libemf

1.0.9

Generated on Tue Feb 3 2026 22:41:09 for libemf by Doxygen 1.15.0

Tue Feb 3 2026 22:41:09

1 Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

2 Data Structure Index

2.1 Data Structures

Here are the data structures with brief descriptions:

3 File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

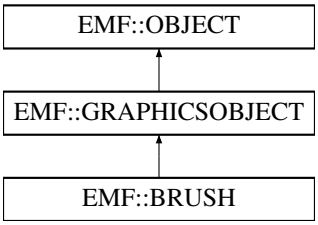
4 Data Structure Documentation

4.1 EMF::BRUSH Class Reference

Graphics Brush.

`#include <libemf.h>`

Inheritance diagram for EMF::BRUSH:



Public Member Functions

- BRUSH (const LOGBRUSH *lbrush)
- OBJECTTYPE getType (void) const
- METARECORD * newEMR (HDC dc, HGDIOBJ emf_handle)

Public Member Functions inherited from EMF::GRAPHICSOBJECT

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Additional Inherited Members

Data Fields inherited from EMF::GRAPHICSOBJECT

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.1.1 Detailed Description

Graphics Brush.

Brushes are used for filling shapes.

4.1.2 Constructor & Destructor Documentation

BRUSH()

```
EMF::BRUSH::BRUSH (
            const LOGBRUSH * lbrush)  [inline]
```

Parameters

lbrush	the (logical?) brush definition.

4.1.3 Member Function Documentation

getType()

```
OBJECTTYPE EMF::BRUSH::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

newEMR()

```
METARECORD * EMF::BRUSH::newEMR (
            HDC dc,
            HGDIOBJ emf_handle)  [inline], [virtual]
```

Return a new metarecord for this object. And record its selection into the given device context.

Parameters

dc	handle of device context into which this object is being selected.
emf_handle	the EMF handle associated with the BRUSH.

Implements EMF::GRAPHICSOBJECT.

References EMF::GRAPHICSOBJECT::contexts.

The documentation for this class was generated from the following file:

- libemf.h

4.2 EMF::BYTEARRAY Struct Reference

Represent a byte array in a simple way.

`#include <libemf.h>`

Public Member Functions

- BYTEARRAY (BYTE *const array, const int n)

Data Fields

- BYTE *const **array_**

  Array of unsigned bytes.
- const int **n_**

  Number of bytes in array.

4.2.1 Detailed Description

Represent a byte array in a simple way.

Evidently, an unsigned array of bytes with no particular encoding implied.

4.2.2 Constructor & Destructor Documentation

BYTEARRAY()

```
EMF::BYTEARRAY::BYTEARRAY (
            BYTE *const array,
            const int n)  [inline]
```

Simple constructor.

Parameters

array	pointer to array of bytes
n	number of bytes in array

References array_, and n_.

The documentation for this struct was generated from the following file:

- libemf.h

4.3 EMF::CHARSTR Struct Reference

Represent an ASCII character string in a simple way.

`#include <libemf.h>`

Public Member Functions

- CHARSTR (CHAR *const string, const int length)

Data Fields

- CHAR *const **string_**

  Array of single byte characters.
- const int **length_**

  Number of single byte characters in array.

4.3.1 Detailed Description

Represent an ASCII character string in a simple way.

ASCII strings don't have to be byte swapped, but this structure allows us to provide a uniform stream-like interface for writing out all the components of metafiles.

4.3.2 Constructor & Destructor Documentation

CHARSTR()

```
EMF::CHARSTR::CHARSTR (
            CHAR *const string,
            const int length)  [inline]
```

Simple constructor.

Parameters

string	pointer to array of single byte characters.
length	number of bytes in array.

References length_, and string_.

The documentation for this struct was generated from the following file:

- libemf.h

4.4 EMF::DATASTREAM Class Reference

Support different endian modes when reading and writing the metafile.

`#include <libemf.h>`

Public Member Functions

- DATASTREAM (::FILE *fp=0)
- void setStream (::FILE *fp)
- DATASTREAM & operator<< (const BYTE &byte)
- DATASTREAM & operator>> (BYTE &byte)
- DATASTREAM & operator<< (const WORD &word)
- DATASTREAM & operator>> (WORD &word)
- DATASTREAM & operator<< (const INT16 &word)
- DATASTREAM & operator>> (INT16 &word)
- DATASTREAM & operator<< (const DWORD &dword)
- DATASTREAM & operator>> (DWORD &dword)
- DATASTREAM & operator<< (const LONG &long_)
- DATASTREAM & operator>> (LONG &long_)
- DATASTREAM & operator<< (const INT &int_)
- DATASTREAM & operator>> (INT &int_)
- DATASTREAM & operator<< (const UINT &uint)
- DATASTREAM & operator>> (UINT &uint)
- DATASTREAM & operator<< (const FLOAT &float_)
- DATASTREAM & operator>> (FLOAT &float_)
- DATASTREAM & operator<< (const PADDING &padding)
- DATASTREAM & operator<< (const RECTL &rectl)
- DATASTREAM & operator>> (RECTL &rectl)
- DATASTREAM & operator<< (const SIZEL &sizel)
- DATASTREAM & operator>> (SIZEL &sizel)
- DATASTREAM & operator<< (const WCHARSTR &wcharstr)
- DATASTREAM & operator>> (WCHARSTR &wcharstr)
- DATASTREAM & operator<< (const CHARSTR &charstr)
- DATASTREAM & operator>> (CHARSTR &charstr)
- DATASTREAM & operator<< (const ::EMR &emr)
- DATASTREAM & operator>> (::EMR &emr)
- DATASTREAM & operator<< (const POINT &point)
- DATASTREAM & operator>> (POINT &point)
- DATASTREAM & operator<< (const POINTL &pointl)
- DATASTREAM & operator>> (POINTL &pointl)
- DATASTREAM & operator<< (const POINT16 &point)
- DATASTREAM & operator>> (POINT16 &point)
- DATASTREAM & operator<< (const XFORM &xform)
- DATASTREAM & operator>> (XFORM &xform)
- DATASTREAM & operator<< (const BYTEARRAY &array)
- DATASTREAM & operator>> (BYTEARRAY &array)
- DATASTREAM & operator<< (const POINTLARRAY &array)
- DATASTREAM & operator>> (POINTLARRAY &array)
- DATASTREAM & operator<< (const POINT16ARRAY &array)
- DATASTREAM & operator>> (POINT16ARRAY &array)
- DATASTREAM & operator<< (const INTARRAY &array)
- DATASTREAM & operator>> (INTARRAY &array)

- DATASTREAM & operator<< (const DWORDARRAY &array)
- DATASTREAM & operator>> (DWORDARRAY &array)
- DATASTREAM & operator<< (const ::EMRTEXT &text)
- DATASTREAM & operator>> (::EMRTEXT &text)
- DATASTREAM & operator<< (const LOGPEN &pen)
- DATASTREAM & operator>> (LOGPEN &pen)
- DATASTREAM & operator<< (const EXTLOGPEN &pen)
- DATASTREAM & operator>> (EXTLOGPEN &pen)
- DATASTREAM & operator<< (const LOGBRUSH &brush)
- DATASTREAM & operator>> (LOGBRUSH &brush)
- DATASTREAM & operator<< (const LOGFONTW &font)
- DATASTREAM & operator>> (LOGFONTW &font)
- DATASTREAM & operator<< (const PANOSE &panose)
- DATASTREAM & operator>> (PANOSE &panose)
- DATASTREAM & operator<< (const EXTLOGFONTW &font)
- DATASTREAM & operator>> (EXTLOGFONTW &font)
- DATASTREAM & operator<< (const LOGPALETTE &palette)
- DATASTREAM & operator>> (LOGPALETTE &palette)

4.4.1 Detailed Description

Support different endian modes when reading and writing the metafile.

To support different endian modes, rather than just writing the structures directly to a file via fwrite(&emr, ...), we have to write each element of the structure separately, swapping bytes as necessary. datastream supports this. Remarkably similar to the QDataStream class from Qt. So, too, for reading.

4.4.2 Constructor & Destructor Documentation

DATASTREAM()

```
EMF::DATASTREAM::DATASTREAM (
            ::FILE * fp = 0)  [inline]
```

Constructor for DATASTREAM.

Parameters

fp	optional file pointer (but must be assigned before any output occurs.)

Referenced by operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator<<(), operator>>(), and operator>>().

4.4.3 Member Function Documentation

operator<<() [1/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const ::EMR & emr)  [inline]
```

Output an Enhanced Metafile Record header.

Parameters

emr	Enhanced Metafile Record header to output.

References DATASTREAM().

operator<<() [2/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const ::EMRTEXT & text)  [inline]
```

Output an Enhanced Metafile Text Record.

Parameters

text	Enhanced Metafile Text Record to output.

References DATASTREAM().

operator<<() [3/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const BYTE & byte)  [inline]
```

Output a byte to the stream (not swabbed or anything).

Parameters

byte	byte to output.

References DATASTREAM().

operator<<() [4/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const BYTEARRAY & array)  [inline]
```

Output an array of BYTEs.

Parameters

array	array of BYTEs to output.

References EMF::BYTEARRAY::array_, DATASTREAM(), and EMF::BYTEARRAY::n_.

operator<<() [5/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const CHARSTR & charstr)  [inline]
```

Output a single byte character string.

Parameters

charstr	structure to output.

References DATASTREAM(), EMF::CHARSTR::length_, and EMF::CHARSTR::string_.

operator<<() [6/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const DWORD & dword)  [inline]
```

Output a double word (long) to the stream (swabbed).

Parameters

dword	double word (long) to output.

References DATASTREAM().

operator<<() [7/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const DWORDARRAY & array)  [inline]
```

Output an array of double words (longs).

Parameters

array	array of double words (longs) to output.

References DATASTREAM(), EMF::DWORDARRAY::dwords_, and EMF::DWORDARRAY::n_.

operator<<() [8/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const EXTLOGFONTW & font)  [inline]
```

Output an Extended Logical Font definition (using WCHAR strings).

Parameters

font	Extended Logical Font definition to output.

References DATASTREAM().

operator<<() [9/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const EXTLOGPEN & pen)  [inline]
```

Output an Extended Logical Pen definition.

Parameters

pen	Extended Logical Pen definition to output.

References DATASTREAM().

operator<<() [10/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const FLOAT & float_)  [inline]
```

Output a single precision float to the stream (swabbed).

Parameters

*float_*	single precision float to output.

References DATASTREAM().

operator<<() [11/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const INT & int_)  [inline]
```

Output a (long) int to the stream (swabbed).

Parameters

*int_*	(long) int to output.

References DATASTREAM().

operator<<() [12/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const INT16 & word)  [inline]
```

Output a (short, 16-bit) word to the stream (swabbed).

Parameters

word	(short, 16-bit) word to output.

References DATASTREAM().

operator<<() [13/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const INTARRAY & array)  [inline]
```

Output an array of (long) ints.

Parameters

array	array of (long) ints to output.

References DATASTREAM(), EMF::INTARRAY::ints_, and EMF::INTARRAY::n_.

operator<<() [14/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const LOGBRUSH & brush)  [inline]
```

Output a Logical Brush definition.

Parameters

brush	Logical Brush definition to output.

References DATASTREAM().

operator<<() [15/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const LOGFONTW & font)  [inline]
```

Output a Logical Font definition (using WCHAR strings).

Parameters

font	Logical Font definition to output.

References DATASTREAM().

operator<<() [16/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const LOGPALETTE & palette)  [inline]
```

Output a Logical Palette.

Parameters

palette	Logical Palette to output.

References DATASTREAM().

operator<<() [17/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const LOGPEN & pen)  [inline]
```

Output a Logical Pen definition.

Parameters

pen	Logical Pen definition to output.

References DATASTREAM().

operator<<() [18/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const LONG & long_)  [inline]
```

Output a long int to the stream (swabbed).

Parameters

*long_*	long int to output.

References DATASTREAM().

operator<<() [19/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const PADDING & padding)  [inline]
```

Output a series of '\0's to pad out a record.

Parameters

padding	simple padding structure (length and number of nulls).

References DATASTREAM(), EMF::PADDING::padding_, and EMF::PADDING::size_.

operator<<() [20/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const PANOSE & panose)  [inline]
```

Output a Panose structure.

Parameters

panose	Panose structure to output.

References DATASTREAM().

operator<<() [21/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const POINT & point)  [inline]
```

Output a POINT structure.

Parameters

point	POINT to output.

References DATASTREAM().

operator<<() [22/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const POINT16 & point)  [inline]
```

Output a POINT16 structure.

Parameters

point	POINT16 to output.

References DATASTREAM().

operator<<() [23/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const POINT16ARRAY & array)  [inline]
```

Output an array of POINT16s.

Parameters

array	array of POINT16s to output.

References DATASTREAM(), EMF::POINT16ARRAY::n_, and EMF::POINT16ARRAY::points_.

operator<<() [24/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const POINTL & pointl)  [inline]
```

Output a POINTL structure.

Parameters

pointl	POINTL to output.

References DATASTREAM().

operator<<() [25/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const POINTLARRAY & array)  [inline]
```

Output an array of POINTLs.

Parameters

array	array of POINTLs to output.

References DATASTREAM(), EMF::POINTLARRAY::n_, and EMF::POINTLARRAY::points_.

operator<<() [26/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const RECTL & rectl)  [inline]
```

Output a RECTL structure.

Parameters

rectl	structure to output.

References DATASTREAM().

operator<<() [27/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const SIZEL & sizel)  [inline]
```

Output a SIZEL structure.

Parameters

sizel	structure to output.

References DATASTREAM().

operator<<() [28/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const UINT & uint)  [inline]
```

Output a (long) unsigned int to the stream (swabbed).

Parameters

uint	(long) unsigned int to output.

References DATASTREAM().

operator<<() [29/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const WCHARSTR & wcharstr)  [inline]
```

Output a WCHAR string (note: the individual characters are swabbed).

Parameters

wcharstr	structure to output.

References DATASTREAM(), EMF::WCHARSTR::length_, and EMF::WCHARSTR::string_.

operator<<() [30/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
            const WORD & word)  [inline]
```

Output a (short) word to the stream (swabbed).

Parameters

word	(short) word to output.

References DATASTREAM().

operator<<() [31/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
             const XFORM & xform)  [inline]
```

Output an XFORM structure.

Parameters

xform	XFORM to output.

References DATASTREAM().

operator>>() [1/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             ::EMR & emr)  [inline]
```

Input an Enhanced Metafile Record header.

Parameters

emr	destination of Enhanced Metafile Record header.

References DATASTREAM().

operator>>() [2/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             ::EMRTEXT & text)  [inline]
```

Input an Enhanced Metafile Text Record.

Parameters

text	destination of Enhanced Metafile Text Record.

References DATASTREAM().

operator>>() [3/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             BYTE & byte)  [inline]
```

Input a byte from the stream (not swabbed or anything).

Parameters

byte	destination for input byte.

References DATASTREAM().

operator>>() [4/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             BYTEARRAY & array)  [inline]
```

Input an array of BYTEs.

Parameters

array	destination of array of input BYTEs.

References EMF::BYTEARRAY::array_, DATASTREAM(), and EMF::BYTEARRAY::n_.

operator>>() [5/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             CHARSTR & charstr)  [inline]
```

Input a single byte character string.

Parameters

charstr	destination of input CHAR string.

References DATASTREAM(), EMF::CHARSTR::length_, and EMF::CHARSTR::string_.

operator>>() [6/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             DWORD & dword)  [inline]
```

Input a double word (long) from the stream (swabbed).

Parameters

dword	destination for double word (long).

References DATASTREAM().

operator>>() [7/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             DWORDARRAY & array)  [inline]
```

Input an array of double words (longs).

Parameters

array	destination of array of input double words (longs).

References DATASTREAM(), EMF::DWORDARRAY::dwords_, and EMF::DWORDARRAY::n_.

operator>>() [8/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             EXTLOGFONTW & font)  [inline]
```

Input an Extended Logical Font definition (using WCHAR strings).

Parameters

font	destination of Extended Logical Font definition.

References DATASTREAM().

operator>>() [9/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             EXTLOGPEN & pen)  [inline]
```

Input an Extended Logical Pen definition.

Parameters

pen	destination of Extended Logical Pen definition.

References DATASTREAM().

operator>>() [10/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             FLOAT & float_)  [inline]
```

Input a single precision float from the stream (swabbed).

Parameters

float↩ _	destination for single precision float.

References DATASTREAM().

operator>>() [11/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             INT & int_)  [inline]
```

Input a (long) int from the stream (swabbed).

Parameters

int↩ _	destination for (long) int.

References DATASTREAM().

operator>>() [12/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             INT16 & word)  [inline]
```

Input a (short, 16-bit) word from the stream (swabbed).

Parameters

word	destination for (short, 16-bit) word.

References DATASTREAM().

operator>>() [13/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             INTARRAY & array)  [inline]
```

Input an array of (long) ints.

Parameters

array	destination of array of input (long) ints.

References DATASTREAM(), EMF::INTARRAY::ints_, and EMF::INTARRAY::n_.

operator>>() [14/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             LOGBRUSH & brush)  [inline]
```

Input a Logical Brush definition.

Parameters

brush	destination of Logical Brush definition.

References DATASTREAM().

operator>>() [15/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             LOGFONTW & font)  [inline]
```

Input a Logical Font definition (using WCHAR strings).

Parameters

font	destination of Logical Font definition.

References DATASTREAM().

operator>>() [16/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             LOGPALETTE & palette)  [inline]
```

Input a Logical Palette.

Parameters

palette	destination of input Logical Palette.

References DATASTREAM().

operator>>() [17/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             LOGPEN & pen)  [inline]
```

Input a Logical Pen definition.

Parameters

pen	destination of Logical Pen definition.

References DATASTREAM().

operator>>() [18/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             LONG & long_)  [inline]
```

Input a long int from the stream (swabbed).

Parameters

*long_*	destination for long int.

References DATASTREAM().

operator>>() [19/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             PANOSE & panose)  [inline]
```

Input a Panose structure.

Parameters

panose	destinatino of input Panose structure.

References DATASTREAM().

operator>>() [20/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             POINT & point)  [inline]
```

Input a POINT structure.

Parameters

point	destination of input POINT.

References DATASTREAM().

operator>>() [21/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
            POINT16 & point)  [inline]
```

Input a POINT16 structure.

Parameters

point	destination of input POINT16.

References DATASTREAM().

operator>>() [22/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
            POINT16ARRAY & array)  [inline]
```

Input an array of POINT16s.

Parameters

array	destination of array of input POINT16s.

References DATASTREAM(), EMF::POINT16ARRAY::n_, and EMF::POINT16ARRAY::points_.

operator>>() [23/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
            POINTL & pointl)  [inline]
```

Input a POINTL structure.

Parameters

pointl	destination of input POINTL.

References DATASTREAM().

operator>>() [24/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             POINTLARRAY & array)  [inline]
```

Input an array of POINTLs.

Parameters

array	destination of array of input POINTLs.

References DATASTREAM(), EMF::POINTLARRAY::n_, and EMF::POINTLARRAY::points_.

operator>>() [25/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             RECTL & rectl)  [inline]
```

Input a RECTL structure.

Parameters

rectl	destination of input RECTL.

References DATASTREAM().

operator>>() [26/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             SIZEL & sizel)  [inline]
```

Input a SIZEL structure.

Parameters

sizel	destination of input SIZEL.

References DATASTREAM().

operator>>() [27/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             UINT & uint)  [inline]
```

Input a (long) unsigned int from the stream (swabbed).

Parameters

uint	destination for (long) unsigned int.

References DATASTREAM().

operator>>() [28/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             WCHARSTR & wcharstr)  [inline]
```

Input a WCHAR string (note: the individual characters are swabbed.)

Parameters

wcharstr	destination of input WCHAR string.

References DATASTREAM(), EMF::WCHARSTR::length_, and EMF::WCHARSTR::string_.

operator>>() [29/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             WORD & word)  [inline]
```

Input a (short) word from the stream (swabbed).

Parameters

word	destination for (short) word.

References DATASTREAM().

operator>>() [30/30]

```
DATASTREAM & EMF::DATASTREAM::operator>> (
             XFORM & xform)  [inline]
```

Input an XFORM structure.

Parameters

xform	destination of input XFORM.

References DATASTREAM().

setStream()

```
void EMF::DATASTREAM::setStream (
             ::FILE * fp)  [inline]
```

Use the given FILE stream as the input/output destination.

Parameters

fp	file point for i/o.

The documentation for this class was generated from the following file:

- libemf.h

4.5 EMF::DWORDARRAY Struct Reference

Represent an array of double word integers in a simple way.

```
#include <libemf.h>
```

Public Member Functions

- DWORDARRAY (DWORD *const dwords, const DWORD n)

Data Fields

- DWORD *const **dwords_**

  Array of double words.
- const DWORD **n_**

  Number of double words in array.

4.5.1 Detailed Description

Represent an array of double word integers in a simple way.

Allow an array of DWORD's to be written out at once.

4.5.2 Constructor & Destructor Documentation

DWORDARRAY()

```
EMF::DWORDARRAY::DWORDARRAY (
            DWORD *const dwords,
            const DWORD n)  [inline]
```

simple constructor.

Parameters

dwords	pointer to double words.
n	number double words in array.

References dwords_, and n_.

The documentation for this struct was generated from the following file:

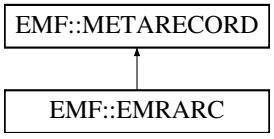
- libemf.h

4.6 EMF::EMRARC Class Reference

EMF Arc.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRARC:



Public Member Functions

- EMRARC (INT left, INT top, INT right, INT bottom, INT xstart, INT ystart, INT xend, INT yend)
- EMRARC (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.6.1 Detailed Description

EMF Arc.

Draw an arc. Not sure what the specification here means, though.

4.6.2 Constructor & Destructor Documentation

EMRARC() [1/2]

```
EMF::EMRARC::EMRARC (
            INT left,
            INT top,
            INT right,
            INT bottom,
            INT xstart,
            INT ystart,
            INT xend,
            INT yend)  [inline]
```

Take these descriptions with a grain of salt...

Parameters

left	x position of left edge of arc box.
top	y position of top edge of arc box.
right	x position of right edge of arc box.
bottom	y position bottom edge of arc box.
xstart	x position of arc start.
ystart	y position of arc start.
xend	x position of arc end.
yend	y position of arc end.

References EMRARC().

Referenced by EMRARC().

EMRARC() [2/2]

```
EMF::EMRARC::EMRARC (
            DATASTREAM & ds)  [inline]
```

Construct an Arc record from the input datastream.

Parameters

ds	Metafile datastream.

4.6.3 Member Function Documentation

execute()

```
void EMF::EMRARC::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRARC::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRARC::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

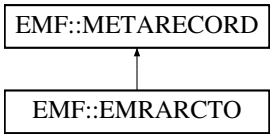
- libemf.h

4.7 EMF::EMRARCTO Class Reference

EMF Arc To.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRARCTO:



Public Member Functions

- EMRARCTO (INT left, INT top, INT right, INT bottom, INT xstart, INT ystart, INT xend, INT yend)
- EMRARCTO (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.7.1 Detailed Description

EMF Arc To.

Draw another arc. Not sure what the specification here means, though.

4.7.2 Constructor & Destructor Documentation

EMRARCTO() [1/2]

```
EMF::EMRARCTO::EMRARCTO (
            INT left,
            INT top,
            INT right,
            INT bottom,
            INT xstart,
            INT ystart,
            INT xend,
            INT yend)  [inline]
```

Take these descriptions with a grain of salt...

Parameters

left	x position of left edge of arc box.
top	y position of top edge of arc box.
right	x position of right edge of arc box.
bottom	y position bottom edge of arc box.
xstart	x position of arc start.
ystart	y position of arc start.
xend	x position of arc end.
yend	y position of arc end.

References EMRARCTO().

Referenced by EMRARCTO().

EMRARCTO() [2/2]

```
EMF::EMRARCTO::EMRARCTO (
            DATASTREAM & ds)  [inline]
```

Construct an ArcTo record from the input stream.

Parameters

ds	Metafile datastream.

4.7.3 Member Function Documentation

execute()

```
void EMF::EMRARCTO::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRARCTO::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRARCTO::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

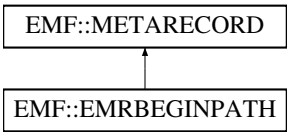
- libemf.h

4.8 EMF::EMRBEGINPATH Class Reference

EMF Begin Path.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRBEGINPATH:



Public Member Functions

- EMRBEGINPATH (void)
- EMRBEGINPATH (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.8.1 Detailed Description

EMF Begin Path.

Begin the current path definition.

4.8.2 Constructor & Destructor Documentation

EMRBEGINPATH() [1/2]

```
EMF::EMRBEGINPATH::EMRBEGINPATH (
            void )  [inline]
```

Create a Begin Path record.

References EMRBEGINPATH().

Referenced by EMRBEGINPATH().

EMRBEGINPATH() [2/2]

```
EMF::EMRBEGINPATH::EMRBEGINPATH (
            DATASTREAM & ds)  [inline]
```

Construct a BeginPath record from the input stream.

Parameters

ds	Metafile datastream.

4.8.3 Member Function Documentation

execute()

```
void EMF::EMRBEGINPATH::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRBEGINPATH::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRBEGINPATH::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

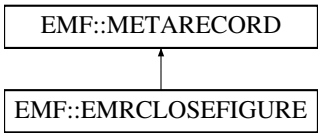
- libemf.h

4.9 EMF::EMRCLOSEFIGURE Class Reference

EMF Close Figure.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRCLOSEFIGURE:



Public Member Functions

- EMRCLOSEFIGURE (void)
- EMRCLOSEFIGURE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.9.1 Detailed Description

EMF Close Figure.

Close the current figure.

4.9.2 Constructor & Destructor Documentation

EMRCLOSEFIGURE() [1/2]

```
EMF::EMRCLOSEFIGURE::EMRCLOSEFIGURE (
            void )  [inline]
```

Create a Close Figure record.

References EMRCLOSEFIGURE().

Referenced by EMRCLOSEFIGURE().

EMRCLOSEFIGURE() [2/2]

```
EMF::EMRCLOSEFIGURE::EMRCLOSEFIGURE (
            DATASTREAM & ds)  [inline]
```

Construct a CloseFigure record from the input stream.

Parameters

ds	Metafile datastream.

4.9.3 Member Function Documentation

execute()

```
void EMF::EMRCLOSEFIGURE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRCLOSEFIGURE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRCLOSEFIGURE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

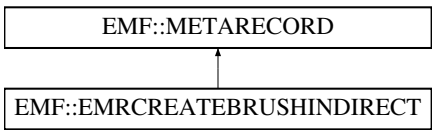
- libemf.h

4.10 EMF::EMRCREATEBRUSHINDIRECT Class Reference

EMF Brush.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRCREATEBRUSHINDIRECT:



Public Member Functions

- EMRCREATEBRUSHINDIRECT (BRUSH *brush, HGDIOBJ handle)
- EMRCREATEBRUSHINDIRECT (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.10.1 Detailed Description

EMF Brush.

Create a new brush (used for filling shapes).

4.10.2 Constructor & Destructor Documentation

EMRCREATEBRUSHINDIRECT() [1/2]

```
EMRCREATEBRUSHINDIRECT::EMRCREATEBRUSHINDIRECT (
            BRUSH * brush,
            HGDIOBJ handle)
```

Parameters

brush	an instance of a BRUSH object.
handle	the BRUSH object's handle.

References EMRCREATEBRUSHINDIRECT().

Referenced by EMRCREATEBRUSHINDIRECT().

EMRCREATEBRUSHINDIRECT() [2/2]

```
EMRCREATEBRUSHINDIRECT::EMRCREATEBRUSHINDIRECT (
            DATASTREAM & ds)
```

Create a CreateBrushIndirect record from the input stream.

Parameters

ds	Metafile datastream.

4.10.3 Member Function Documentation

execute()

```
void EMRCREATEBRUSHINDIRECT::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMRCREATEBRUSHINDIRECT::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRCREATEBRUSHINDIRECT::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

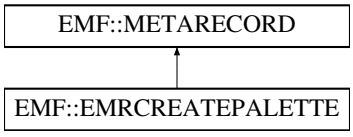
- libemf.h
- libemf.cpp

4.11 EMF::EMRCREATEPALETTE Class Reference

EMF Palette.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRCREATEPALETTE:



Public Member Functions

- EMRCREATEPALETTE (PALETTE *palette, HGDIOBJ handle)
- EMRCREATEPALETTE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.11.1 Detailed Description

EMF Palette.

Create a new palette.

4.11.2 Constructor & Destructor Documentation

EMRCREATEPALETTE() [1/2]

```
EMRCREATEPALETTE::EMRCREATEPALETTE (
            PALETTE * palette,
            HGDIOBJ handle)
```

Parameters

palette	an instance of a PALETTE object.
handle	the PALETTE object's handle.

References EMRCREATEPALETTE().

Referenced by EMRCREATEPALETTE().

EMRCREATEPALETTE() [2/2]

```
EMF::EMRCREATEPALETTE::EMRCREATEPALETTE (
            DATASTREAM & ds)
```

Construct a CreatePalette record from the input stream.

Parameters

ds	Metafile datastream.

4.11.3 Member Function Documentation

execute()

```
void EMRCREATEPALETTE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRCREATEPALETTE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRCREATEPALETTE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

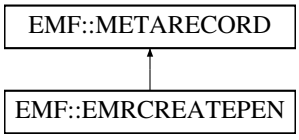
- libemf.h
- libemf.cpp

4.12 EMF::EMRCREATEPEN Class Reference

EMF Pen.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRCREATEPEN:



Public Member Functions

- EMRCREATEPEN (PEN *pen, HGDIOBJ handle)
- EMRCREATEPEN (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.12.1 Detailed Description

EMF Pen.

Create a new pen (used for drawing lines, arcs, rectangles, etc.).

4.12.2 Constructor & Destructor Documentation

EMRCREATEPEN() [1/2]

```
EMRCREATEPEN::EMRCREATEPEN (
            PEN * pen,
            HGDIOBJ handle)
```

Parameters

pen	an instance of a PEN object.
handle	the PEN object's handle.

References EMRCREATEPEN().

Referenced by EMRCREATEPEN().

EMRCREATEPEN() [2/2]

```
EMRCREATEPEN::EMRCREATEPEN (
            DATASTREAM & ds)
```

Construct a CreatePen record from the input stream.

Parameters

ds	Metafile datastream.

4.12.3 Member Function Documentation

execute()

```
void EMRCREATEPEN::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMRCREATEPEN::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRCREATEPEN::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

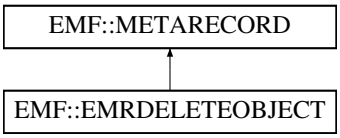
- libemf.h
- libemf.cpp

4.13 EMF::EMRDELETEOBJECT Class Reference

EMF Delete Object.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRDELETEOBJECT:



Public Member Functions

- EMRDELETEOBJECT (HGDIOBJ object)
- EMRDELETEOBJECT (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.13.1 Detailed Description

EMF Delete Object.

Delete the given object, such as a pen, brush or font.

4.13.2 Constructor & Destructor Documentation

EMRDELETEOBJECT() [1/2]

```
EMF::EMRDELETEOBJECT::EMRDELETEOBJECT (
            HGDIOBJ object)  [inline]
```

Parameters

object	the object to delete.

References EMRDELETEOBJECT().

Referenced by EMRDELETEOBJECT().

EMRDELETEOBJECT() [2/2]

```
EMF::EMRDELETEOBJECT::EMRDELETEOBJECT (
            DATASTREAM & ds)  [inline]
```

Construct a DeleteObject record from the input stream.

Parameters

ds	Metafile datastream.

4.13.3 Member Function Documentation

execute()

```
void EMRDELETEOBJECT::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMRDELETEOBJECT::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRDELETEOBJECT::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

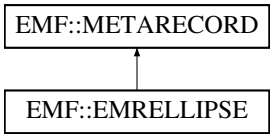
- libemf.h
- libemf.cpp

4.14 EMF::EMRELLIPSE Class Reference

EMF Ellipse.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRELLIPSE:



Public Member Functions

- EMRELLIPSE (INT left, INT top, INT right, INT bottom)
- EMRELLIPSE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.14.1 Detailed Description

EMF Ellipse.

Draw an ellipse. (I have no idea how the ellipse is defined!)

4.14.2 Constructor & Destructor Documentation

EMRELLIPSE() [1/2]

```
EMF::EMRELLIPSE::EMRELLIPSE (
            INT left,
            INT top,
            INT right,
            INT bottom)  [inline]
```

Take these descriptions with a grain of salt...

Parameters

left	x position of left extrema of ellipse.

top	y position of top extrema of ellipse.
right	x position of right extrema of ellipse.
bottom	y position of bottom extrema of ellipse.

References EMRELLIPSE().

Referenced by EMRELLIPSE().

EMRELLIPSE() [2/2]

```
EMF::EMRELLIPSE::EMRELLIPSE (
            DATASTREAM & ds)  [inline]
```

Construct an Ellipse record from the input stream.

Parameters

ds	Metafile datastream.

4.14.3 Member Function Documentation

execute()

```
void EMF::EMRELLIPSE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRELLIPSE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRELLIPSE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

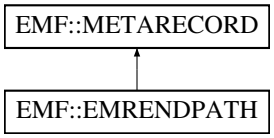
- libemf.h

4.15 EMF::EMRENDPATH Class Reference

EMF End Path.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRENDPATH:



Public Member Functions

- EMRENDPATH (void)
- EMRENDPATH (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.15.1 Detailed Description

EMF End Path.

End the current path definition.

4.15.2 Constructor & Destructor Documentation

EMRENDPATH() [1/2]

```
EMF::EMRENDPATH::EMRENDPATH (
            void )  [inline]
```

Create an End Path record.

References EMRENDPATH().

Referenced by EMRENDPATH().

EMRENDPATH() [2/2]

```
EMF::EMRENDPATH::EMRENDPATH (
            DATASTREAM & ds)  [inline]
```

Construct an EndPath record from the input stream.

Parameters

ds	Metafile datastream.

4.15.3 Member Function Documentation

execute()

```
void EMF::EMRENDPATH::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRENDPATH::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRENDPATH::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

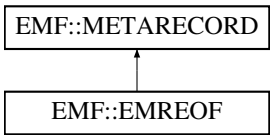
- libemf.h

4.16 EMF::EMREOF Class Reference

EMF End of File Record.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMREOF:



Public Member Functions

- EMREOF (void)
- EMREOF (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.16.1 Detailed Description

EMF End of File Record.

Every metafile must have an End of File record. A palette may also be recorded in the EOF record, but it is currently unused by this library (all colors are specified in full RGB coordinates).

4.16.2 Constructor & Destructor Documentation

EMREOF() [1/2]

```
EMF::EMREOF::EMREOF (
            void )  [inline]
```

Constructor contains no user serviceable parts.

References EMREOF().

Referenced by EMREOF().

EMREOF() [2/2]

```
EMF::EMREOF::EMREOF (
            DATASTREAM & ds)  [inline]
```

Construct an EOF record from the input stream

Parameters

ds	Metafile datastream.

4.16.3 Member Function Documentation

execute()

```
void EMF::EMREOF::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMREOF::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMREOF::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

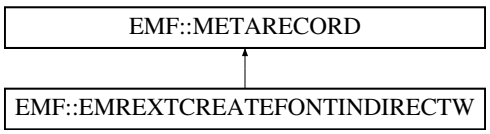
- libemf.h

4.17 EMF::EMREXTCREATEFONTINDIRECTW Class Reference

EMF Font.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMREXTCREATEFONTINDIRECTW:



Public Member Functions

- EMREXTCREATEFONTINDIRECTW (FONT *font, HGDIOBJ handle)
- EMREXTCREATEFONTINDIRECTW (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.17.1 Detailed Description

EMF Font.

Create a new font.

4.17.2 Constructor & Destructor Documentation

EMREXTCREATEFONTINDIRECTW() [1/2]

```
EMREXTCREATEFONTINDIRECTW::EMREXTCREATEFONTINDIRECTW (
            FONT * font,
            HGDIOBJ handle)
```

Parameters

font	an instance of a FONT object.
handle	the FONT object's handle.

References EMREXTCREATEFONTINDIRECTW().

Referenced by EMREXTCREATEFONTINDIRECTW().

EMREXTCREATEFONTINDIRECTW() [2/2]

```
EMREXTCREATEFONTINDIRECTW::EMREXTCREATEFONTINDIRECTW (
            DATASTREAM & ds)
```

Construct a CreateFontIndirectW record from the input stream.

Parameters

ds	Metafile datastream.

4.17.3 Member Function Documentation

execute()

```
void EMREXTCREATEFONTINDIRECTW::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMREXTCREATEFONTINDIRECTW::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMREXTCREATEFONTINDIRECTW::size (
            void ) const  [inline], [virtual]
```

Returns

the size of the record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

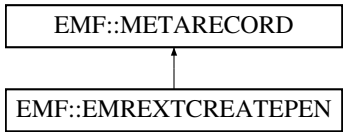
- libemf.h
- libemf.cpp

4.18 EMF::EMREXTCREATEPEN Class Reference

EMF Extended Pen.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMREXTCREATEPEN:



Public Member Functions

- EMREXTCREATEPEN (EXTPEN ∗pen, HGDIOBJ handle)
- EMREXTCREATEPEN (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ∼METARECORD ()

4.18.1 Detailed Description

EMF Extended Pen.

Create a new pen (used for drawing lines, arcs, rectangles, etc.). Apparently uses extended attributes such as a bitmap mask.

4.18.2 Constructor & Destructor Documentation

EMREXTCREATEPEN() [1/2]

```
EMREXTCREATEPEN::EMREXTCREATEPEN (
            EXTPEN * pen,
            HGDIOBJ handle)
```

Parameters

pen	an instance of a PEN object.
handle	the PEN object's handle.

References EMREXTCREATEPEN().

Referenced by EMREXTCREATEPEN().

EMREXTCREATEPEN() [2/2]

```
EMREXTCREATEPEN::EMREXTCREATEPEN (
            DATASTREAM & ds)
```

Construct a ExtCreatePen record from the input stream.

Parameters

ds	Metafile datastream.

4.18.3 Member Function Documentation

execute()

```
void EMREXTCREATEPEN::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMREXTCREATEPEN::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMREXTCREATEPEN::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

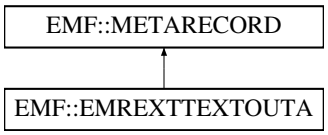
- libemf.h
- libemf.cpp

4.19 EMF::EMREXTTEXTOUTA Class Reference

EMF Extended Text Output ASCII.

`#include <libemf.h>`

Inheritance diagram for EMF::EMREXTTEXTOUTA:



Public Member Functions

- EMREXTTEXTOUTA (const RECTL ∗bounds, DWORD graphicsMode, FLOAT xScale, FLOAT yScale, const PEMRTEXT text, LPCSTR string, const INT ∗dx)
- EMREXTTEXTOUTA (DATASTREAM &ds)
- ∼EMREXTTEXTOUTA ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ∼METARECORD ()

4.19.1 Detailed Description

EMF Extended Text Output ASCII.

Draw this text string with the current font, in the color of the current pen and with the given text background color. Individual character positioning can be given in the dx array.

4.19.2 Constructor & Destructor Documentation

EMREXTTEXTOUTA() [1/2]

```
EMF::EMREXTTEXTOUTA::EMREXTTEXTOUTA (
            const RECTL * bounds,
            DWORD graphicsMode,
            FLOAT xScale,
            FLOAT yScale,
            const PEMRTEXT text,
            LPCSTR string,
            const INT * dx)  [inline]
```

Parameters

bounds	bounding box of text string.
graphicsMode	(not entirely sure?)
xScale	width scale factor (of what?)
yScale	height scale factor (of what?)
text	a text metarecord containing the rendering style.
string	the text to render
dx	an array of positions for each character in string.

References EMREXTTEXTOUTA().

Referenced by EMREXTTEXTOUTA().

EMREXTTEXTOUTA() [2/2]

```
EMF::EMREXTTEXTOUTA::EMREXTTEXTOUTA (
            DATASTREAM & ds)  [inline]
```

Construct a ExtTextOutA record from the input stream.

Parameters

ds	Metafile datastream.

~EMREXTTEXTOUTA()

```
EMF::EMREXTTEXTOUTA::~EMREXTTEXTOUTA ()  [inline]
```

Destructor frees its copy of the string and its character offset array

4.19.3 Member Function Documentation

execute()

```
void EMF::EMREXTTEXTOUTA::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.

dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMREXTTEXTOUTA::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMREXTTEXTOUTA::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

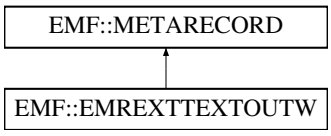
- libemf.h

4.20 EMF::EMREXTTEXTOUTW Class Reference

EMF Extended Text Output Wide character.

`#include <libemf.h>`

Inheritance diagram for EMF::EMREXTTEXTOUTW:



Public Member Functions

- EMREXTTEXTOUTW (const RECTL *bounds, DWORD graphicsMode, FLOAT xScale, FLOAT yScale, const PEMRTEXT text, LPCWSTR string, const INT *dx)
- EMREXTTEXTOUTW (DATASTREAM &ds)
- ~EMREXTTEXTOUTW ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.20.1 Detailed Description

EMF Extended Text Output Wide character.

Draw this text string with the current font, in the color of the current pen and with the given text background color. Individual character positioning can be given in the dx array.

4.20.2 Constructor & Destructor Documentation

EMREXTTEXTOUTW() [1/2]

```
EMF::EMREXTTEXTOUTW::EMREXTTEXTOUTW (
            const RECTL * bounds,
            DWORD graphicsMode,
            FLOAT xScale,
            FLOAT yScale,
            const PEMRTEXT text,
            LPCWSTR string,
            const INT * dx)  [inline]
```

Parameters

bounds	bounding box of text string.
graphicsMode	(not entirely sure?)
xScale	width scale factor (of what?)
yScale	height scale factor (of what?)
text	a text metarecord containing the rendering style.
string	the text to render
dx	an array of positions for each character in string.

References EMREXTTEXTOUTW().

Referenced by EMREXTTEXTOUTW().

EMREXTTEXTOUTW() [2/2]

```
EMF::EMREXTTEXTOUTW::EMREXTTEXTOUTW (
            DATASTREAM & ds)  [inline]
```

Construct a ExtTextOutA record from the input stream.

Parameters

ds	Metafile datastream.

~EMREXTTEXTOUTW()

```
EMF::EMREXTTEXTOUTW::~EMREXTTEXTOUTW ()  [inline]
```

Destructor frees its copy of the string and its character offset array

4.20.3 Member Function Documentation

execute()

```
void EMF::EMREXTTEXTOUTW::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMREXTTEXTOUTW::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMREXTTEXTOUTW::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

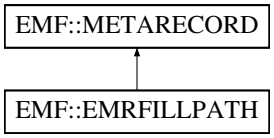
- libemf.h

4.21 EMF::EMRFILLPATH Class Reference

EMF Fill path.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRFILLPATH:



Public Member Functions

- EMRFILLPATH (const RECTL *bounds)
- EMRFILLPATH (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.21.1 Detailed Description

EMF Fill path.

Fill the path.

4.21.2 Constructor & Destructor Documentation

EMRFILLPATH() [1/2]

```
EMF::EMRFILLPATH::EMRFILLPATH (
            const RECTL * bounds)  [inline]
```

Parameters

bounds	overall bounding box of polygon.

References EMRFILLPATH().

Referenced by EMRFILLPATH().

EMRFILLPATH() [2/2]

```
EMF::EMRFILLPATH::EMRFILLPATH (
            DATASTREAM & ds)  [inline]
```

Create a FillPath record from input stream.

Parameters

ds	Metafile datastream.

4.21.3 Member Function Documentation

execute()

```
void EMF::EMRFILLPATH::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRFILLPATH::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRFILLPATH::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

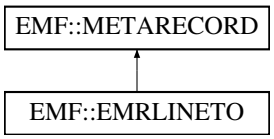
- libemf.h

4.22 EMF::EMRLINETO Class Reference

EMF Line To.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRLINETO:



Public Member Functions

- EMRLINETO (INT x, INT y)
- EMRLINETO (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.22.1 Detailed Description

EMF Line To.

Draw a line using the current pen to the given position.

4.22.2 Constructor & Destructor Documentation

EMRLINETO() [1/2]

```
EMF::EMRLINETO::EMRLINETO (
            INT x,
            INT y)  [inline]
```

Parameters

x	x position to draw line to in logical coordinates.
y	y position to draw line to in logical coordinates.

References EMRLINETO().

Referenced by EMRLINETO().

EMRLINETO() [2/2]

```
EMF::EMRLINETO::EMRLINETO (
            DATASTREAM & ds)  [inline]
```

Construct a LineTo record from the input stream.

Parameters

ds	Metafile datastream

4.22.3 Member Function Documentation

execute()

```
void EMF::EMRLINETO::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRLINETO::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream

Implements EMF::METARECORD.

size()

```
int EMF::EMRLINETO::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

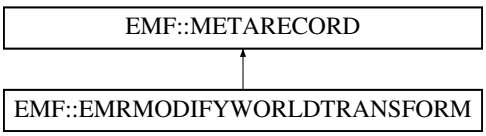
- libemf.h

4.23 EMF::EMRMODIFYWORLDTRANSFORM Class Reference

EMF Modify World Transform.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRMODIFYWORLDTRANSFORM:



Public Member Functions

- EMRMODIFYWORLDTRANSFORM (const XFORM *transform, DWORD mode)
- EMRMODIFYWORLDTRANSFORM (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.23.1 Detailed Description

EMF Modify World Transform.

Enhanced metafiles have a Coordinate Transformation which allows the contents to be rotated and transformed. Does not appear to work properly in StarOffice (but it's also possible I don't understand how it's supposed to work either).

4.23.2 Constructor & Destructor Documentation

EMRMODIFYWORLDTRANSFORM() [1/2]

```
EMF::EMRMODIFYWORLDTRANSFORM::EMRMODIFYWORLDTRANSFORM (
            const XFORM * transform,
            DWORD mode)  [inline]
```

Parameters

transform	the transformation to apply
mode	the mode of the transformation application (namely, pre- or post-multiply)

References EMRMODIFYWORLDTRANSFORM().

Referenced by EMRMODIFYWORLDTRANSFORM().

EMRMODIFYWORLDTRANSFORM() [2/2]

```
EMF::EMRMODIFYWORLDTRANSFORM::EMRMODIFYWORLDTRANSFORM (
            DATASTREAM & ds)  [inline]
```

Construct a ModifyWorldTransform from the input datastream.

Parameters

ds	Metafile datastream.

4.23.3 Member Function Documentation

execute()

```
void EMF::EMRMODIFYWORLDTRANSFORM::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRMODIFYWORLDTRANSFORM::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRMODIFYWORLDTRANSFORM::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

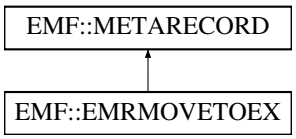
- libemf.h

4.24 EMF::EMRMOVETOEX Class Reference

EMF MoveTo (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRMOVETOEX:



Public Member Functions

- EMRMOVETOEX (INT x, INT y)
- EMRMOVETOEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.24.1 Detailed Description

EMF MoveTo (ex).

Move the drawing point to the given position.

4.24.2 Constructor & Destructor Documentation

EMRMOVETOEX() [1/2]

```
EMF::EMRMOVETOEX::EMRMOVETOEX (
            INT x,
            INT y)  [inline]
```

Parameters

x	new x position in logical coordinates.
y	new y position in logical coordinates.

References EMRMOVETOEX().

Referenced by EMRMOVETOEX().

EMRMOVETOEX() [2/2]

```
EMF::EMRMOVETOEX::EMRMOVETOEX (
            DATASTREAM & ds)  [inline]
```

Construct a MoveToEx record from the input stream.

Parameters

ds	Metafile datastream.

4.24.3 Member Function Documentation

execute()

```
void EMF::EMRMOVETOEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRMOVETOEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRMOVETOEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

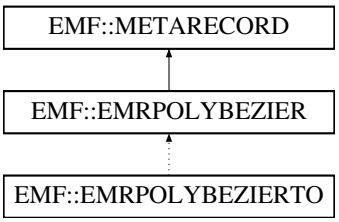
- libemf.h

4.25 EMF::EMRPOLYBEZIER Class Reference

EMF Polybezier.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYBEZIER:



Public Member Functions

- EMRPOLYBEZIER (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYBEZIER (DATASTREAM &ds)
- ~EMRPOLYBEZIER ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.25.1 Detailed Description

EMF Polybezier.

Draw a polygonal Bezier curve to (what?)

4.25.2 Constructor & Destructor Documentation

EMRPOLYBEZIER() [1/2]

```
EMF::EMRPOLYBEZIER::EMRPOLYBEZIER (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.

points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIER().

Referenced by EMRPOLYBEZIER(), and EMRPOLYBEZIER().

EMRPOLYBEZIER() [2/2]

```
EMF::EMRPOLYBEZIER::EMRPOLYBEZIER (
            DATASTREAM & ds)  [inline]
```

Construct a PolyBezier record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYBEZIER().

~EMRPOLYBEZIER()

```
EMF::EMRPOLYBEZIER::~EMRPOLYBEZIER ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.25.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYBEZIER::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO.

serialize()

```
bool EMF::EMRPOLYBEZIER::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO.

size()

```
int EMF::EMRPOLYBEZIER::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO.

The documentation for this class was generated from the following file:

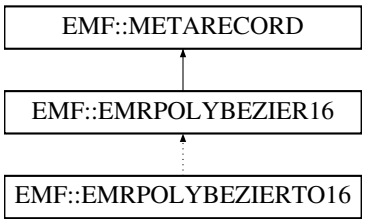
- libemf.h

4.26 EMF::EMRPOLYBEZIER16 Class Reference

EMF Polybezier16.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRPOLYBEZIER16:



Public Member Functions

- EMRPOLYBEZIER16 (const RECTL *bounds, const POINT16 *points, INT n)
- EMRPOLYBEZIER16 (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYBEZIER16 (DATASTREAM &ds)
- ~EMRPOLYBEZIER16 ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.26.1 Detailed Description

EMF Polybezier16.

Draw a polygonal Bezier curve to (what?) using 16-bit points.

4.26.2 Constructor & Destructor Documentation

EMRPOLYBEZIER16() [1/3]

```
EMF::EMRPOLYBEZIER16::EMRPOLYBEZIER16 (
            const RECTL * bounds,
            const POINT16 * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIER16().

Referenced by EMRPOLYBEZIER16(), EMRPOLYBEZIER16(), and EMRPOLYBEZIER16().

EMRPOLYBEZIER16() [2/3]

```
EMF::EMRPOLYBEZIER16::EMRPOLYBEZIER16 (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Convenience constructor with POINTs.

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIER16().

EMRPOLYBEZIER16() [3/3]

```
EMF::EMRPOLYBEZIER16::EMRPOLYBEZIER16 (
            DATASTREAM & ds)  [inline]
```

Construct a PolyBezier record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYBEZIER16().

~EMRPOLYBEZIER16()

```
EMF::EMRPOLYBEZIER16::~EMRPOLYBEZIER16 ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.26.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYBEZIER16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO16.

serialize()

```
bool EMF::EMRPOLYBEZIER16::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO16.

size()

```
int EMF::EMRPOLYBEZIER16::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

Reimplemented in EMF::EMRPOLYBEZIERTO16.

The documentation for this class was generated from the following file:

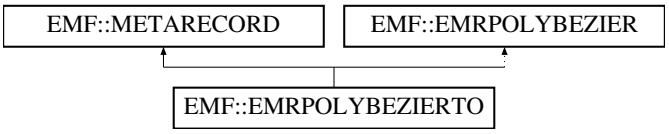
- libemf.h

4.27 EMF::EMRPOLYBEZIERTO Class Reference

EMF PolyBezierTo.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRPOLYBEZIERTO:



Public Member Functions

- EMRPOLYBEZIERTO (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYBEZIERTO (DATASTREAM &ds)
- ~EMRPOLYBEZIERTO ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.27.1 Detailed Description

EMF PolyBezierTo.

Draw a polygonal Bezier curve to (what?)

4.27.2 Constructor & Destructor Documentation

EMRPOLYBEZIERTO() [1/2]

```
EMF::EMRPOLYBEZIERTO::EMRPOLYBEZIERTO (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIERTO().

Referenced by EMRPOLYBEZIERTO(), and EMRPOLYBEZIERTO().

EMRPOLYBEZIERTO() [2/2]

```
EMF::EMRPOLYBEZIERTO::EMRPOLYBEZIERTO (
            DATASTREAM & ds)  [inline]
```

Construct a PolyBezier record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYBEZIERTO().

~EMRPOLYBEZIERTO()

```
EMF::EMRPOLYBEZIERTO::~EMRPOLYBEZIERTO ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.27.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYBEZIERTO::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYBEZIERTO::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYBEZIERTO::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

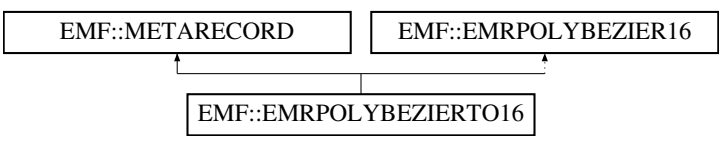
- libemf.h

4.28 EMF::EMRPOLYBEZIERTO16 Class Reference

EMF PolyBezierTo16.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYBEZIERTO16:



Public Member Functions

- EMRPOLYBEZIERTO16 (const RECTL *bounds, const POINT16 *points, INT n)
- EMRPOLYBEZIERTO16 (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYBEZIERTO16 (DATASTREAM &ds)
- ~EMRPOLYBEZIERTO16 ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.28.1 Detailed Description

EMF PolyBezierTo16.

Draw a polygonal Bezier curve to (what?) using 16-bit points

4.28.2 Constructor & Destructor Documentation

EMRPOLYBEZIERTO16() [1/3]

```
EMF::EMRPOLYBEZIERTO16::EMRPOLYBEZIERTO16 (
            const RECTL * bounds,
            const POINT16 * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIERTO16().

Referenced by EMRPOLYBEZIERTO16(), EMRPOLYBEZIERTO16(), and EMRPOLYBEZIERTO16().

EMRPOLYBEZIERTO16() [2/3]

```
EMF::EMRPOLYBEZIERTO16::EMRPOLYBEZIERTO16 (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Convenience constructor with POINTs.

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYBEZIERTO16().

EMRPOLYBEZIERTO16() [3/3]

```
EMF::EMRPOLYBEZIERTO16::EMRPOLYBEZIERTO16 (
            DATASTREAM & ds)  [inline]
```

Construct a PolyBezier record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYBEZIERTO16().

~EMRPOLYBEZIERTO16()

```
EMF::EMRPOLYBEZIERTO16::~EMRPOLYBEZIERTO16 ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.28.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYBEZIERTO16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYBEZIERTO16::serialize (
             DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYBEZIERTO16::size (
             void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

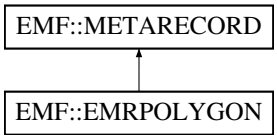
- libemf.h

4.29 EMF::EMRPOLYGON Class Reference

EMF Filled Polygon.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRPOLYGON:



Public Member Functions

- EMRPOLYGON (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYGON (DATASTREAM &ds)
- ~EMRPOLYGON ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.29.1 Detailed Description

EMF Filled Polygon.

Draw a filled polygon.

4.29.2 Constructor & Destructor Documentation

EMRPOLYGON() [1/2]

```
EMF::EMRPOLYGON::EMRPOLYGON (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.
n	number of vertices in points.

References EMRPOLYGON().

Referenced by EMRPOLYGON(), and EMRPOLYGON().

EMRPOLYGON() [2/2]

```
EMF::EMRPOLYGON::EMRPOLYGON (
            DATASTREAM & ds)  [inline]
```

Construct a Polygon record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYGON().

~EMRPOLYGON()

```
EMF::EMRPOLYGON::~EMRPOLYGON ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.29.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYGON::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYGON::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYGON::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

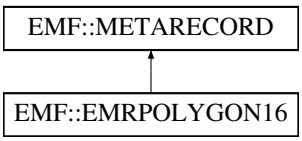
- libemf.h

4.30 EMF::EMRPOLYGON16 Class Reference

EMF Filled Polygon16.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYGON16:



Public Member Functions

- EMRPOLYGON16 (const RECTL *bounds, const POINT *points, INT16 n)
- EMRPOLYGON16 (const RECTL *bounds, const POINT16 *points, INT16 n)
- EMRPOLYGON16 (DATASTREAM &ds)
- ~EMRPOLYGON16 ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.30.1 Detailed Description

EMF Filled Polygon16.

Draw a filled polygon (with 16-bit points).

4.30.2 Constructor & Destructor Documentation

EMRPOLYGON16() [1/3]

```
EMF::EMRPOLYGON16::EMRPOLYGON16 (
            const RECTL * bounds,
            const POINT * points,
            INT16 n)  [inline]
```

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.
n	number of vertices in points.

References EMRPOLYGON16().

Referenced by EMRPOLYGON16(), EMRPOLYGON16(), and EMRPOLYGON16().

EMRPOLYGON16() [2/3]

```
EMF::EMRPOLYGON16::EMRPOLYGON16 (
            const RECTL * bounds,
            const POINT16 * points,
            INT16 n)  [inline]
```

Additional constructor which takes a POINT16 array.

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.
n	number of vertices in points.

References EMRPOLYGON16().

EMRPOLYGON16() [3/3]

```
EMF::EMRPOLYGON16::EMRPOLYGON16 (
            DATASTREAM & ds)  [inline]
```

Construct a Polygon record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYGON16().

~EMRPOLYGON16()

```
EMF::EMRPOLYGON16::~EMRPOLYGON16 ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.30.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYGON16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYGON16::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYGON16::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

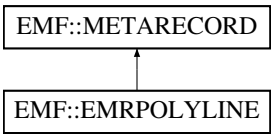
- libemf.h

4.31 EMF::EMRPOLYLINE Class Reference

EMF Polyline.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYLINE:



Public Member Functions

- EMRPOLYLINE (const RECTL *bounds, const POINT *points, INT n)
- ~EMRPOLYLINE ()
- EMRPOLYLINE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.31.1 Detailed Description

EMF Polyline.

Draw a series of connected lines.

4.31.2 Constructor & Destructor Documentation

EMRPOLYLINE() [1/2]

```
EMF::EMRPOLYLINE::EMRPOLYLINE (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polyline.
points	array of polyline vertices.
n	number of vertices in points.

References EMRPOLYLINE().

Referenced by EMRPOLYLINE(), and EMRPOLYLINE().

~EMRPOLYLINE()

```
EMF::EMRPOLYLINE::~EMRPOLYLINE ()  [inline]
```

Destructor frees a copy of the points it buffered.

EMRPOLYLINE() [2/2]

```
EMF::EMRPOLYLINE::EMRPOLYLINE (
            DATASTREAM & ds)  [inline]
```

Construct a Polyline record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYLINE().

4.31.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYLINE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYLINE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYLINE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

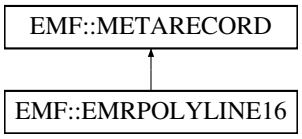
- libemf.h

4.32 EMF::EMRPOLYLINE16 Class Reference

EMF Polyline16.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYLINE16:



Public Member Functions

- EMRPOLYLINE16 (const RECTL *bounds, const POINT16 *points, INT n)
- EMRPOLYLINE16 (const RECTL *bounds, const POINT *points, INT n)
- ~EMRPOLYLINE16 ()
- EMRPOLYLINE16 (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.32.1 Detailed Description

EMF Polyline16.

Draw a series of connected lines using 16-bit points.

4.32.2 Constructor & Destructor Documentation

EMRPOLYLINE16() [1/3]

```
EMF::EMRPOLYLINE16::EMRPOLYLINE16 (
            const RECTL * bounds,
            const POINT16 * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polyline.
points	array of polyline vertices.
n	number of vertices in points.

References EMRPOLYLINE16().

Referenced by EMRPOLYLINE16(), EMRPOLYLINE16(), and EMRPOLYLINE16().

EMRPOLYLINE16() [2/3]

```
EMF::EMRPOLYLINE16::EMRPOLYLINE16 (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Constructor with POINTs.

Parameters

bounds	overall bounding box of polyline.
points	array of polyline vertices.
n	number of vertices in points.

References EMRPOLYLINE16().

~EMRPOLYLINE16()

```
EMF::EMRPOLYLINE16::~EMRPOLYLINE16 ()  [inline]
```

Destructor frees a copy of the points it buffered.

EMRPOLYLINE16() [3/3]

```
EMF::EMRPOLYLINE16::EMRPOLYLINE16 (
            DATASTREAM & ds)  [inline]
```

Construct a Polyline record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYLINE16().

4.32.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYLINE16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYLINE16::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYLINE16::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

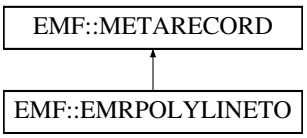
- libemf.h

4.33 EMF::EMRPOLYLINETO Class Reference

EMF PolylineTo.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYLINETO:



Public Member Functions

- EMRPOLYLINETO (const RECTL ∗bounds, const POINT ∗points, INT n)
- EMRPOLYLINETO (DATASTREAM &ds)
- ∼EMRPOLYLINETO ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ∼METARECORD ()

4.33.1 Detailed Description

EMF PolylineTo.

Draw a polygonal line curve to (what?)

4.33.2 Constructor & Destructor Documentation

EMRPOLYLINETO() [1/2]

```
EMF::EMRPOLYLINETO::EMRPOLYLINETO (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYLINETO().

Referenced by EMRPOLYLINETO(), and EMRPOLYLINETO().

EMRPOLYLINETO() [2/2]

```
EMF::EMRPOLYLINETO::EMRPOLYLINETO (
            DATASTREAM & ds)  [inline]
```

Construct a PolylineTo record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYLINETO().

~EMRPOLYLINETO()

```
EMF::EMRPOLYLINETO::~EMRPOLYLINETO ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.33.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYLINETO::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYLINETO::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYLINETO::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

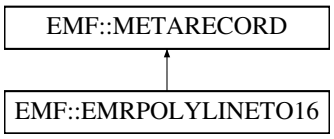
- libemf.h

4.34 EMF::EMRPOLYLINETO16 Class Reference

EMF PolylineTo16.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRPOLYLINETO16:



Public Member Functions

- EMRPOLYLINETO16 (const RECTL *bounds, const POINT16 *points, INT n)
- EMRPOLYLINETO16 (const RECTL *bounds, const POINT *points, INT n)
- EMRPOLYLINETO16 (DATASTREAM &ds)
- ~EMRPOLYLINETO16 ()
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.34.1 Detailed Description

EMF PolylineTo16.

Draw a polygonal line curve to (what?)

4.34.2 Constructor & Destructor Documentation

EMRPOLYLINETO16() [1/3]

```
EMF::EMRPOLYLINETO16::EMRPOLYLINETO16 (
            const RECTL * bounds,
            const POINT16 * points,
            INT n)  [inline]
```

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYLINETO16().

Referenced by EMRPOLYLINETO16(), EMRPOLYLINETO16(), and EMRPOLYLINETO16().

EMRPOLYLINETO16() [2/3]

```
EMF::EMRPOLYLINETO16::EMRPOLYLINETO16 (
            const RECTL * bounds,
            const POINT * points,
            INT n)  [inline]
```

Convenience constructor with POINTs.

Parameters

bounds	overall bounding box of polybezier curve.
points	array of polybezier vertices.
n	number of vertices in points.

References EMRPOLYLINETO16().

EMRPOLYLINETO16() [3/3]

```
EMF::EMRPOLYLINETO16::EMRPOLYLINETO16 (
            DATASTREAM & ds)  [inline]
```

Construct a PolylineTo record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYLINETO16().

~EMRPOLYLINETO16()

```
EMF::EMRPOLYLINETO16::~EMRPOLYLINETO16 ()  [inline]
```

Destructor frees a copy of the points it buffered.

4.34.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYLINETO16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYLINETO16::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYLINETO16::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

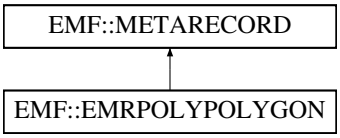
- libemf.h

4.35 EMF::EMRPOLYPOLYGON Class Reference

EMF Poly Polygon.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRPOLYPOLYGON:



Public Member Functions

- EMRPOLYPOLYGON (const RECTL *bounds, const POINT *points, const INT *counts, UINT polygons)
- ~EMRPOLYPOLYGON ()
- EMRPOLYPOLYGON (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.35.1 Detailed Description

EMF Poly Polygon.

Draw several filled polygons.

4.35.2 Constructor & Destructor Documentation

EMRPOLYPOLYGON() [1/2]

```
EMF::EMRPOLYPOLYGON::EMRPOLYPOLYGON (
            const RECTL * bounds,
            const POINT * points,
            const INT * counts,
            UINT polygons)  [inline]
```

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.

counts	array of number of vertices in each polygon.
polygons	number of polygons.

References EMRPOLYPOLYGON().

Referenced by EMRPOLYPOLYGON(), and EMRPOLYPOLYGON().

~EMRPOLYPOLYGON()

```
EMF::EMRPOLYPOLYGON::~EMRPOLYPOLYGON ()  [inline]
```

Destructor frees a copy of the counts and points it buffered.

EMRPOLYPOLYGON() [2/2]

```
EMF::EMRPOLYPOLYGON::EMRPOLYPOLYGON (
            DATASTREAM & ds)  [inline]
```

Construct a Polygon record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYPOLYGON().

4.35.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYPOLYGON::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYPOLYGON::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYPOLYGON::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

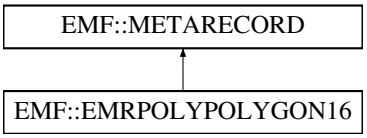
- libemf.h

4.36 EMF::EMRPOLYPOLYGON16 Class Reference

EMF Poly Polygon16.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRPOLYPOLYGON16:



Public Member Functions

- EMRPOLYPOLYGON16 (const RECTL *bounds, const POINT *points, const INT *counts, UINT polygons)
- EMRPOLYPOLYGON16 (const RECTL *bounds, const POINT16 *points, const INT *counts, UINT16 polygons)
- ~EMRPOLYPOLYGON16 ()
- EMRPOLYPOLYGON16 (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.36.1 Detailed Description

EMF Poly Polygon16.

Draw several filled polygons (with 16-bit points).

4.36.2 Constructor & Destructor Documentation

EMRPOLYPOLYGON16() [1/3]

```
EMF::EMRPOLYPOLYGON16::EMRPOLYPOLYGON16 (
            const RECTL * bounds,
            const POINT * points,
            const INT * counts,
            UINT polygons)  [inline]
```

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.
counts	array of number of vertices in each polygon.
polygons	number of polygons.

References EMRPOLYPOLYGON16().

Referenced by EMRPOLYPOLYGON16(), EMRPOLYPOLYGON16(), and EMRPOLYPOLYGON16().

EMRPOLYPOLYGON16() [2/3]

```
EMF::EMRPOLYPOLYGON16::EMRPOLYPOLYGON16 (
            const RECTL * bounds,
            const POINT16 * points,
            const INT * counts,
            UINT16 polygons)  [inline]
```

Additional constructor which takes a POINT16 structure.

Parameters

bounds	overall bounding box of polygon.
points	array of polygon vertices.
counts	array of number of vertices in each polygon.

polygons	number of polygons.

References EMRPOLYPOLYGON16().

~EMRPOLYPOLYGON16()

```
EMF::EMRPOLYPOLYGON16::~EMRPOLYPOLYGON16 ()  [inline]
```

Destructor frees a copy of the counts and points it buffered.

EMRPOLYPOLYGON16() [3/3]

```
EMF::EMRPOLYPOLYGON16::EMRPOLYPOLYGON16 (
            DATASTREAM & ds)  [inline]
```

Construct a Polygon record from the input stream.

Parameters

ds	Metafile datastream.

References EMRPOLYPOLYGON16().

4.36.3 Member Function Documentation

execute()

```
void EMF::EMRPOLYPOLYGON16::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRPOLYPOLYGON16::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRPOLYPOLYGON16::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

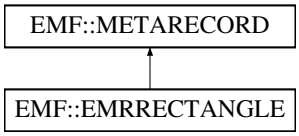
- libemf.h

4.37 EMF::EMRRECTANGLE Class Reference

EMF Rectangle.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRRECTANGLE:



Public Member Functions

- EMRRECTANGLE (INT left, INT top, INT right, INT bottom)
- EMRRECTANGLE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.37.1 Detailed Description

EMF Rectangle.

Draw a rectangle.

4.37.2 Constructor & Destructor Documentation

EMRRECTANGLE() [1/2]

```
EMF::EMRRECTANGLE::EMRRECTANGLE (
              INT left,
              INT top,
              INT right,
              INT bottom)  [inline]
```

Parameters

left	x position of left side of rectangle.
top	y position of top side of rectangle.
right	x position of right edge of rectangle.
bottom	y position of bottom edge of rectangle.

References EMRRECTANGLE().

Referenced by EMRRECTANGLE().

EMRRECTANGLE() [2/2]

```
EMF::EMRRECTANGLE::EMRRECTANGLE (
              DATASTREAM & ds)  [inline]
```

Construct a Rectangle record from the input stream.

Parameters

ds	Metafile datastream.

4.37.3 Member Function Documentation

execute()

```
void EMF::EMRRECTANGLE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRRECTANGLE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRRECTANGLE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

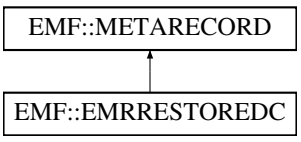
- libemf.h

4.38 EMF::EMRRESTOREDC Class Reference

EMF Restore DC.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRRESTOREDC:



Public Member Functions

- EMRRESTOREDC (INT n)
- EMRRESTOREDC (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.38.1 Detailed Description

EMF Restore DC.

Use the stored device context in this context(?)

4.38.2 Constructor & Destructor Documentation

EMRRESTOREDC() [1/2]

```
EMF::EMRRESTOREDC::EMRRESTOREDC (
              INT n)  [inline]
```

Create a Restore DC record.

References EMRRESTOREDC().

Referenced by EMRRESTOREDC().

EMRRESTOREDC() [2/2]

```
EMF::EMRRESTOREDC::EMRRESTOREDC (
              DATASTREAM & ds)  [inline]
```

Construct an Restoredc record from the input stream.

Parameters

ds	Metafile datastream.

4.38.3 Member Function Documentation

execute()

```
void EMF::EMRRESTOREDC::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRRESTOREDC::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRRESTOREDC::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

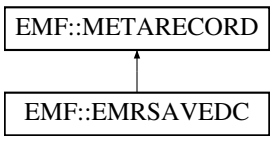
- libemf.h

4.39 EMF::EMRSAVEDC Class Reference

EMF Save DC.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSAVEDC:



Public Member Functions

- EMRSAVEDC (void)
- EMRSAVEDC (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.39.1 Detailed Description

EMF Save DC.

Save the device context (i.e., push contents on a stack of some variety?)

4.39.2 Constructor & Destructor Documentation

EMRSAVEDC() [1/2]

```
EMF::EMRSAVEDC::EMRSAVEDC (
            void )  [inline]
```

Create a Save DC record.

References EMRSAVEDC().

Referenced by EMRSAVEDC().

EMRSAVEDC() [2/2]

```
EMF::EMRSAVEDC::EMRSAVEDC (
            DATASTREAM & ds)  [inline]
```

Construct an Savedc record from the input stream.

Parameters

ds	Metafile datastream.

4.39.3 Member Function Documentation

execute()

```
void EMF::EMRSAVEDC::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSAVEDC::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSAVEDC::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

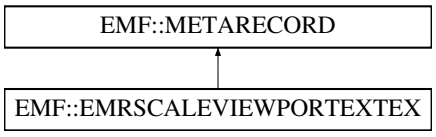
- libemf.h

4.40 EMF::EMRSCALEVIEWPORTEXTEX Class Reference

EMF Scale Viewport Extents (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSCALEVIEWPORTEXTEX:



Public Member Functions

- EMRSCALEVIEWPORTEXTEX (LONG x_num, LONG x_den, LONG y_num, LONG y_den)
- EMRSCALEVIEWPORTEXTEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.40.1 Detailed Description

EMF Scale Viewport Extents (ex).

The viewport extent is the device coordinate (i.e. pixels) size of the viewport. Scale the viewport extents by the ratios of the given values. (OpenOffice accepts this, but not SETVIEWPORTEXT(?))

4.40.2 Constructor & Destructor Documentation

EMRSCALEVIEWPORTEXTEX() [1/2]

```
EMF::EMRSCALEVIEWPORTEXTEX::EMRSCALEVIEWPORTEXTEX (
            LONG x_num,
            LONG x_den,
            LONG y_num,
            LONG y_den)  [inline]
```

Parameters

x_num	numerator of x scale
x_den	denominator of x scale
y_num	numerator of y scale
y_den	denominator of y scale

References EMRSCALEVIEWPORTEXTEX().

Referenced by EMRSCALEVIEWPORTEXTEX().

EMRSCALEVIEWPORTEXTEX() [2/2]

```
EMF::EMRSCALEVIEWPORTEXTEX::EMRSCALEVIEWPORTEXTEX (
            DATASTREAM & ds)  [inline]
```

Construct a ScaleViewportExtEx record from the input stream.

Parameters

ds	Metafile datastream.

4.40.3 Member Function Documentation

execute()

```
void EMF::EMRSCALEVIEWPORTEXTEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSCALEVIEWPORTEXTEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSCALEVIEWPORTEXTEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

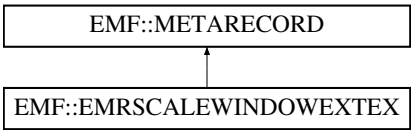
- libemf.h

4.41 EMF::EMRSCALEWINDOWEXTEX Class Reference

EMF Scale Window Extents (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSCALEWINDOWEXTEX:



Public Member Functions

- EMRSCALEWINDOWEXTEX (LONG x_num, LONG x_den, LONG y_num, LONG y_den)
- EMRSCALEWINDOWEXTEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.41.1 Detailed Description

EMF Scale Window Extents (ex).

The window extent is the logical coordinate size of the window. Scale the window extents by the ratios of the given values.

4.41.2 Constructor & Destructor Documentation

EMRSCALEWINDOWEXTEX() [1/2]

```
EMF::EMRSCALEWINDOWEXTEX::EMRSCALEWINDOWEXTEX (
            LONG x_num,
            LONG x_den,
            LONG y_num,
            LONG y_den)  [inline]
```

Parameters

x_num	numerator of x scale
x_den	denominator of x scale

y_num	numerator of y scale
y_den	denominator of y scale

References EMRSCALEWINDOWEXTEX().

Referenced by EMRSCALEWINDOWEXTEX().

EMRSCALEWINDOWEXTEX() [2/2]

```
EMF::EMRSCALEWINDOWEXTEX::EMRSCALEWINDOWEXTEX (
            DATASTREAM & ds)  [inline]
```

Construct a ScaleWindowExtEx record from the input stream.

Parameters

ds	Metafile datastream.

4.41.3 Member Function Documentation

execute()

```
void EMF::EMRSCALEWINDOWEXTEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSCALEWINDOWEXTEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSCALEWINDOWEXTEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

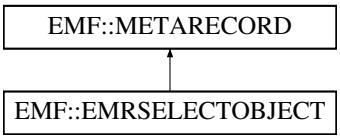
- libemf.h

4.42 EMF::EMRSELECTOBJECT Class Reference

EMF Select Object.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSELECTOBJECT:



Public Member Functions

- EMRSELECTOBJECT (HGDIOBJ object)
- EMRSELECTOBJECT (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.42.1 Detailed Description

EMF Select Object.

Activate (make current) the given object, such as a pen, brush or font.

4.42.2 Constructor & Destructor Documentation

EMRSELECTOBJECT() [1/2]

```
EMF::EMRSELECTOBJECT::EMRSELECTOBJECT (
            HGDIOBJ object)  [inline]
```

Parameters

object	the object to make active.

References EMRSELECTOBJECT().

Referenced by EMRSELECTOBJECT().

EMRSELECTOBJECT() [2/2]

```
EMF::EMRSELECTOBJECT::EMRSELECTOBJECT (
            DATASTREAM & ds)  [inline]
```

Construct a SelectObject record from the input stream.

Parameters

ds	Metafile datastream.

4.42.3 Member Function Documentation

execute()

```
void EMF::EMRSELECTOBJECT::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

References EMF::METAFILEDEVICECONTEXT::emf_handles.

serialize()

```
bool EMF::EMRSELECTOBJECT::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSELECTOBJECT::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following files:

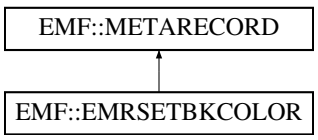
- libemf.h
- libemf.cpp

4.43 EMF::EMRSETBKCOLOR Class Reference

EMF Set Background Color.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRSETBKCOLOR:



Public Member Functions

- EMRSETBKCOLOR (COLORREF color)
- EMRSETBKCOLOR (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.43.1 Detailed Description

EMF Set Background Color.

Sets the background color.

4.43.2 Constructor & Destructor Documentation

EMRSETBKCOLOR() [1/2]

```
EMF::EMRSETBKCOLOR::EMRSETBKCOLOR (
            COLORREF color)  [inline]
```

Parameters

color	background color

References EMRSETBKCOLOR().

Referenced by EMRSETBKCOLOR().

EMRSETBKCOLOR() [2/2]

```
EMF::EMRSETBKCOLOR::EMRSETBKCOLOR (
            DATASTREAM & ds)  [inline]
```

Construct a SetBkColor record from the input datastream.

Parameters

ds	Metafile datastream.

4.43.3 Member Function Documentation

execute()

```
void EMF::EMRSETBKCOLOR::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.

dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETBKCOLOR::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETBKCOLOR::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

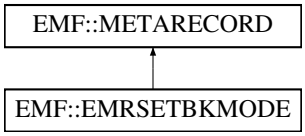
- libemf.h

4.44 EMF::EMRSETBKMODE Class Reference

EMF Set Background Mode.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EMRSETBKMODE:



Public Member Functions

- EMRSETBKMODE (DWORD mode)
- EMRSETBKMODE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.44.1 Detailed Description

EMF Set Background Mode.

Set the background mode: transparent or opaque. Seems to be ignored by StarOffice. (Appears to work for text, though.)

4.44.2 Constructor & Destructor Documentation

EMRSETBKMODE() [1/2]

```
EMF::EMRSETBKMODE::EMRSETBKMODE (
            DWORD mode)  [inline]
```

Parameters

mode	background mode.

References EMRSETBKMODE().

Referenced by EMRSETBKMODE().

EMRSETBKMODE() [2/2]

```
EMF::EMRSETBKMODE::EMRSETBKMODE (
            DATASTREAM & ds)  [inline]
```

Construct a SetBkMode record from the input datastream.

Parameters

ds	Metafile datastream.

4.44.3 Member Function Documentation

execute()

```
void EMF::EMRSETBKMODE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETBKMODE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETBKMODE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

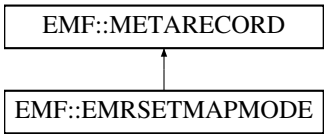
- libemf.h

4.45 EMF::EMRSETMAPMODE Class Reference

EMF Set Mapping Mode.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETMAPMODE:



Public Member Functions

- EMRSETMAPMODE (DWORD mode)
- EMRSETMAPMODE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.45.1 Detailed Description

EMF Set Mapping Mode.

Set the mapping mode: HI (X style), LO (OpenGL style). Totally ignored by StarOffice as near as I can tell.

4.45.2 Constructor & Destructor Documentation

EMRSETMAPMODE() [1/2]

```
EMF::EMRSETMAPMODE::EMRSETMAPMODE (
            DWORD mode)  [inline]
```

Parameters

mode	window mapping mode

References EMRSETMAPMODE().

Referenced by EMRSETMAPMODE().

EMRSETMAPMODE() [2/2]

```
EMF::EMRSETMAPMODE::EMRSETMAPMODE (
            DATASTREAM & ds)  [inline]
```

Construct a SetMapMode record from the input stream.

Parameters

ds	Metafile datastream.

4.45.3 Member Function Documentation

execute()

```
void EMF::EMRSETMAPMODE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETMAPMODE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETMAPMODE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

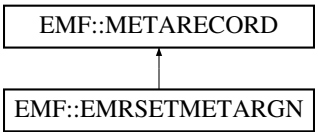
- libemf.h

4.46 EMF::EMRSETMETARGN Class Reference

EMF Set Meta Region.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETMETARGN:



Public Member Functions

- EMRSETMETARGN (void)
- EMRSETMETARGN (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.46.1 Detailed Description

EMF Set Meta Region.

I really have no idea.

4.46.2 Constructor & Destructor Documentation

EMRSETMETARGN() [1/2]

```
EMF::EMRSETMETARGN::EMRSETMETARGN (
            void )  [inline]
```

Create a Set Meta Rgn record.

References EMRSETMETARGN().

Referenced by EMRSETMETARGN().

EMRSETMETARGN() [2/2]

```
EMF::EMRSETMETARGN::EMRSETMETARGN (
            DATASTREAM & ds)  [inline]
```

Construct an Setmetargn record from the input stream.

Parameters

ds	Metafile datastream.

4.46.3 Member Function Documentation

execute()

```
void EMF::EMRSETMETARGN::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETMETARGN::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETMETARGN::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

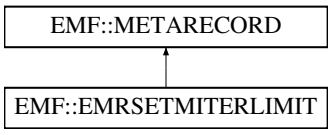
- libemf.h

4.47 EMF::EMRSETMITERLIMIT Class Reference

EMF SetMiterLimit.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETMITERLIMIT:



Public Member Functions

- EMRSETMITERLIMIT (FLOAT limit)
- EMRSETMITERLIMIT (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.47.1 Detailed Description

EMF SetMiterLimit.

Sets the length limit for miter joins.

4.47.2 Constructor & Destructor Documentation

EMRSETMITERLIMIT() [1/2]

```
EMF::EMRSETMITERLIMIT::EMRSETMITERLIMIT (
            FLOAT limit)  [inline]
```

Parameters

limit	miter length limit.

References EMRSETMITERLIMIT().

Referenced by EMRSETMITERLIMIT().

EMRSETMITERLIMIT() [2/2]

```
EMF::EMRSETMITERLIMIT::EMRSETMITERLIMIT (
            DATASTREAM & ds)  [inline]
```

Construct a SetMiterLimit record from the input stream.

Parameters

ds	Metafile datastream.

4.47.3 Member Function Documentation

execute()

```
void EMF::EMRSETMITERLIMIT::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETMITERLIMIT::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETMITERLIMIT::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

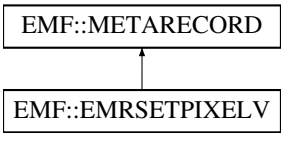
- libemf.h

4.48 EMF::EMRSETPIXELV Class Reference

EMF Set Pixel.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETPIXELV:



Public Member Functions

- EMRSETPIXELV (INT x, INT y, COLORREF color)
- EMRSETPIXELV (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.48.1 Detailed Description

EMF Set Pixel.

Set the given pixel to the given color.

4.48.2 Constructor & Destructor Documentation

EMRSETPIXELV() [1/2]

```
EMF::EMRSETPIXELV::EMRSETPIXELV (
            INT x,
            INT y,
            COLORREF color)  [inline]
```

Parameters

x	x position at which to draw pixel.
y	y position at which to draw pixel.
color	color of pixel.

References EMRSETPIXELV().

Referenced by EMRSETPIXELV().

EMRSETPIXELV() [2/2]

```
EMF::EMRSETPIXELV::EMRSETPIXELV (
            DATASTREAM & ds)  [inline]
```

Construct a SetPixelV record from the input stream.

Parameters

ds	Metafile datastream.

4.48.3 Member Function Documentation

execute()

```
void EMF::EMRSETPIXELV::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETPIXELV::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETPIXELV::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

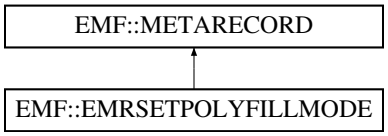
- libemf.h

4.49 EMF::EMRSETPOLYFILLMODE Class Reference

EMF Set the Polygon Fill Mode.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETPOLYFILLMODE:



Public Member Functions

- EMRSETPOLYFILLMODE (DWORD mode)
- EMRSETPOLYFILLMODE (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.49.1 Detailed Description

EMF Set the Polygon Fill Mode.

Set the polygon fill mode: ALTERNATE or WINDING

4.49.2 Constructor & Destructor Documentation

EMRSETPOLYFILLMODE() [1/2]

```
EMF::EMRSETPOLYFILLMODE::EMRSETPOLYFILLMODE (
            DWORD mode)  [inline]
```

Parameters

mode	background mode.

References EMRSETPOLYFILLMODE().

Referenced by EMRSETPOLYFILLMODE().

EMRSETPOLYFILLMODE() [2/2]

```
EMF::EMRSETPOLYFILLMODE::EMRSETPOLYFILLMODE (
            DATASTREAM & ds)  [inline]
```

Construct a SetPolyFillMode record from the input stream.

Parameters

ds	Metafile datastream.

4.49.3 Member Function Documentation

execute()

```
void EMF::EMRSETPOLYFILLMODE::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETPOLYFILLMODE::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETPOLYFILLMODE::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

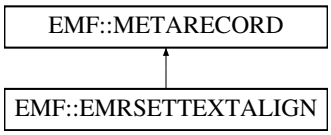
- libemf.h

4.50 EMF::EMRSETTEXTALIGN Class Reference

EMF Set Text Alignment.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETTEXTALIGN:



Public Member Functions

- EMRSETTEXTALIGN (UINT mode)
- EMRSETTEXTALIGN (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ∼METARECORD ()

4.50.1 Detailed Description

EMF Set Text Alignment.

Determines the justification of the text with respect to its position.

4.50.2 Constructor & Destructor Documentation

EMRSETTEXTALIGN() [1/2]

```
EMF::EMRSETTEXTALIGN::EMRSETTEXTALIGN (
            UINT mode)  [inline]
```

Parameters

mode	text alignment mode.

References EMRSETTEXTALIGN().

Referenced by EMRSETTEXTALIGN().

EMRSETTEXTALIGN() [2/2]

```
EMF::EMRSETTEXTALIGN::EMRSETTEXTALIGN (
            DATASTREAM & ds)  [inline]
```

Construct a SetTextAlign record from the input datastream.

Parameters

ds	Metafile datastream.

4.50.3 Member Function Documentation

execute()

```
void EMF::EMRSETTEXTALIGN::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETTEXTALIGN::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETTEXTALIGN::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

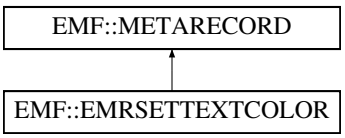
- libemf.h

4.51 EMF::EMRSETTEXTCOLOR Class Reference

EMF Set Text Color.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETTEXTCOLOR:



Public Member Functions

- EMRSETTEXTCOLOR (COLORREF color)
- EMRSETTEXTCOLOR (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.51.1 Detailed Description

EMF Set Text Color.

Sets the foreground color of text.

4.51.2 Constructor & Destructor Documentation

EMRSETTEXTCOLOR() [1/2]

```
EMF::EMRSETTEXTCOLOR::EMRSETTEXTCOLOR (
            COLORREF color)  [inline]
```

Parameters

color	text foreground color

References EMRSETTEXTCOLOR().

Referenced by EMRSETTEXTCOLOR().

EMRSETTEXTCOLOR() [2/2]

```
EMF::EMRSETTEXTCOLOR::EMRSETTEXTCOLOR (
            DATASTREAM & ds)  [inline]
```

Construct a SetTextColor record from the input stream.

Parameters

ds	Metafile datastream.

4.51.3 Member Function Documentation

execute()

```
void EMF::EMRSETTEXTCOLOR::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETTEXTCOLOR::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETTEXTCOLOR::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

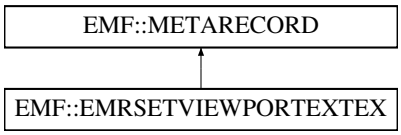
- libemf.h

4.52 EMF::EMRSETVIEWPORTEXTEX Class Reference

EMF Set Viewport Extents (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETVIEWPORTEXTEX:



Public Member Functions

- EMRSETVIEWPORTEXTEX (INT cx, INT cy)
- EMRSETVIEWPORTEXTEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.52.1 Detailed Description

EMF Set Viewport Extents (ex).

The viewport extent is the device coordinate (i.e. pixels) size of the viewport. Since W32 doesn't do any clipping, the purpose of this is not clear.

4.52.2 Constructor & Destructor Documentation

EMRSETVIEWPORTEXTEX() [1/2]

```
EMF::EMRSETVIEWPORTEXTEX::EMRSETVIEWPORTEXTEX (
            INT cx,
            INT cy)  [inline]
```

Parameters

cx	width of viewport in device coordinates
cy	height of viewport in device coordinates

References EMRSETVIEWPORTEXTEX().

Referenced by EMRSETVIEWPORTEXTEX().

EMRSETVIEWPORTEXTEX() [2/2]

```
EMF::EMRSETVIEWPORTEXTEX::EMRSETVIEWPORTEXTEX (
            DATASTREAM & ds)  [inline]
```

Construct a SetViewportExtEx record from the input stream.

Parameters

ds	Metafile datastream.

4.52.3 Member Function Documentation

execute()

```
void EMF::EMRSETVIEWPORTEXTEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETVIEWPORTEXTEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETVIEWPORTEXTEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

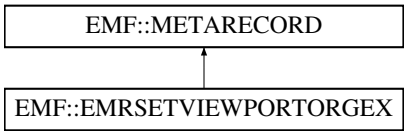
- libemf.h

4.53 EMF::EMRSETVIEWPORTORGEX Class Reference

EMF Set Viewport Origin (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETVIEWPORTORGEX:



Public Member Functions

- EMRSETVIEWPORTORGEX (INT x, INT y)
- EMRSETVIEWPORTORGEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.53.1 Detailed Description

EMF Set Viewport Origin (ex).

The viewport origin is a point in device coordinates (i.e., pixels) where the viewport starts. (For example, if you want to put several different views on the same page, you might use different viewports.)

4.53.2 Constructor & Destructor Documentation

EMRSETVIEWPORTORGEX() [1/2]

```
EMF::EMRSETVIEWPORTORGEX::EMRSETVIEWPORTORGEX (
            INT x,
            INT y)  [inline]
```

Parameters

x	x position of the viewport in device coordinates
y	y position of the viewport in device coordinates

References EMRSETVIEWPORTORGEX().

Referenced by EMRSETVIEWPORTORGEX().

EMRSETVIEWPORTORGEX() [2/2]

```
EMF::EMRSETVIEWPORTORGEX::EMRSETVIEWPORTORGEX (
            DATASTREAM & ds)  [inline]
```

Construct a SetVieportOrgEx record from the input stream.

Parameters

ds	Metafile datastream.

4.53.3 Member Function Documentation

execute()

```
void EMF::EMRSETVIEWPORTORGEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETVIEWPORTORGEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETVIEWPORTORGEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

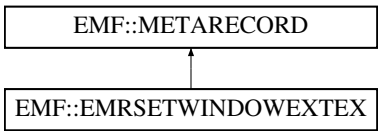
- libemf.h

4.54 EMF::EMRSETWINDOWEXTEX Class Reference

EMF Set Window Extent (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETWINDOWEXTEX:



Public Member Functions

- EMRSETWINDOWEXTEX (INT cx, INT cy)
- EMRSETWINDOWEXTEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.54.1 Detailed Description

EMF Set Window Extent (ex).

The window extents define the scale of the logical coordinates. For example, if your XY plot is from [-10,-10] to [10,10], then the window extents are [20,20].

4.54.2 Constructor & Destructor Documentation

EMRSETWINDOWEXTEX() [1/2]

```
EMF::EMRSETWINDOWEXTEX::EMRSETWINDOWEXTEX (
            INT cx,
            INT cy)  [inline]
```

Parameters

cx	width of window in logical coordinates.
cy	height of window in logical coordinates.

References EMRSETWINDOWEXTEX().

Referenced by EMRSETWINDOWEXTEX().

EMRSETWINDOWEXTEX() [2/2]

```
EMF::EMRSETWINDOWEXTEX::EMRSETWINDOWEXTEX (
            DATASTREAM & ds)  [inline]
```

Construct a SetWindowExtEx record from the input stream.

Parameters

ds	Metafile datastream.

4.54.3 Member Function Documentation

execute()

```
void EMF::EMRSETWINDOWEXTEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETWINDOWEXTEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETWINDOWEXTEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

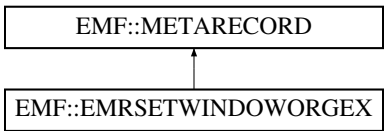
- libemf.h

4.55 EMF::EMRSETWINDOWORGEX Class Reference

EMF Set Window Origin (ex).

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETWINDOWORGEX:



Public Member Functions

- EMRSETWINDOWORGEX (INT x, INT y)
- EMRSETWINDOWORGEX (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.55.1 Detailed Description

EMF Set Window Origin (ex).

The window origin specifies the logical (i.e., real) coordinates of the upper, left corner of the viewport. (For example, if you want your XY plot's axis origin to be in the middle of the viewport, you'd set the window origin to something like [-1,-1].)

4.55.2 Constructor & Destructor Documentation

EMRSETWINDOWORGEX() [1/2]

```
EMF::EMRSETWINDOWORGEX::EMRSETWINDOWORGEX (
            INT x,
            INT y)  [inline]
```

Parameters

x	x coordinate of window origin in logical coordinates
y	y coordinate of window origin in logical coordinates

References EMRSETWINDOWORGEX().

Referenced by EMRSETWINDOWORGEX().

EMRSETWINDOWORGEX() [2/2]

```
EMF::EMRSETWINDOWORGEX::EMRSETWINDOWORGEX (
            DATASTREAM & ds)  [inline]
```

Construct a SetWindowOrgEx record from the input stream.

Parameters

ds	Metafile datastream.

4.55.3 Member Function Documentation

execute()

```
void EMF::EMRSETWINDOWORGEX::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETWINDOWORGEX::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETWINDOWORGEX::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

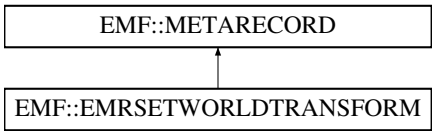
- libemf.h

4.56 EMF::EMRSETWORLDTRANSFORM Class Reference

EMF Set World Transform.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSETWORLDTRANSFORM:



Public Member Functions

- EMRSETWORLDTRANSFORM (const XFORM *transform)
- EMRSETWORLDTRANSFORM (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.56.1 Detailed Description

EMF Set World Transform.

Enhanced metafiles have a Coordinate Transformation which allows the contents to be rotated and transformed. Does not appear to work properly in StarOffice (but it's also possible I don't understand how it's supposed to work either).

4.56.2 Constructor & Destructor Documentation

EMRSETWORLDTRANSFORM() [1/2]

```
EMF::EMRSETWORLDTRANSFORM::EMRSETWORLDTRANSFORM (
            const XFORM * transform)  [inline]
```

Parameters

transform	the new transformation

References EMRSETWORLDTRANSFORM().

Referenced by EMRSETWORLDTRANSFORM().

EMRSETWORLDTRANSFORM() [2/2]

```
EMF::EMRSETWORLDTRANSFORM::EMRSETWORLDTRANSFORM (
            DATASTREAM & ds)  [inline]
```

Construct a SetWorldTransform record from the input stream.

Parameters

ds	Metafile datastream.

4.56.3 Member Function Documentation

execute()

```
void EMF::EMRSETWORLDTRANSFORM::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSETWORLDTRANSFORM::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSETWORLDTRANSFORM::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

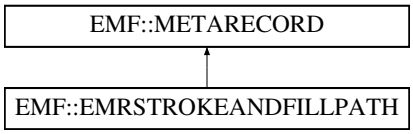
- libemf.h

4.57 EMF::EMRSTROKEANDFILLPATH Class Reference

EMF Stroke and Fill path.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSTROKEANDFILLPATH:



Public Member Functions

- EMRSTROKEANDFILLPATH (const RECTL ∗bounds)
- EMRSTROKEANDFILLPATH (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ∼METARECORD ()

4.57.1 Detailed Description

EMF Stroke and Fill path.

Stroke and Fill the path.

4.57.2 Constructor & Destructor Documentation

EMRSTROKEANDFILLPATH() [1/2]

```
EMF::EMRSTROKEANDFILLPATH::EMRSTROKEANDFILLPATH (
            const RECTL * bounds)  [inline]
```

Parameters

bounds	overall bounding box of polygon.

References EMRSTROKEANDFILLPATH().

Referenced by EMRSTROKEANDFILLPATH().

EMRSTROKEANDFILLPATH() [2/2]

```
EMF::EMRSTROKEANDFILLPATH::EMRSTROKEANDFILLPATH (
            DATASTREAM & ds)  [inline]
```

Create a StrokeandfillPath record from input stream.

Parameters

ds	Metafile datastream.

4.57.3 Member Function Documentation

execute()

```
void EMF::EMRSTROKEANDFILLPATH::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSTROKEANDFILLPATH::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSTROKEANDFILLPATH::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

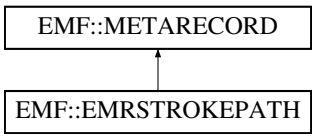
- libemf.h

4.58 EMF::EMRSTROKEPATH Class Reference

EMF Stroke path.

`#include <libemf.h>`

Inheritance diagram for EMF::EMRSTROKEPATH:



Public Member Functions

- EMRSTROKEPATH (const RECTL *bounds)
- EMRSTROKEPATH (DATASTREAM &ds)
- bool serialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.58.1 Detailed Description

EMF Stroke path.

Stroke the path.

4.58.2 Constructor & Destructor Documentation

EMRSTROKEPATH() [1/2]

```
EMF::EMRSTROKEPATH::EMRSTROKEPATH (
            const RECTL * bounds)  [inline]
```

Parameters

bounds	overall bounding box of polygon.

References EMRSTROKEPATH().

Referenced by EMRSTROKEPATH().

EMRSTROKEPATH() [2/2]

```
EMF::EMRSTROKEPATH::EMRSTROKEPATH (
            DATASTREAM & ds)  [inline]
```

Create a StrokePath record from input stream.

Parameters

ds	Metafile datastream.

4.58.3 Member Function Documentation

execute()

```
void EMF::EMRSTROKEPATH::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::EMRSTROKEPATH::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::EMRSTROKEPATH::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

The documentation for this class was generated from the following file:

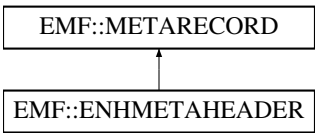
- libemf.h

4.59 EMF::ENHMETAHEADER Class Reference

Enhanced Metafile Header Record.

`#include <libemf.h>`

Inheritance diagram for EMF::ENHMETAHEADER:



Public Member Functions

- ENHMETAHEADER (LPCWSTR description=0)
- ~ENHMETAHEADER ()
- bool serialize (DATASTREAM ds)
- bool unserialize (DATASTREAM ds)
- int size (void) const
- void execute (METAFILEDEVICECONTEXT *source, HDC dc) const

Public Member Functions inherited from EMF::METARECORD

- virtual ~METARECORD ()

4.59.1 Detailed Description

Enhanced Metafile Header Record.

The ENHMETAHEADER serves two purposes in this library: it keeps track of the size of the metafile (in physical dimensions) and number of records and handles that are ultimately to be written to the disk file. It is also a real record that must be written out.

4.59.2 Constructor & Destructor Documentation

ENHMETAHEADER()

```
EMF::ENHMETAHEADER::ENHMETAHEADER (
            LPCWSTR description = 0)  [inline]
```

Parameters

description	an optional description argument is a UNICODE-like string with the following format: "some text\0some more text\0\0". The W32 interface defines UNICODE characters to be two-byte (unsigned short strings). The constructor makes a copy of the argument.

References ENHMETAHEADER().

Referenced by ENHMETAHEADER(), and unserialize().

~ENHMETAHEADER()

```
EMF::ENHMETAHEADER::~ENHMETAHEADER ()  [inline]
```

Destructor deletes memory allocated for description.

4.59.3 Member Function Documentation

execute()

```
void EMF::ENHMETAHEADER::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [inline], [virtual]
```

Execute this record in the context of the given device context.

Parameters

source	the device context from which this record is taken.
dc	device context for execute.

Implements EMF::METARECORD.

serialize()

```
bool EMF::ENHMETAHEADER::serialize (
            DATASTREAM ds)  [inline], [virtual]
```

Serializing the header is an example of an extended record.

Parameters

ds	Metafile datastream.

Implements EMF::METARECORD.

size()

```
int EMF::ENHMETAHEADER::size (
            void ) const  [inline], [virtual]
```

Internally computed size of this record.

Implements EMF::METARECORD.

unserialize()

```
bool EMF::ENHMETAHEADER::unserialize (
            DATASTREAM ds)  [inline]
```

Read a header record from the datastream.

References ENHMETAHEADER().

The documentation for this class was generated from the following file:

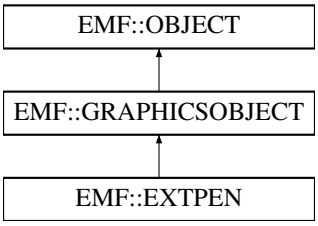
- libemf.h

4.60 EMF::EXTPEN Class Reference

Extended Graphics Pen.

```
#include <libemf.h>
```

Inheritance diagram for EMF::EXTPEN:



Public Member Functions

- EXTPEN (const EXTLOGPEN *lpen)
- OBJECTTYPE getType (void) const
- METARECORD * newEMR (HDC dc, HGDIOBJ emf_handle)

Public Member Functions inherited from EMF::GRAPHICSOBJECT

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Additional Inherited Members

Data Fields inherited from EMF::GRAPHICSOBJECT

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.60.1 Detailed Description

Extended Graphics Pen.

Pens are used for drawing lines, arc, rectangles, etc.

4.60.2 Constructor & Destructor Documentation

EXTPEN()

```
EMF::EXTPEN::EXTPEN (
            const EXTLOGPEN * lpen)  [inline]
```

Parameters

lpen	the (logical?) pen definition.

4.60.3 Member Function Documentation

getType()

```
OBJECTTYPE EMF::EXTPEN::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

newEMR()

```
METARECORD * EMF::EXTPEN::newEMR (
             HDC dc,
             HGDIOBJ emf_handle)  [inline], [virtual]
```

Return a new metarecord for this object. And record its selection into the given device context.

Parameters

dc	handle of device context into which this object is being selected.
emf_handle	the EMF handle associated with the PEN.

Implements EMF::GRAPHICSOBJECT.

References EMF::GRAPHICSOBJECT::contexts.

The documentation for this class was generated from the following file:

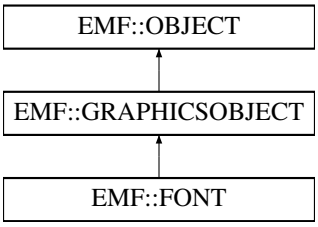
- libemf.h

4.61 EMF::FONT Class Reference

Graphics Font.

```
#include <libemf.h>
```

Inheritance diagram for EMF::FONT:



Public Member Functions

- FONT (const LOGFONTW *lfont)
- OBJECTTYPE getType (void) const
- METARECORD * newEMR (HDC dc, HGDIOBJ emf_handle)

Public Member Functions inherited from EMF::GRAPHICSOBJECT

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Additional Inherited Members

Data Fields inherited from EMF::GRAPHICSOBJECT

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.61.1 Detailed Description

Graphics Font.

Fonts are used for drawing text (obviously).

4.61.2 Constructor & Destructor Documentation

FONT()

```
EMF::FONT::FONT (
            const LOGFONTW * lfont)  [inline]
```

Parameters

lfont	the (logical?) font definition.

4.61.3 Member Function Documentation

getType()

```
OBJECTTYPE EMF::FONT::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

newEMR()

```
METARECORD * EMF::FONT::newEMR (
             HDC dc,
             HGDIOBJ emf_handle)  [inline], [virtual]
```

Return a new metarecord for this object. And record its selection into the given device context.

Parameters

dc	handle of device context into which this object is being selected.
emf_handle	the EMF handle associated with the FONT.

Implements EMF::GRAPHICSOBJECT.

References EMF::GRAPHICSOBJECT::contexts.

The documentation for this class was generated from the following file:

- libemf.h

4.62 EMF::GLOBALOBJECTS Class Reference

```
#include <libemf.h>
```

Public Member Functions

- HGDIOBJ add (OBJECT *object)
- OBJECT * find (const HGDIOBJ handle)
- void remove (const OBJECT *object)
- auto begin (void) const
- auto end (void) const
- METARECORDCTOR newRecord (DWORD iType) const

Static Public Member Functions

- static EMF::METARECORD * **new_eof** (DATASTREAM &ds)

  Create a new EMREOF record.
- static EMF::METARECORD * **new_setviewportorgex** (DATASTREAM &ds)

  Create a new EMRSETVIEWPORTORGEX record.
- static EMF::METARECORD * **new_setwindoworgex** (DATASTREAM &ds)

  Create a new EMRSETWINDOWORGEX record.
- static EMF::METARECORD * **new_setviewportextex** (DATASTREAM &ds)

  Create a new EMRSETVIEWPORTEXTEX record.
- static EMF::METARECORD * **new_setwindowextex** (DATASTREAM &ds)

  Create a new EMRSETWINDOWEXTEX record.
- static EMF::METARECORD * **new_scaleviewportextex** (DATASTREAM &ds)

  Create a new SCALEVIEWPORTEXTEX record.
- static EMF::METARECORD * **new_scalewindowextex** (DATASTREAM &ds)

Create a new SCALEWINDOWEXTEX record.

- static EMF::METARECORD * **new_modifyworldtransform** (DATASTREAM &ds)

  Create a new MODIFYWORLDTRANSFORM record.
- static EMF::METARECORD * **new_setworldtransform** (DATASTREAM &ds)

  Create a new SETWORLDTRANSFORM record.
- static EMF::METARECORD * **new_settextalign** (DATASTREAM &ds)

  Create a new SETTEXTALIGN record.
- static EMF::METARECORD * **new_settextcolor** (DATASTREAM &ds)

  Create a new SETTEXTCOLOR record.
- static EMF::METARECORD * **new_setbkcolor** (DATASTREAM &ds)

  Create a new SETBKCOLOR record.
- static EMF::METARECORD * **new_setbkmode** (DATASTREAM &ds)

  Create a new SETBKMODE record.
- static EMF::METARECORD * **new_setpolyfillmode** (DATASTREAM &ds)

  Create a new SETPOLYFILLMODE record.
- static EMF::METARECORD * **new_setmapmode** (DATASTREAM &ds)

  Create a new SETMAPMODE record.
- static EMF::METARECORD * **new_selectobject** (DATASTREAM &ds)

  Create a new SELECTOBJECT record.
- static EMF::METARECORD * **new_deleteobject** (DATASTREAM &ds)

  Create a new DELETEOBJECT record.
- static EMF::METARECORD * **new_movetoex** (DATASTREAM &ds)

  Create a new MOVETOEX record.
- static EMF::METARECORD * **new_lineto** (DATASTREAM &ds)

  Create a new LINETO record.
- static EMF::METARECORD * **new_arc** (DATASTREAM &ds)

  Create a new ARC record.
- static EMF::METARECORD * **new_arcto** (DATASTREAM &ds)

  Create a new ARCTO record.
- static EMF::METARECORD * **new_rectangle** (DATASTREAM &ds)

  Create a new RECTANGLE record.
- static EMF::METARECORD * **new_ellipse** (DATASTREAM &ds)

  Create a new ELLIPSE record.
- static EMF::METARECORD * **new_polyline** (DATASTREAM &ds)

  Create a new POLYLINE record.
- static EMF::METARECORD * **new_polyline16** (DATASTREAM &ds)

  Create a new POLYLINE16 record.
- static EMF::METARECORD * **new_polygon** (DATASTREAM &ds)

  Create a new POLYGON record.
- static EMF::METARECORD * **new_polygon16** (DATASTREAM &ds)

  Create a new POLYGON16 record.
- static EMF::METARECORD * **new_polypolygon** (DATASTREAM &ds)

  Create a new POLYPOLYGON record.
- static EMF::METARECORD * **new_polypolygon16** (DATASTREAM &ds)

  Create a new POLYPOLYGON16 record.
- static EMF::METARECORD * **new_polybezier** (DATASTREAM &ds)

  Create a new POLYBEZIER record.
- static EMF::METARECORD * **new_polybezier16** (DATASTREAM &ds)

  Create a new POLYBEZIER16 record.
- static EMF::METARECORD * **new_polybezierto** (DATASTREAM &ds)

  Create a new POLYBEZIERTO record.

- static EMF::METARECORD * **new_polybezierto16** (DATASTREAM &ds)

  Create a new POLYBEZIERTO16 record.
- static EMF::METARECORD * **new_polylineto** (DATASTREAM &ds)

  Create a new POLYLINETO record.
- static EMF::METARECORD * **new_polylineto16** (DATASTREAM &ds)

  Create a new POLYLINETO16 record.
- static EMF::METARECORD * **new_exttextouta** (DATASTREAM &ds)

  Create a new EXTTEXTOUTA record.
- static EMF::METARECORD * **new_exttextoutw** (DATASTREAM &ds)

  Create a new EXTTEXTOUTW record.
- static EMF::METARECORD * **new_setpixelv** (DATASTREAM &ds)

  Create a new SETPIXELV record.
- static EMF::METARECORD * **new_createpen** (DATASTREAM &ds)

  Create a new CREATEPEN record.
- static EMF::METARECORD * **new_extcreatepen** (DATASTREAM &ds)

  Create a new EXTCREATEPEN record.
- static EMF::METARECORD * **new_createbrushindirect** (DATASTREAM &ds)

  Create a new CREATEBRUSHINDIRECT record.
- static EMF::METARECORD * **new_extcreatefontindirectw** (DATASTREAM &ds)

  Create a new EXTCREATEFONTINDIRECTW record.
- static EMF::METARECORD * **new_fillpath** (DATASTREAM &ds)

  Create a new FILLPATH record.
- static EMF::METARECORD * **new_strokepath** (DATASTREAM &ds)

  Create a new STROKEPATH record.
- static EMF::METARECORD * **new_strokeandfillpath** (DATASTREAM &ds)

  Create a new STROKEANDFILLPATH record.
- static EMF::METARECORD * **new_beginpath** (DATASTREAM &ds)

  Create a new BEGINPATH record.
- static EMF::METARECORD * **new_endpath** (DATASTREAM &ds)

  Create a new ENDPATH record.
- static EMF::METARECORD * **new_closefigure** (DATASTREAM &ds)

  Create a new CLOSEFIGURE record.
- static EMF::METARECORD * **new_savedc** (DATASTREAM &ds)

  Create a new SAVEDC record.
- static EMF::METARECORD * **new_restoredc** (DATASTREAM &ds)

  Create a new RESTOREDC record.
- static EMF::METARECORD * **new_setmetargn** (DATASTREAM &ds)

  Create a new SETMETARGN record.
- static EMF::METARECORD * **new_setmiterlimit** (DATASTREAM &ds)

  Create a new SETMITERLIMIT record.

4.62.1 Detailed Description

Stores all the objects in a single database within a process.

4.62.2 Member Function Documentation

add()

```
HGDIOBJ EMF::GLOBALOBJECTS::add (
            OBJECT * object)
```

Add an object to the global vector. The object's handle is simply its index in the global object vector, which is computed by the very interesting "difference between two iterators" method.

Parameters

object	pointer to a real instance of an object, not its handle.

begin()

```
auto EMF::GLOBALOBJECTS::begin (
            void ) const  [inline]
```

Returns

an iterator pointing to the first global object.

end()

```
auto EMF::GLOBALOBJECTS::end (
            void ) const  [inline]
```

Returns

an iterator pointing to (one past) the final global object.

find()

```
OBJECT * EMF::GLOBALOBJECTS::find (
            const HGDIOBJ handle)
```

Look up a object by handle in the global object vector. Note: Stock objects (like a gray brush or the black pen) have their high order bit set, so this has to be masked out when using their handles.

Parameters

handle	the object's handle.

Returns

pointer to object.

newRecord()

```
METARECORDCTOR EMF::GLOBALOBJECTS::newRecord (
            DWORD iType) const
```

See if we have a constructor for a record of the given type.

Parameters

iType	metarecord type.

Returns

pointer to "virtual" constructor.

remove()

```
void EMF::GLOBALOBJECTS::remove (
            const OBJECT * object)
```

A call to the metafile function DeleteObject() allows a particular object's handle to be reused, so some care has to be taken to erase it.

Parameters

object	pointer to object to delete.

The documentation for this class was generated from the following files:

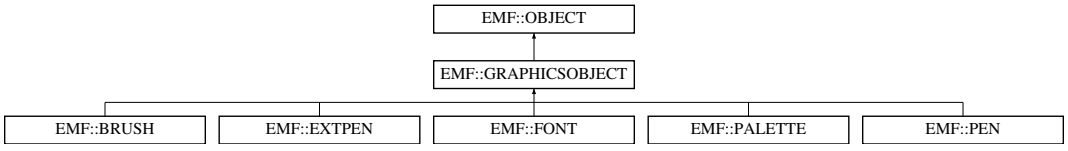
- libemf.h
- libemf.cpp

4.63 EMF::GRAPHICSOBJECT Class Reference

A global graphics object.

`#include <libemf.h>`

Inheritance diagram for EMF::GRAPHICSOBJECT:



Public Member Functions

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.
- virtual METARECORD * newEMR (HDC dc, HGDIOBJ handle)=0

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)
- virtual OBJECTTYPE getType (void) const =0

Data Fields

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.63.1 Detailed Description

A global graphics object.

Graphics objects have some additional properties: When an object is Select'ed into a device context, the handle for that context is added to the list of context's in which this object is used.

4.63.2 Member Function Documentation

newEMR()

```
virtual METARECORD * EMF::GRAPHICSOBJECT::newEMR (
            HDC dc,
            HGDIOBJ handle)  [pure virtual]
```

Create a new metarecord which describes this object.

Parameters

dc	the handle to the device context.
handle	(appears not to used. Note the handle is really assigned at serialization time.)

Implemented in EMF::BRUSH, EMF::EXTPEN, EMF::FONT, EMF::PALETTE, and EMF::PEN.

References EMF::OBJECT::handle.

4.63.3 Field Documentation

contexts

```
std::map< HDC, HGDIOBJ > EMF::GRAPHICSOBJECT::contexts
```

A set of all the contexts into which this object has been selected and the associated metafile handle for the object.

Referenced by EMF::BRUSH::newEMR(), EMF::EXTPEN::newEMR(), EMF::FONT::newEMR(), EMF::PALETTE::newEMR(), and EMF::PEN::newEMR().

The documentation for this class was generated from the following file:

- libemf.h

4.64 EMF::INTARRAY Struct Reference

Represent an array of integers in a simple way.

```
#include <libemf.h>
```

Public Member Functions

- INTARRAY (INT *const ints, const DWORD n)

Data Fields

- INT *const **ints_**
  Array of ints.
- const DWORD **n_**
  Number of ints in array.

4.64.1 Detailed Description

Represent an array of integers in a simple way.

Allow an array of INT's to be written out at once.

4.64.2 Constructor & Destructor Documentation

INTARRAY()

```
EMF::INTARRAY::INTARRAY (
            INT *const ints,
            const DWORD n)  [inline]
```

simple constructor.

Parameters

ints	pointer to ints.
n	number ints in array.

References ints_, and n_.

The documentation for this struct was generated from the following file:

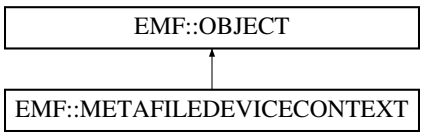
- libemf.h

4.65 EMF::METAFILEDEVICECONTEXT Class Reference

Graphics Device Context.

```
#include <libemf.h>
```

Inheritance diagram for EMF::METAFILEDEVICECONTEXT:



Public Member Functions

- METAFILEDEVICECONTEXT (FILE *fp_, const RECT *size, LPCWSTR description_w)
- virtual ~METAFILEDEVICECONTEXT ()
- OBJECTTYPE getType (void) const
- DWORD nextHandle (void)
- void clearHandle (DWORD handle)
- void appendRecord (METARECORD *record)
- void appendHandle (METARECORD *record)
- void deleteMetafile (void)
- void mergePoint (const LONG &x, const LONG &y)
- void mergePoint (const POINT &p)

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Data Fields

- ::FILE * fp
- DATASTREAM ds
- ENHMETAHEADER * header
- std::vector< EMF::METARECORD * > records
- SIZEL **resolution**

  The resolution in DPI of the reference DC.
- SIZEL **viewport_ext**

  The extent of the viewport.
- POINT **viewport_org**

  The origin of the viewport.
- SIZEL **window_ext**

  The extent of the window.
- POINT **window_org**

  The origin of the window.
- bool **update_frame**

  Update the frame automatically?
- POINT **min_device_point**

  The lft/top-most painted point in device units.
- POINT **max_device_point**

  The rgt/btm-most painted point in device units.
- POINT **point**

  The current point.
- PEN * **pen**

  The current pen.
- BRUSH * **brush**

  The current brush.
- FONT * **font**

  The current font.
- PALETTE * **palette**

  The current palette.
- UINT **text_alignment**

  The current text alignment.
- COLORREF **text_color**

  The current text foreground color.
- COLORREF **bk_color**

  The current background color.
- INT **bk_mode**

  The current background mode.
- INT **polyfill_mode**

  The current polygon fill mode.
- INT **map_mode**

  The current mapping mode.
- FLOAT **miter_limit**

  The current miter length limit.
- std::vector< bool > handles
- std::map< HGDIOBJ, HGDIOBJ > emf_handles

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.65.1 Detailed Description

Graphics Device Context.

Almost all GDI graphics calls require a device context (except those which create graphics objects such as pens and fonts). This is a specific context which renders to a metafile. There is a one-to-one correspondence between the device context and the metafile.

4.65.2 Constructor & Destructor Documentation

METAFILEDEVICECONTEXT()

```
EMF::METAFILEDEVICECONTEXT::METAFILEDEVICECONTEXT (
            FILE * fp_,
            const RECT * size,
            LPCWSTR description_w)  [inline]
```

Most graphics programs seem to want to handle the opening and closing of files themselves, so this is an extension to the w32 interface.

Parameters

*fp_*	stdio pointer to an open file. May be null.
size	the rectangle describing the position and size of the metafile on the "page". May be null.
description_w	a UNICODE string describing the metafile. The format must be "some text\0some more text\0\0". May be null.

References ds, and fp.

~METAFILEDEVICECONTEXT()

```
virtual EMF::METAFILEDEVICECONTEXT::~METAFILEDEVICECONTEXT ()  [inline], [virtual]
```

Destructor frees all the graphics objects which may have been allocated. Now, it also frees any metarecords which it might hold, too.

References deleteMetafile(), and records.

4.65.3 Member Function Documentation

appendHandle()

```
void EMF::METAFILEDEVICECONTEXT::appendHandle (
            METARECORD * record)  [inline]
```

Add this record to the metafile.

Parameters

record	this record is an object so it increments the handle count as well.

References header, records, and EMF::METARECORD::size().

appendRecord()

```
void EMF::METAFILEDEVICECONTEXT::appendRecord (
            METARECORD * record)  [inline]
```

Add this record to the metafile.

Parameters

record	standard graphics record

References header, records, and EMF::METARECORD::size().

clearHandle()

```
void EMF::METAFILEDEVICECONTEXT::clearHandle (
            DWORD handle)  [inline]
```

Clear the usage of this handle

References EMF::OBJECT::handle, and handles.

deleteMetafile()

```
void EMF::METAFILEDEVICECONTEXT::deleteMetafile (
            void )  [inline]
```

Delete all the records from the metafile. This would seem to include deleting the header record as well.

References records.

Referenced by ~METAFILEDEVICECONTEXT().

getType()

```
OBJECTTYPE EMF::METAFILEDEVICECONTEXT::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

mergePoint() [1/2]

```
void EMF::METAFILEDEVICECONTEXT::mergePoint (
            const LONG & x,
            const LONG & y)  [inline]
```

Somewhat superfluous, except checker doesn't understand the initialization of automatic structures in the declaration.

References mergePoint().

Referenced by mergePoint().

mergePoint() [2/2]

```
void EMF::METAFILEDEVICECONTEXT::mergePoint (
            const POINT & p)  [inline]
```

Take the given point and determine if it enlarges the "painted" area of the device.

References header, max_device_point, min_device_point, update_frame, viewport_ext, viewport_org, window_ext, and window_org.

nextHandle()

```
DWORD EMF::METAFILEDEVICECONTEXT::nextHandle (
            void )  [inline]
```

Scan the bit vector of used handles and return the index of the first free bit as this objects metafile handle.

References handles, and header.

4.65.4 Field Documentation

ds

```
DATASTREAM EMF::METAFILEDEVICECONTEXT::ds
```

All i/o to the metafile is wrapped by this class so that byte swapping on big-endian machines is transparent.

Referenced by METAFILEDEVICECONTEXT().

emf_handles

```
std::map< HGDIOBJ, HGDIOBJ > EMF::METAFILEDEVICECONTEXT::emf_handles
```

This map holds the *current* mapping between EMF handles and global object handles as a metafile is played back (with PlayEnhMetaFile).

Referenced by EMF::EMRCREATEBRUSHINDIRECT::execute(), EMF::EMRCREATEPEN::execute(), EMF::EMRDELETEOBJECT::e
EMF::EMREXTCREATEFONTINDIRECTW::execute(), EMF::EMREXTCREATEPEN::execute(), and EMF::EMRSELECTOBJECT::ex

fp

```
::FILE* EMF::METAFILEDEVICECONTEXT::fp
```

If it is a file-based metafile, then this pointer is not null.

Referenced by METAFILEDEVICECONTEXT().

handles

```
std::vector< bool > EMF::METAFILEDEVICECONTEXT::handles
```

For compatibility, it appears that metafile handles are reused as objects are deleted. Attempt to emulate that behavior with a bit vector of used metafile handles.

Referenced by clearHandle(), and nextHandle().

header

```
ENHMETAHEADER* EMF::METAFILEDEVICECONTEXT::header
```

Serves double duty as the physical device description.

Referenced by appendHandle(), appendRecord(), mergePoint(), and nextHandle().

records

```
std::vector< EMF::METARECORD* > EMF::METAFILEDEVICECONTEXT::records
```

All of the metafile records are stored in memory.

Referenced by appendHandle(), appendRecord(), deleteMetafile(), and ~METAFILEDEVICECONTEXT().

The documentation for this class was generated from the following file:

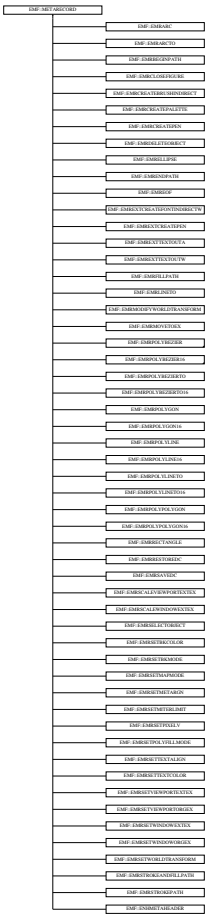
- libemf.h

4.66 EMF::METARECORD Class Reference

The base class of all metafile records.

`#include <libemf.h>`

Inheritance diagram for EMF::METARECORD:



Public Member Functions

- virtual void execute (METAFILEDEVICECONTEXT ∗source, HDC dc) const =0
- virtual bool serialize (DATASTREAM ds)=0
- virtual int size (void) const =0
- virtual ∼METARECORD ()

4.66.1 Detailed Description

The base class of all metafile records.

A metafile consists off a sequence of graphics records "executed" in order. This is a common base class that allows each, different, record to be stored in a common list. An interface is specified for each record to write itself to a file.

4.66.2 Constructor & Destructor Documentation

~METARECORD()

```
virtual EMF::METARECORD::~METARECORD ()  [inline], [virtual]
```

The virtual destructor allows records which allocated additional memory to release it when they are deleted. Simple records just use the default destructor defined here.

4.66.3 Member Function Documentation

execute()

```
virtual void EMF::METARECORD::execute (
            METAFILEDEVICECONTEXT * source,
            HDC dc) const  [pure virtual]
```

Execute the graphics command in the given context. Used by PlayEnhMetaFile to "copy" one metafile into another.

Parameters

source	the device context from which this record is taken.
dc	the destination context.

Implemented in EMF::EMRARC, EMF::EMRARCTO, EMF::EMRBEGINPATH, EMF::EMRCLOSEFIGURE, EMF::EMRCREATEBRUSHINDIRECT, EMF::EMRCREATEPALETTE, EMF::EMRCREATEPEN, EMF::EMRDELETEOBJECT, EMF::EMRELLIPSE, EMF::EMRENDPATH, EMF::EMREOF, EMF::EMREXTCREATEFONTINDIRECTW, EMF::EMREXTCREATEPEN, EMF::EMREXTTEXTOUTA, EMF::EMREXTTEXTOUTW, EMF::EMRFILLPATH, EMF::EMRLINETO, EMF::EMRMODIFYWORLDTRANSFORM, EMF::EMRMOVETOEX, EMF::EMRPOLYBEZIER16, EMF::EMRPOLYBEZIER, EMF::EMRPOLYBEZIERTO16, EMF::EMRPOLYBEZIERTO, EMF::EMRPOLYGON16, EMF::EMRPOLYGON, EMF::EMRPOLYLINE16, EMF::EMRPOLYLINE, EMF::EMRPOLYLINETO16, EMF::EMRPOLYLINETO, EMF::EMRPOLYPOLYGON16, EMF::EMRPOLYPOLYGON, EMF::EMRRECTANGLE, EMF::EMRRESTOREDC, EMF::EMRSAVEDC, EMF::EMRSCALEVIEWPORTEXTEX, EMF::EMRSCALEWINDOWEXTEX, EMF::EMRSELECTOBJECT, EMF::EMRSETBKCOLOR, EMF::EMRSETBKMODE, EMF::EMRSETMAPMODE, EMF::EMRSETMETARGN, EMF::EMRSETMITERLIMIT, EMF::EMRSETPIXELV, EMF::EMRSETPOLYFILLMODE, EMF::EMRSETTEXTALIGN, EMF::EMRSETTEXTCOLOR, EMF::EMRSETVIEWPORTEXTEX, EMF::EMRSETVIEWPORTORGEX, EMF::EMRSETWINDOWEXT EMF::EMRSETWINDOWORGEX, EMF::EMRSETWORLDTRANSFORM, EMF::EMRSTROKEANDFILLPATH, EMF::EMRSTROKEPATH, and EMF::ENHMETAHEADER.

serialize()

```
virtual bool EMF::METARECORD::serialize (
            DATASTREAM ds)  [pure virtual]
```

Write yourself to the given file. This is virtual since some records are of arbitrary length and need to write additional information after their EMR structure.

Parameters

ds	the datastream to write oneself to.

Implemented in EMF::EMRARC, EMF::EMRARCTO, EMF::EMRBEGINPATH, EMF::EMRCLOSEFIGURE, EMF::EMRCREATEBRUSHINDIRECT, EMF::EMRCREATEPALETTE, EMF::EMRCREATEPEN, EMF::EMRDELETEOBJECT, EMF::EMRELLIPSE, EMF::EMRENDPATH, EMF::EMREOF, EMF::EMREXTCREATEFONTINDIRECTW, EMF::EMREXTCREATEPEN, EMF::EMREXTTEXTOUTA, EMF::EMREXTTEXTOUTW, EMF::EMRFILLPATH, EMF::EMRLINETO, EMF::EMRMODIFYWORLDTRANSFORM, EMF::EMRMOVETOEX, EMF::EMRPOLYBEZIER16, EMF::EMRPOLYBEZIER, EMF::EMRPOLYBEZIERTO16, EMF::EMRPOLYBEZIERTO, EMF::EMRPOLYGON16, EMF::EMRPOLYGON, EMF::EMRPOLYLINE16, EMF::EMRPOLYLINE, EMF::EMRPOLYLINETO16, EMF::EMRPOLYLINETO, EMF::EMRPOLYPOLYGON16, EMF::EMRPOLYPOLYGON, EMF::EMRRECTANGLE, EMF::EMRRESTOREDC, EMF::EMRSAVEDC, EMF::EMRSCALEVIEWPORTEXTEX, EMF::EMRSCALEWINDOWEXTEX, EMF::EMRSELECTOBJECT, EMF::EMRSETBKCOLOR, EMF::EMRSETBKMODE, EMF::EMRSETMAPMODE, EMF::EMRSETMETARGN, EMF::EMRSETMITERLIMIT, EMF::EMRSETPIXELV, EMF::EMRSETPOLYFILLMODE, EMF::EMRSETTEXTALIGN, EMF::EMRSETTEXTCOLOR, EMF::EMRSETVIEWPORTEXTEX, EMF::EMRSETVIEWPORTORGEX, EMF::EMRSETWINDOWEXT EMF::EMRSETWINDOWORGEX, EMF::EMRSETWORLDTRANSFORM, EMF::EMRSTROKEANDFILLPATH, EMF::EMRSTROKEPATH, and EMF::ENHMETAHEADER.

size()

```
virtual int EMF::METARECORD::size (
            void ) const  [pure virtual]
```

The header record of a metafile records the total size of the metafile in bytes, so as each record is added to the list, it updates the total size.

Implemented in EMF::EMRARC, EMF::EMRARCTO, EMF::EMRBEGINPATH, EMF::EMRCLOSEFIGURE, EMF::EMRCREATEBRUSHINDIRECT, EMF::EMRCREATEPALETTE, EMF::EMRCREATEPEN, EMF::EMRDELETEOBJECT, EMF::EMRELLIPSE, EMF::EMRENDPATH, EMF::EMREOF, EMF::EMREXTCREATEFONTINDIRECTW, EMF::EMREXTCREATEPEN, EMF::EMREXTTEXTOUTA, EMF::EMREXTTEXTOUTW, EMF::EMRFILLPATH, EMF::EMRLINETO, EMF::EMRMODIFYWORLDTRANSFORM, EMF::EMRMOVETOEX, EMF::EMRPOLYBEZIER16, EMF::EMRPOLYBEZIER, EMF::EMRPOLYBEZIERTO16, EMF::EMRPOLYBEZIERTO, EMF::EMRPOLYGON16, EMF::EMRPOLYGON, EMF::EMRPOLYLINE16, EMF::EMRPOLYLINE, EMF::EMRPOLYLINETO16, EMF::EMRPOLYLINETO, EMF::EMRPOLYPOLYGON16, EMF::EMRPOLYPOLYGON, EMF::EMRRECTANGLE, EMF::EMRRESTOREDC, EMF::EMRSAVEDC, EMF::EMRSCALEVIEWPORTEXTEX, EMF::EMRSCALEWINDOWEXTEX, EMF::EMRSELECTOBJECT, EMF::EMRSETBKCOLOR, EMF::EMRSETBKMODE, EMF::EMRSETMAPMODE, EMF::EMRSETMETARGN, EMF::EMRSETMITERLIMIT, EMF::EMRSETPIXELV, EMF::EMRSETPOLYFILLMODE, EMF::EMRSETTEXTALIGN, EMF::EMRSETTEXTCOLOR, EMF::EMRSETVIEWPORTEXTEX, EMF::EMRSETVIEWPORTORGEX, EMF::EMRSETWINDOWEXT EMF::EMRSETWINDOWORGEX, EMF::EMRSETWORLDTRANSFORM, EMF::EMRSTROKEANDFILLPATH, EMF::EMRSTROKEPATH, and EMF::ENHMETAHEADER.

Referenced by EMF::METAFILEDEVICECONTEXT::appendHandle(), and EMF::METAFILEDEVICECONTEXT::appendRecord().

The documentation for this class was generated from the following file:

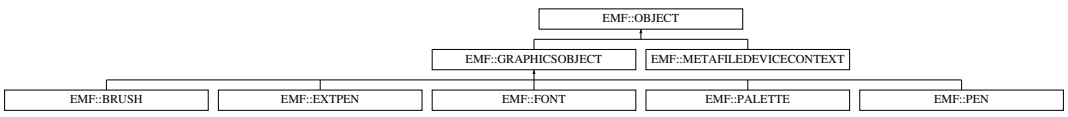
- libemf.h

4.67 EMF::OBJECT Class Reference

Global GDI object.

`#include <libemf.h>`

Inheritance diagram for EMF::OBJECT:



Public Member Functions

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)
- virtual OBJECTTYPE getType (void) const =0

Data Fields

- HGDIOBJ handle

4.67.1 Detailed Description

Global GDI object.

The GDI interface defines objects in terms of handles (rather than pointers). In order to emulate this, each object is placed into a global list and the index in that list becomes their handle.

4.67.2 Constructor & Destructor Documentation

OBJECT()

```
EMF::OBJECT::OBJECT (
            void )  [inline]
```

Create a new object. It's up to a subclass to create a real handle for this object.

References handle.

4.67.3 Member Function Documentation

getType()

```
virtual OBJECTTYPE EMF::OBJECT::getType (
            void ) const  [pure virtual]
```

Return the type of the object.

Implemented in EMF::BRUSH, EMF::EXTPEN, EMF::FONT, EMF::METAFILEDEVICECONTEXT, EMF::PALETTE, and EMF::PEN.

4.67.4 Field Documentation

handle

```
HGDIOBJ EMF::OBJECT::handle
```

The handle of a GDI object.

Referenced by EMF::METAFILEDEVICECONTEXT::clearHandle(), EMF::GRAPHICSOBJECT::newEMR(), and OBJECT().

The documentation for this class was generated from the following file:

- libemf.h

4.68 EMF::PADDING Struct Reference

All metafile records must be padded out to a multiple of 4 bytes.

`#include <libemf.h>`

Public Member Functions

- PADDING (const int size)

Data Fields

- const int **size_**
  Number of bytes of padding.

Static Public Attributes

- static const char **padding_** [4] = { 0, 0, 0, 0 }
  Pad with '\0's.

4.68.1 Detailed Description

All metafile records must be padded out to a multiple of 4 bytes.

Write out a few bytes of padding if necessary.

4.68.2 Constructor & Destructor Documentation

PADDING()

```
EMF::PADDING::PADDING (
            const int size)  [inline]
```

simple constructor.

Parameters

size	number of bytes of padding to use.

References size_.

The documentation for this struct was generated from the following files:

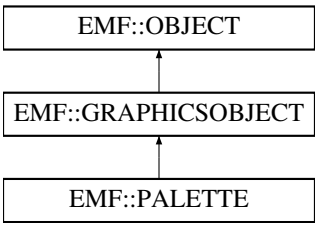
- libemf.h
- libemf.cpp

4.69 EMF::PALETTE Class Reference

Graphics Palette.

`#include <libemf.h>`

Inheritance diagram for EMF::PALETTE:



Public Member Functions

- PALETTE (const LOGPALETTE *lpalette)
- OBJECTTYPE getType (void) const
- METARECORD * newEMR (HDC dc, HGDIOBJ emf_handle)

Public Member Functions inherited from EMF::GRAPHICSOBJECT

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Additional Inherited Members

Data Fields inherited from EMF::GRAPHICSOBJECT

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.69.1 Detailed Description

Graphics Palette.

Not entirely sure how palettes are used in general.

4.69.2 Constructor & Destructor Documentation

PALETTE()

```
EMF::PALETTE::PALETTE (
            const LOGPALETTE * lpalette)  [inline]
```

Parameters

lpalette	the (logical?) palette definition.

4.69.3 Member Function Documentation

getType()

```
OBJECTTYPE EMF::PALETTE::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

newEMR()

```
METARECORD * EMF::PALETTE::newEMR (
            HDC dc,
            HGDIOBJ emf_handle)  [inline], [virtual]
```

Return a new metarecord for this object. And record its selection into the given device context.

Parameters

dc	handle of device context into which this object is being selected.
emf_handle	the EMF handle associated with the FONT.

Implements EMF::GRAPHICSOBJECT.

References EMF::GRAPHICSOBJECT::contexts.

The documentation for this class was generated from the following file:

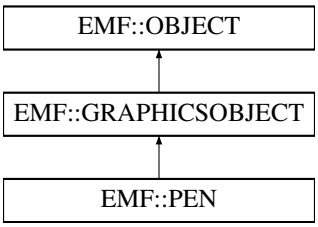
- libemf.h

4.70 EMF::PEN Class Reference

Graphics Pen.

`#include <libemf.h>`

Inheritance diagram for EMF::PEN:



Public Member Functions

- PEN (const LOGPEN *lpen)
- OBJECTTYPE getType (void) const
- METARECORD * newEMR (HDC dc, HGDIOBJ emf_handle)

Public Member Functions inherited from EMF::GRAPHICSOBJECT

- virtual ~**GRAPHICSOBJECT** ()

  GRAPHICSOBJECTs has a virtual destructor.

Public Member Functions inherited from EMF::OBJECT

- virtual ~**OBJECT** ()

  OBJECTs have a virtual destructor.
- OBJECT (void)

Additional Inherited Members

Data Fields inherited from EMF::GRAPHICSOBJECT

- std::map< HDC, HGDIOBJ > contexts

Data Fields inherited from EMF::OBJECT

- HGDIOBJ handle

4.70.1 Detailed Description

Graphics Pen.

Pens are used for drawing lines, arc, rectangles, etc.

4.70.2 Constructor & Destructor Documentation

PEN()

```
EMF::PEN::PEN (
            const LOGPEN * lpen)  [inline]
```

Parameters

lpen	the (logical?) pen definition.

4.70.3 Member Function Documentation

getType()

```
OBJECTTYPE EMF::PEN::getType (
            void ) const  [inline], [virtual]
```

Return the type of this object (could probably do better with RTTI()).

Implements EMF::OBJECT.

newEMR()

```
METARECORD * EMF::PEN::newEMR (
            HDC dc,
            HGDIOBJ emf_handle)  [inline], [virtual]
```

Return a new metarecord for this object. And record its selection into the given device context.

Parameters

dc	handle of device context into which this object is being selected.
emf_handle	the EMF handle associated with the PEN.

Implements EMF::GRAPHICSOBJECT.

References EMF::GRAPHICSOBJECT::contexts.

The documentation for this class was generated from the following file:

- libemf.h

4.71 EMF::POINT16ARRAY Struct Reference

Represent an array of 16-bit point in a simple way.

```
#include <libemf.h>
```

Public Member Functions

- POINT16ARRAY (POINT16 ∗const points, const DWORD n)

Data Fields

- POINT16 ∗const **points_**

  Array of POINT16s.
- const DWORD **n_**

  Number of POINT16s in array.

4.71.1 Detailed Description

Represent an array of 16-bit point in a simple way.

Allow an array of POINT16's to be written out at once.

4.71.2 Constructor & Destructor Documentation

POINT16ARRAY()

```
EMF::POINT16ARRAY::POINT16ARRAY (
             POINT16 *const points,
             const DWORD n)  [inline]
```

Simple constructor.

Parameters

points	pointer to array of POINT16s.
n	number POINT16s in array.

References n_, and points_.

The documentation for this struct was generated from the following file:

- libemf.h

4.72 EMF::POINTLARRAY Struct Reference

Represent an array of points in a simple way.

```
#include <libemf.h>
```

Public Member Functions

- POINTLARRAY (POINTL ∗const points, const DWORD n)

Data Fields

- POINTL ∗const **points_**

  Array of POINTLs.
- const DWORD **n_**

  Number of POINTLs in array.

4.72.1 Detailed Description

Represent an array of points in a simple way.

Allow an array of POINTL's to be written out at once.

4.72.2 Constructor & Destructor Documentation

POINTLARRAY()

```
EMF::POINTLARRAY::POINTLARRAY (
            POINTL *const points,
            const DWORD n)  [inline]
```

Simple constructor.

Parameters

points	pointer to array of POINTLs.
n	number POINTLs in array.

References n_, and points_.

The documentation for this struct was generated from the following file:

- libemf.h

4.73 EMF::WCHARSTR Struct Reference

Represent a wide (UNICODE) character string in a simple way.

```
#include <libemf.h>
```

Public Member Functions

- WCHARSTR (WCHAR ∗const string, const int length)

Data Fields

- WCHAR ∗const **string_**

  String of WCHARs.
- const int **length_**

  Number of WCHARs in string.

4.73.1 Detailed Description

Represent a wide (UNICODE) character string in a simple way.

Even (widechar) strings have to be byte swapped. This structure allows us to provide a uniform stream-like interface for writing out all the components of metafiles.

4.73.2 Constructor & Destructor Documentation

WCHARSTR()

```
EMF::WCHARSTR::WCHARSTR (
            WCHAR *const string,
            const int length)  [inline]
```

Simple constructor.

Parameters

string	pointer to string of WCHARS.
length	number of WCHARS in string.

References length_, and string_.

The documentation for this struct was generated from the following file:

- libemf.h

5 File Documentation

5.1 emf.h

```
00001 /*
00002  * EMF: A library for generating ECMA-234 Enhanced Metafiles
00003  * Copyright (C) 2002 lignum Computing, Inc. <dallenbarnett@users.sourceforge.net>
00004  * $Id: emf.h 93 2020-04-18 13:30:11Z dallenbarnett $
00005  *
00006  * This library is free software; you can redistribute it and/or
00007  * modify it under the terms of the GNU Lesser General Public
00008  * License as published by the Free Software Foundation; either
00009  * version 2.1 of the License, or (at your option) any later version.
00010  *
00011  * This library is distributed in the hope that it will be useful,
00012  * but WITHOUT ANY WARRANTY; without even the implied warranty of
00013  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00014  * Lesser General Public License for more details.
```

```
00015  *
00016  * You should have received a copy of the GNU Lesser General Public
00017  * License along with this library; if not, write to the Free Software
00018  * Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA  02111-1307  USA
00019  *
00020  */
00021 #ifndef _EMF_H
00022 #define _EMF_H
00023
00024 #include <stdio.h>
00025 #include <string.h>
00026
00027 #include <libEMF/wine/windef.h>
00028 #include <libEMF/wine/winbase.h>
00029 #include <libEMF/wine/wingdi.h>
00030 #include <libEMF/wine/winuser.h>
00031 #include <libEMF/wine/winerror.h>
00032
00033 #ifdef __cplusplus
00034 extern "C" {
00035 #endif
00036 /*
00037  * Here are additional, non-"standard" routines which the author deems useful.
00038  */
00039 HDC CreateEnhMetaFileWithFILEA( HDC context, FILE* fp, const RECT* size,
00040                 LPCSTR description );
00041 HDC CreateEnhMetaFileWithFILEW( HDC context, FILE* fp, const RECT* size,
00042                 LPCWSTR description );
00043 HENHMETAFILE CloseEnhMetaFileWithFILE( HDC context );
00044 /*
00045  * This function will only produce output if the library has been compiled with
00046  * editing enabled (e.g., ./configure --enable-editing).
00047  */
00048 void WINAPI EditEnhMetaFile ( HENHMETAFILE metafile );
00049 #ifdef __cplusplus
00050 }
00051 #endif
00052
00053 #endif /* _EMF_H */
```

5.2 basetsd.h

```
00001 /*
00002  * Compilers that uses ILP32, LP64 or P64 type models
00003  * for both Win32 and Win64 are supported by this file.
00004  */
00005
00006 #ifndef __WINE_BASETSD_H
00007 #define __WINE_BASETSD_H
00008
00009 #ifdef __cplusplus
00010 extern "C" {
00011 #endif /* defined(__cplusplus) */
00012
00013 /*
00014  * Win32 was easy to implement under Unix since most (all?) 32-bit
00015  * Unices uses the same type model (ILP32) as Win32, where int, long
00016  * and pointer are 32-bit.
00017  *
00018  * Win64, however, will cause some problems when implemented under Unix.
00019  * Linux/{Alpha, Sparc64} and most (all?) other 64-bit Unices uses
00020  * the LP64 type model where int is 32-bit and long and pointer are
00021  * 64-bit. Win64 on the other hand uses the P64 (sometimes called LLP64)
00022  * type model where int and long are 32 bit and pointer is 64-bit.
00023  */
00024
00025 /* Type model indepent typedefs */
00026
00027 typedef char          __int8;
00028 typedef unsigned char __uint8;
00029
00030 typedef short          __int16;
00031 typedef unsigned short __uint16;
00032
00033 typedef int          __int32;
00034 typedef unsigned int __uint32;
00035
00036 // wogl
00037 //typedef long long          __int64;
00038 //typedef unsigned long long __uint64;
00039 typedef long          __int64;
00040 typedef unsigned long __uint64;
00041
00042 #if defined(_WIN64)
```

```
00043
00044 typedef __uint32 __ptr32;
00045 typedef void    *__ptr64;
00046
00047 #else /* FIXME: defined(_WIN32) */
00048
00049 typedef void    *__ptr32;
00050 typedef __uint64 __ptr64;
00051
00052 #endif
00053
00054 /* Always signed and 32 bit wide */
00055
00056 typedef __int32 LONG32;
00057 typedef __int32 INT32;
00058
00059 typedef LONG32 *PLONG32;
00060 typedef INT32  *PINT32;
00061
00062 /* Always unsigned and 32 bit wide */
00063
00064 typedef __uint32 ULONG32;
00065 typedef __uint32 DWORD32;
00066 typedef __uint32 UINT32;
00067
00068 typedef ULONG32 *PULONG32;
00069 typedef DWORD32 *PDWORD32;
00070 typedef UINT32  *PUINT32;
00071
00072 /* Always signed and 64 bit wide */
00073
00074 typedef __int64 LONG64;
00075 typedef __int64 INT64;
00076
00077 typedef LONG64 *PLONG64;
00078 typedef INT64  *PINT64;
00079
00080 /* Always unsigned and 64 bit wide */
00081
00082 typedef __uint64 ULONG64;
00083 typedef __uint64 DWORD64;
00084 typedef __uint64 UINT64;
00085
00086 typedef ULONG64 *PULONG64;
00087 typedef DWORD64 *PDWORD64;
00088 typedef UINT64  *PUINT64;
00089
00090 /* Win32 or Win64 dependent typedef/defines. */
00091
00092 #ifdef _WIN64
00093
00094 typedef __int64 INT_PTR, *PINT_PTR;
00095 typedef __uint64 UINT_PTR, *PUINT_PTR;
00096
00097 #define MAXINT_PTR 0x7fffffffffffffff
00098 #define MININT_PTR 0x8000000000000000
00099 #define MAXUINT_PTR 0xffffffffffffffff
00100
00101 typedef __int32 HALF_PTR, *PHALF_PTR;
00102 typedef __int32 UHALF_PTR, *PUHALF_PTR;
00103
00104 #define MAXHALF_PTR 0x7fffffff
00105 #define MINHALF_PTR 0x80000000
00106 #define MAXUHALF_PTR 0xffffffff
00107
00108 typedef __int64 LONG_PTR, *PLONG_PTR;
00109 typedef __uint64 ULONG_PTR, *PULONG_PTR;
00110 typedef __uint64 DWORD_PTR, *PDWORD_PTR;
00111
00112 #else /* FIXME: defined(_WIN32) */
00113
00114 typedef __int32 INT_PTR, *PINT_PTR;
00115 typedef __uint32 UINT_PTR, *PUINT_PTR;
00116
00117 #define MAXINT_PTR 0x7fffffff
00118 #define MININT_PTR 0x80000000
00119 #define MAXUINT_PTR 0xffffffff
00120
00121 typedef __int16 HALF_PTR, *PHALF_PTR;
00122 typedef __uint16 UHALF_PTR, *PUHALF_PTR;
00123
00124 #define MAXUHALF_PTR 0xffff
00125 #define MAXHALF_PTR 0x7fff
00126 #define MINHALF_PTR 0x8000
00127
00128 typedef __int32 LONG_PTR, *PLONG_PTR;
00129 typedef __uint32 ULONG_PTR, *PULONG_PTR;
```

```
00130 typedef __uint32 DWORD_PTR, *PDWORD_PTR;
00131
00132 #endif /* defined(_WIN64) || defined(_WIN32) */
00133
00134 typedef INT_PTR SSIZE_T, *PSSIZE_T;
00135 typedef UINT_PTR SIZE_T, *PSIZE_T;
00136
00137 #ifdef __cplusplus
00138 } /* extern "C" */
00139 #endif /* defined(__cplusplus) */
00140
00141 #endif /* !defined(__WINE_BASETSD_H) */
00142
00143
00144
```

5.3 guiddef.h

```
00001 #ifndef GUID_DEFINED
00002 #define GUID_DEFINED
00003 typedef struct _GUID
00004 {
00005     unsigned long  Data1;
00006     unsigned short Data2;
00007     unsigned short Data3;
00008     unsigned char  Data4[ 8 ];
00009 } GUID;
00010 #endif
00011
00012 #undef DEFINE_GUID
00013
00014 #ifdef INITGUID
00015 #define DEFINE_GUID(name, l, w1, w2, b1, b2, b3, b4, b5, b6, b7, b8) \
00016         const GUID name = \
00017     { l, w1, w2, { b1, b2,  b3,  b4,  b5,  b6,  b7,  b8 } }
00018 #else
00019 #define DEFINE_GUID(name, l, w1, w2, b1, b2, b3, b4, b5, b6, b7, b8) \
00020     extern const GUID name
00021 #endif
00022
00023 #define DEFINE_OLEGUID(name, l, w1, w2) \
00024     DEFINE_GUID(name, l, w1, w2, 0xC0,0,0,0,0,0,0,0x46)
00025
00026 #ifndef _GUIDDEF_H_
00027 #define _GUIDDEF_H_
00028
00029 typedef GUID *LPGUID;
00030 typedef GUID CLSID,*LPCLSID;
00031 typedef GUID IID,*LPIID;
00032 typedef GUID FMTID,*LPFMTID;
00033
00034 #if defined(__cplusplus) && !defined(CINTERFACE)
00035 #define REFGUID             const GUID &
00036 #define REFCLSID            const CLSID &
00037 #define REFIID              const IID &
00038 #define REFFMTID            const FMTID &
00039 #else /* !defined(__cplusplus) && !defined(CINTERFACE) */
00040 #define REFGUID             const GUID* const
00041 #define REFCLSID            const CLSID* const
00042 #define REFIID              const IID* const
00043 #define REFFMTID            const FMTID* const
00044 #endif /* !defined(__cplusplus) && !defined(CINTERFACE) */
00045
00046 #if defined(__cplusplus) && !defined(CINTERFACE)
00047 #define IsEqualGUID(rguid1, rguid2) (!memcmp(&(rguid1), &(rguid2), sizeof(GUID)))
00048 #else /* defined(__cplusplus) && !defined(CINTERFACE) */
00049 #define IsEqualGUID(rguid1, rguid2) (!memcmp(rguid1, rguid2, sizeof(GUID)))
00050 #endif /* defined(__cplusplus) && !defined(CINTERFACE) */
00051 #define IsEqualIID(riid1, riid2) IsEqualGUID(riid1, riid2)
00052 #define IsEqualCLSID(rclsid1, rclsid2) IsEqualGUID(rclsid1, rclsid2)
00053
00054 #if defined(__cplusplus) && !defined(CINTERFACE)
00055 #include <string.h>
00056 inline bool operator==(const GUID& guidOne, const GUID& guidOther)
00057 {
00058     return !memcmp(&guidOne,&guidOther,sizeof(GUID));
00059 }
00060 inline bool operator!=(const GUID& guidOne, const GUID& guidOther)
00061 {
00062     return !(guidOne == guidOther);
00063 }
00064 #endif
00065
00066 extern const IID GUID_NULL;
```

```
00067 #define IID_NULL            GUID_NULL
00068 #define CLSID_NULL GUID_NULL
00069 #define FMTID_NULL          GUID_NULL
00070
00071 #endif /* _GUIDDEF_H_ */
```

5.4 poppack.h

```
00001 #if defined(__WINE_PSHPACK_H3)
00002 #  ifndef __WINE_INTERNAL_POPPACK
00003 #    undef __WINE_PSHPACK_H3
00004 #  endif
00005 /* Depth == 3 */
00006
00007 #  if defined(__GNUC__) || defined(__SUNPRO_C) || defined(__SUNPRO_CC)
00008 #    if __WINE_PSHPACK_H2 == 1
00009 #      pragma pack(1)
00010 #    elif __WINE_PSHPACK_H2 == 2
00011 #      pragma pack(2)
00012 #    elif __WINE_PSHPACK_H2 == 8
00013 #      pragma pack(8)
00014 #    else
00015 #      pragma pack(4)
00016 #    endif
00017 #  elif !defined(RC_INVOKED)
00018 #    error "Adjusting the alignment is not supported with this compiler"
00019 #  endif
00020
00021 #elif defined(__WINE_PSHPACK_H2)
00022 #  ifndef __WINE_INTERNAL_POPPACK
00023 #    undef __WINE_PSHPACK_H2
00024 #  endif
00025 /* Depth == 2 */
00026
00027 #  if defined(__GNUC__) || defined(__SUNPRO_C) || defined(__SUNPRO_CC)
00028 #    if __WINE_PSHPACK_H == 1
00029 #      pragma pack(1)
00030 #    elif __WINE_PSHPACK_H == 2
00031 #      pragma pack(2)
00032 #    elif __WINE_PSHPACK_H == 8
00033 #      pragma pack(8)
00034 #    else
00035 #      pragma pack(4)
00036 #    endif
00037 #  elif !defined(RC_INVOKED)
00038 #    error "Adjusting the alignment is not supported with this compiler"
00039 #  endif
00040
00041 #elif defined(__WINE_PSHPACK_H)
00042 #  ifndef __WINE_INTERNAL_POPPACK
00043 #    undef __WINE_PSHPACK_H
00044 #  endif
00045 /* Depth == 1 */
00046
00047 #  if defined(__GNUC__) || defined(__SUNPRO_C)
00048 #    pragma pack()
00049 #  elif defined(__SUNPRO_CC)
00050 /*#    warning "Assuming a default alignment of 4"*/
00051 #    pragma pack(4)
00052 #  elif !defined(RC_INVOKED)
00053 #    error "Adjusting the alignment is not supported with this compiler"
00054 #  endif
00055
00056 #else
00057 /* Depth == 0 ! */
00058
00059 #error "Popping alignment isn't possible since no alignment has been pushed"
00060
00061 #endif
00062
00063 #undef __WINE_INTERNAL_POPPACK
```

5.5 pshpack2.h

```
00001 #if defined(__WINE_PSHPACK_H3)
00002
00003    /* Depth > 3 */
00004 #  error "Alignment nesting > 3 is not supported"
00005
00006 #else
```

```
00007
00008 #  if !defined(__WINE_PSHPACK_H)
00009 #    define __WINE_PSHPACK_H  2
00010      /* Depth == 1 */
00011 #  elif !defined(__WINE_PSHPACK_H2)
00012 #    define __WINE_PSHPACK_H2 2
00013      /* Depth == 2 */
00014 #    define __WINE_INTERNAL_POPPACK
00015 #    include "poppack.h"
00016 #  elif !defined(__WINE_PSHPACK_H3)
00017 #    define __WINE_PSHPACK_H3 2
00018      /* Depth == 3 */
00019 #    define __WINE_INTERNAL_POPPACK
00020 #    include "poppack.h"
00021 #  endif
00022
00023 #  if defined(__GNUC__) || defined(__SUNPRO_C) || defined(__SUNPRO_CC)
00024 #    pragma pack(2)
00025 #  elif !defined(RC_INVOKED)
00026 #    error "Adjusting the alignment is not supported with this compiler"
00027 #  endif
00028
00029 #endif
```

5.6 pshpack4.h

```
00001 #if defined(__WINE_PSHPACK_H3)
00002
00003    /* Depth > 3 */
00004 #  error "Alignment nesting > 3 is not supported"
00005
00006 #else
00007
00008 #  if !defined(__WINE_PSHPACK_H)
00009 #    define __WINE_PSHPACK_H  4
00010      /* Depth == 1 */
00011 #  elif !defined(__WINE_PSHPACK_H2)
00012 #    define __WINE_PSHPACK_H2 4
00013      /* Depth == 2 */
00014 #    define __WINE_INTERNAL_POPPACK
00015 #    include "poppack.h"
00016 #  elif !defined(__WINE_PSHPACK_H3)
00017 #    define __WINE_PSHPACK_H3 4
00018      /* Depth == 3 */
00019 #    define __WINE_INTERNAL_POPPACK
00020 #    include "poppack.h"
00021 #  endif
00022
00023 #  if defined(__GNUC__) || defined(__SUNPRO_C) || defined(__SUNPRO_CC)
00024 #    pragma pack(4)
00025 #  elif !defined(RC_INVOKED)
00026 #    error "Adjusting the alignment is not supported with this compiler"
00027 #  endif
00028
00029 #endif
```

5.7 w16.h

```
00001 /*
00002  * These are some left-over definitions which are not supported
00003  * in WINE any more, but still show up in metafiles. They are
00004  * not exposed as API.
00005  */
00006 #ifndef W16_H
00007 #define W16_H
00008
00009 #ifdef __cplusplus
00010 extern "C" {
00011 #endif
00012
00013 /* Standard data types */
00014
00015 typedef short           INT16;
00016 typedef unsigned short  UINT16;
00017 typedef unsigned short  BOOL16;
00018
00019 typedef HDC     HDC16;
00020
00021 /* The POINT structure */
00022
```

```
00023 typedef struct
00024 {
00025     INT16  x;
00026     INT16  y;
00027 } POINT16, *PPOINT16, *LPPOINT16;
00028
00029 typedef struct {
00030     EMR    emr;
00031     RECTL  rclBounds;
00032     DWORD  cpts;
00033     POINT16 apts[1];
00034 } EMRPOLYLINE16,     *PEMRPOLYLINE16,
00035   EMRPOLYBEZIER16,   *PEMRPOLYBEZIER16,
00036   EMRPOLYGON16,      *PEMRPOLYGON16,
00037   EMRPOLYBEZIERTO16, *PEMRPOLYBEZIERTO16,
00038   EMRPOLYLINETO16,   *PEMRPOLYLINETO16;
00039
00040 typedef struct {
00041     EMR    emr;
00042     RECTL  rclBounds;
00043     DWORD  nPolys;
00044     DWORD  cpts;
00045     DWORD  aPolyCounts[1];
00046     POINT16 apts[1];
00047 } EMRPOLYPOLYLINE16,     *PEMRPOLYPOLYLINE16,
00048   EMRPOLYPOLYGON16,      *PEMRPOLYPOLYGON16;
00049
00050 BOOL      WINAPI PolyBezier16(HDC16,const POINT16*,INT16);
00051 BOOL      WINAPI PolyBezierTo16(HDC16,const POINT16*,INT16);
00052 BOOL      WINAPI Polyline16(HDC16,const POINT16*,INT16);
00053 BOOL      WINAPI PolylineTo16(HDC16,const POINT16*,INT16);
00054 BOOL      WINAPI Polygon16(HDC16,const POINT16*,INT16);
00055 BOOL      WINAPI PolyPolygon16(HDC16,const POINT16*,const INT*,UINT16);
00056 #ifdef __cplusplus
00057 }
00058 #endif
00059
00060
00061 #endif /* W16_H */
```

5.8 winbase.h

```
00001 #ifndef __WINE_WINBASE_H
00002 #define __WINE_WINBASE_H
00003
00004 #ifndef RC_INVOKED
00005 #include <stdarg.h>
00006 #endif
00007
00008 #include "basetsd.h"
00009 #include "windef.h"
00010
00011 #ifndef RC_INVOKED
00012 #include <stdarg.h>
00013 #endif
00014
00015 #ifdef __cplusplus
00016 extern "C" {
00017 #endif
00018
00019   /* Windows Exit Procedure flag values */
00020 #define WEP_FREE_DLL        0
00021 #define WEP_SYSTEM_EXIT     1
00022
00023 typedef DWORD CALLBACK (*LPTHREAD_START_ROUTINE)(LPVOID);
00024
00025 typedef VOID /*WINAPI*/ (*PFIBER_START_ROUTINE)( LPVOID lpFiberParameter );
00026 typedef PFIBER_START_ROUTINE LPFIBER_START_ROUTINE;
00027
00028 typedef RTL_CRITICAL_SECTION CRITICAL_SECTION;
00029 typedef PRTL_CRITICAL_SECTION PCRITICAL_SECTION;
00030 typedef PRTL_CRITICAL_SECTION LPCRITICAL_SECTION;
00031
00032 typedef RTL_CRITICAL_SECTION_DEBUG CRITICAL_SECTION_DEBUG;
00033 typedef PRTL_CRITICAL_SECTION_DEBUG PCRITICAL_SECTION_DEBUG;
00034 typedef PRTL_CRITICAL_SECTION_DEBUG LPCRITICAL_SECTION_DEBUG;
00035
00036
00037 #define EXCEPTION_DEBUG_EVENT       1
00038 #define CREATE_THREAD_DEBUG_EVENT   2
00039 #define CREATE_PROCESS_DEBUG_EVENT  3
00040 #define EXIT_THREAD_DEBUG_EVENT     4
00041 #define EXIT_PROCESS_DEBUG_EVENT    5
00042 #define LOAD_DLL_DEBUG_EVENT        6
```

```
00043 #define UNLOAD_DLL_DEBUG_EVENT      7
00044 #define OUTPUT_DEBUG_STRING_EVENT   8
00045 #define RIP_EVENT                   9
00046
00047 typedef struct _EXCEPTION_DEBUG_INFO {
00048     EXCEPTION_RECORD ExceptionRecord;
00049     DWORD dwFirstChance;
00050 } EXCEPTION_DEBUG_INFO;
00051
00052 typedef struct _CREATE_THREAD_DEBUG_INFO {
00053     HANDLE hThread;
00054     LPVOID lpThreadLocalBase;
00055     LPTHREAD_START_ROUTINE lpStartAddress;
00056 } CREATE_THREAD_DEBUG_INFO;
00057
00058 typedef struct _CREATE_PROCESS_DEBUG_INFO {
00059     HANDLE hFile;
00060     HANDLE hProcess;
00061     HANDLE hThread;
00062     LPVOID lpBaseOfImage;
00063     DWORD dwDebugInfoFileOffset;
00064     DWORD nDebugInfoSize;
00065     LPVOID lpThreadLocalBase;
00066     LPTHREAD_START_ROUTINE lpStartAddress;
00067     LPVOID lpImageName;
00068     WORD fUnicode;
00069 } CREATE_PROCESS_DEBUG_INFO;
00070
00071 typedef struct _EXIT_THREAD_DEBUG_INFO {
00072     DWORD dwExitCode;
00073 } EXIT_THREAD_DEBUG_INFO;
00074
00075 typedef struct _EXIT_PROCESS_DEBUG_INFO {
00076     DWORD dwExitCode;
00077 } EXIT_PROCESS_DEBUG_INFO;
00078
00079 typedef struct _LOAD_DLL_DEBUG_INFO {
00080     HANDLE hFile;
00081     LPVOID   lpBaseOfDll;
00082     DWORD    dwDebugInfoFileOffset;
00083     DWORD    nDebugInfoSize;
00084     LPVOID   lpImageName;
00085     WORD     fUnicode;
00086 } LOAD_DLL_DEBUG_INFO;
00087
00088 typedef struct _UNLOAD_DLL_DEBUG_INFO {
00089     LPVOID lpBaseOfDll;
00090 } UNLOAD_DLL_DEBUG_INFO;
00091
00092 typedef struct _OUTPUT_DEBUG_STRING_INFO {
00093     LPSTR lpDebugStringData;
00094     WORD  fUnicode;
00095     WORD  nDebugStringLength;
00096 } OUTPUT_DEBUG_STRING_INFO;
00097
00098 typedef struct _RIP_INFO {
00099     DWORD dwError;
00100     DWORD dwType;
00101 } RIP_INFO;
00102
00103 typedef struct _DEBUG_EVENT {
00104     DWORD dwDebugEventCode;
00105     DWORD dwProcessId;
00106     DWORD dwThreadId;
00107     union u11 {
00108         EXCEPTION_DEBUG_INFO      Exception;
00109         CREATE_THREAD_DEBUG_INFO  CreateThread;
00110         CREATE_PROCESS_DEBUG_INFO CreateProcessInfo;
00111         EXIT_THREAD_DEBUG_INFO    ExitThread;
00112         EXIT_PROCESS_DEBUG_INFO   ExitProcess;
00113         LOAD_DLL_DEBUG_INFO       LoadDll;
00114         UNLOAD_DLL_DEBUG_INFO     UnloadDll;
00115         OUTPUT_DEBUG_STRING_INFO  DebugString;
00116         RIP_INFO                  RipInfo;
00117     } u;
00118 } DEBUG_EVENT, *LPDEBUG_EVENT;
00119
00120 typedef PCONTEXT LPCONTEXT;
00121 typedef PEXCEPTION_RECORD LPEXCEPTION_RECORD;
00122 typedef PEXCEPTION_POINTERS LPEXCEPTION_POINTERS;
00123
00124 #define OFS_MAXPATHNAME 128
00125 typedef struct
00126 {
00127     BYTE cBytes;
00128     BYTE fFixedDisk;
00129     WORD nErrCode;
```

```
00130     BYTE reserved[4];
00131     BYTE szPathName[OFS_MAXPATHNAME];
00132 } OFSTRUCT, *POFSTRUCT, *LPOFSTRUCT;
00133
00134 #define OF_READ               0x0000
00135 #define OF_WRITE              0x0001
00136 #define OF_READWRITE          0x0002
00137 #define OF_SHARE_COMPAT       0x0000
00138 #define OF_SHARE_EXCLUSIVE    0x0010
00139 #define OF_SHARE_DENY_WRITE   0x0020
00140 #define OF_SHARE_DENY_READ    0x0030
00141 #define OF_SHARE_DENY_NONE    0x0040
00142 #define OF_PARSE              0x0100
00143 #define OF_DELETE             0x0200
00144 #define OF_VERIFY             0x0400   /* Used with OF_REOPEN */
00145 #define OF_SEARCH             0x0400   /* Used without OF_REOPEN */
00146 #define OF_CANCEL             0x0800
00147 #define OF_CREATE             0x1000
00148 #define OF_PROMPT             0x2000
00149 #define OF_EXIST              0x4000
00150 #define OF_REOPEN             0x8000
00151
00152 /* SetErrorMode values */
00153 #define SEM_FAILCRITICALERRORS      0x0001
00154 #define SEM_NOGPFAULTERRORBOX       0x0002
00155 #define SEM_NOALIGNMENTFAULTEXCEPT  0x0004
00156 #define SEM_NOOPENFILEERRORBOX      0x8000
00157
00158 /* CopyFileEx flags */
00159 #define COPY_FILE_FAIL_IF_EXISTS        0x00000001
00160 #define COPY_FILE_RESTARTABLE           0x00000002
00161 #define COPY_FILE_OPEN_SOURCE_FOR_WRITE 0x00000004
00162
00163 /* GetTempFileName() Flags */
00164 #define TF_FORCEDRIVE           0x80
00165
00166 #define DRIVE_UNKNOWN              0
00167 #define DRIVE_NO_ROOT_DIR          1
00168 #define DRIVE_REMOVABLE            2
00169 #define DRIVE_FIXED                3
00170 #define DRIVE_REMOTE               4
00171 /* Win32 additions */
00172 #define DRIVE_CDROM                5
00173 #define DRIVE_RAMDISK              6
00174
00175 /* The security attributes structure */
00176 typedef struct _SECURITY_ATTRIBUTES
00177 {
00178     DWORD   nLength;
00179     LPVOID  lpSecurityDescriptor;
00180     BOOL  bInheritHandle;
00181 } SECURITY_ATTRIBUTES, *PSECURITY_ATTRIBUTES, *LPSECURITY_ATTRIBUTES;
00182
00183 #ifndef _FILETIME_
00184 #define _FILETIME_
00185 /* 64 bit number of 100 nanoseconds intervals since January 1, 1601 */
00186 typedef struct
00187 {
00188   DWORD  dwLowDateTime;
00189   DWORD  dwHighDateTime;
00190 } FILETIME, *PFILETIME, *LPFILETIME;
00191 #endif /* _FILETIME_ */
00192
00193 /* Find* structures */
00194 typedef struct
00195 {
00196     DWORD     dwFileAttributes;
00197     FILETIME  ftCreationTime;
00198     FILETIME  ftLastAccessTime;
00199     FILETIME  ftLastWriteTime;
00200     DWORD     nFileSizeHigh;
00201     DWORD     nFileSizeLow;
00202     DWORD     dwReserved0;
00203     DWORD     dwReserved1;
00204     CHAR      cFileName[260];
00205     CHAR      cAlternateFileName[14];
00206 } WIN32_FIND_DATAA, *PWIN32_FIND_DATAA, *LPWIN32_FIND_DATAA;
00207
00208 typedef struct
00209 {
00210     DWORD     dwFileAttributes;
00211     FILETIME  ftCreationTime;
00212     FILETIME  ftLastAccessTime;
00213     FILETIME  ftLastWriteTime;
00214     DWORD     nFileSizeHigh;
00215     DWORD     nFileSizeLow;
00216     DWORD     dwReserved0;
```

```
00217     DWORD     dwReserved1;
00218     WCHAR     cFileName[260];
00219     WCHAR     cAlternateFileName[14];
00220 } WIN32_FIND_DATAW, *PWIN32_FIND_DATAW, *LPWIN32_FIND_DATAW;
00221
00222 DECL_WINELIB_TYPE_AW(WIN32_FIND_DATA)
00223 DECL_WINELIB_TYPE_AW(PWIN32_FIND_DATA)
00224 DECL_WINELIB_TYPE_AW(LPWIN32_FIND_DATA)
00225
00226 typedef enum _FINDEX_INFO_LEVELS
00227 {
00228     FindExInfoStandard,
00229     FindExInfoMaxInfoLevel
00230 } FINDEX_INFO_LEVELS;
00231
00232 typedef enum _FINDEX_SEARCH_OPS
00233 {
00234     FindExSearchNameMatch,
00235     FindExSearchLimitToDirectories,
00236     FindExSearchLimitToDevices,
00237     FindExSearchMaxSearchOp
00238 } FINDEX_SEARCH_OPS;
00239
00240 typedef struct
00241 {
00242     LPVOID lpData;
00243     DWORD cbData;
00244     BYTE cbOverhead;
00245     BYTE iRegionIndex;
00246     WORD wFlags;
00247     union u21 {
00248         struct {
00249             HANDLE hMem;
00250             DWORD dwReserved[3];
00251         } Block;
00252         struct {
00253             DWORD dwCommittedSize;
00254             DWORD dwUnCommittedSize;
00255             LPVOID lpFirstBlock;
00256             LPVOID lpLastBlock;
00257         } Region;
00258     } DUMMYUNIONNAME;
00259 } PROCESS_HEAP_ENTRY, *PPROCESS_HEAP_ENTRY, *LPPROCESS_HEAP_ENTRY;
00260
00261 #define PROCESS_HEAP_REGION                   0x0001
00262 #define PROCESS_HEAP_UNCOMMITTED_RANGE        0x0002
00263 #define PROCESS_HEAP_ENTRY_BUSY               0x0004
00264 #define PROCESS_HEAP_ENTRY_MOVEABLE           0x0010
00265 #define PROCESS_HEAP_ENTRY_DDESHARE           0x0020
00266
00267 #define INVALID_HANDLE_VALUE  ((HANDLE) -1)
00268
00269 #define TLS_OUT_OF_INDEXES ((DWORD)0xFFFFFFFF)
00270
00271 #define SHUTDOWN_NORETRY 1
00272
00273 /* comm */
00274
00275 #define CBR_110 0xFF10
00276 #define CBR_300 0xFF11
00277 #define CBR_600 0xFF12
00278 #define CBR_1200    0xFF13
00279 #define CBR_2400    0xFF14
00280 #define CBR_4800    0xFF15
00281 #define CBR_9600    0xFF16
00282 #define CBR_14400   0xFF17
00283 #define CBR_19200   0xFF18
00284 #define CBR_38400   0xFF1B
00285 #define CBR_56000   0xFF1F
00286 #define CBR_57600       0xFF20
00287 #define CBR_115200      0xFF21
00288 #define CBR_128000  0xFF23
00289 #define CBR_256000  0xFF27
00290
00291 #define NOPARITY    0
00292 #define ODDPARITY   1
00293 #define EVENPARITY  2
00294 #define MARKPARITY  3
00295 #define SPACEPARITY 4
00296 #define ONESTOPBIT  0
00297 #define ONE5STOPBITS    1
00298 #define TWOSTOPBITS 2
00299
00300 #define IGNORE      0
00301 #define INFINITE      0xFFFFFFFF
00302
00303 #define CE_RXOVER   0x0001
```

```
00304 #define CE_OVERRUN  0x0002
00305 #define CE_RXPARITY 0x0004
00306 #define CE_FRAME    0x0008
00307 #define CE_BREAK    0x0010
00308 #define CE_CTSTO    0x0020
00309 #define CE_DSRTO    0x0040
00310 #define CE_RLSDTO   0x0080
00311 #define CE_TXFULL   0x0100
00312 #define CE_PTO      0x0200
00313 #define CE_IOE      0x0400
00314 #define CE_DNS      0x0800
00315 #define CE_OOP      0x1000
00316 #define CE_MODE 0x8000
00317
00318 #define IE_BADID    -1
00319 #define IE_OPEN -2
00320 #define IE_NOPEN    -3
00321 #define IE_MEMORY   -4
00322 #define IE_DEFAULT  -5
00323 #define IE_HARDWARE -10
00324 #define IE_BYTESIZE -11
00325 #define IE_BAUDRATE -12
00326
00327 #define EV_RXCHAR    0x0001
00328 #define EV_RXFLAG    0x0002
00329 #define EV_TXEMPT    0x0004
00330 #define EV_CTS       0x0008
00331 #define EV_DSR       0x0010
00332 #define EV_RLSD      0x0020
00333 #define EV_BREAK     0x0040
00334 #define EV_ERR       0x0080
00335 #define EV_RING      0x0100
00336 #define EV_PERR      0x0200
00337 #define EV_RX80FULL  0x0400
00338 #define EV_EVENT1    0x0800
00339 #define EV_EVENT2    0x1000
00340
00341 #define SETXOFF 1
00342 #define SETXON      2
00343 #define SETRTS      3
00344 #define CLRRTS      4
00345 #define SETDTR      5
00346 #define CLRDTR      6
00347 #define RESETDEV    7
00348 #define SETBREAK    8
00349 #define CLRBREAK    9
00350
00351 /* Purge functions for Comm Port */
00352 #define PURGE_TXABORT       0x0001  /* Kill the pending/current writes to the
00353                         comm port */
00354 #define PURGE_RXABORT       0x0002  /*Kill the pending/current reads to
00355                       the comm port */
00356 #define PURGE_TXCLEAR       0x0004  /* Kill the transmit queue if there*/
00357 #define PURGE_RXCLEAR       0x0008  /* Kill the typeahead buffer if there*/
00358
00359
00360 /* Modem Status Flags */
00361 #define MS_CTS_ON           ((DWORD)0x0010)
00362 #define MS_DSR_ON           ((DWORD)0x0020)
00363 #define MS_RING_ON          ((DWORD)0x0040)
00364 #define MS_RLSD_ON          ((DWORD)0x0080)
00365
00366 #define RTS_CONTROL_DISABLE 0
00367 #define RTS_CONTROL_ENABLE  1
00368 #define RTS_CONTROL_HANDSHAKE   2
00369 #define RTS_CONTROL_TOGGLE  3
00370
00371 #define DTR_CONTROL_DISABLE 0
00372 #define DTR_CONTROL_ENABLE  1
00373 #define DTR_CONTROL_HANDSHAKE   2
00374
00375
00376 #define LMEM_FIXED          0
00377 #define LMEM_MOVEABLE       0x0002
00378 #define LMEM_NOCOMPACT      0x0010
00379 #define LMEM_NODISCARD      0x0020
00380 #define LMEM_ZEROINIT       0x0040
00381 #define LMEM_MODIFY         0x0080
00382 #define LMEM_DISCARDABLE    0x0F00
00383 #define LMEM_DISCARDED      0x4000
00384 #define LMEM_LOCKCOUNT      0x00FF
00385
00386 #define LPTR (LMEM_FIXED | LMEM_ZEROINIT)
00387 #define LHND (LMEM_MOVEABLE | LMEM_ZEROINIT)
00388
00389 #define NONZEROLHND         (LMEM_MOVEABLE)
00390 #define NONZEROLPTR         (LMEM_FIXED)
```

```
00391
00392 #define GMEM_FIXED          0x0000
00393 #define GMEM_MOVEABLE       0x0002
00394 #define GMEM_NOCOMPACT      0x0010
00395 #define GMEM_NODISCARD      0x0020
00396 #define GMEM_ZEROINIT       0x0040
00397 #define GMEM_MODIFY         0x0080
00398 #define GMEM_DISCARDABLE    0x0100
00399 #define GMEM_NOT_BANKED     0x1000
00400 #define GMEM_SHARE          0x2000
00401 #define GMEM_DDESHARE       0x2000
00402 #define GMEM_NOTIFY         0x4000
00403 #define GMEM_LOWER          GMEM_NOT_BANKED
00404 #define GMEM_DISCARDED      0x4000
00405 #define GMEM_LOCKCOUNT      0x00ff
00406 #define GMEM_INVALID_HANDLE 0x8000
00407
00408 #define GHND                (GMEM_MOVEABLE | GMEM_ZEROINIT)
00409 #define GPTR                (GMEM_FIXED | GMEM_ZEROINIT)
00410
00411 #define INVALID_ATOM        ((ATOM)0)
00412 #define MAXINTATOM          0xc000
00413 #define MAKEINTATOMA(atom)  ((LPCSTR)((ULONG_PTR)((WORD)(atom))))
00414 #define MAKEINTATOMW(atom)  ((LPCWSTR)((ULONG_PTR)((WORD)(atom))))
00415 #define MAKEINTATOM  WINELIB_NAME_AW(MAKEINTATOM)
00416
00417 typedef struct tagMEMORYSTATUS
00418 {
00419     DWORD    dwLength;
00420     DWORD    dwMemoryLoad;
00421     DWORD    dwTotalPhys;
00422     DWORD    dwAvailPhys;
00423     DWORD    dwTotalPageFile;
00424     DWORD    dwAvailPageFile;
00425     DWORD    dwTotalVirtual;
00426     DWORD    dwAvailVirtual;
00427 } MEMORYSTATUS, *LPMEMORYSTATUS;
00428
00429
00430 typedef struct {
00431         WORD wYear;
00432         WORD wMonth;
00433         WORD wDayOfWeek;
00434         WORD wDay;
00435         WORD wHour;
00436         WORD wMinute;
00437         WORD wSecond;
00438         WORD wMilliseconds;
00439 } SYSTEMTIME, *PSYSTEMTIME, *LPSYSTEMTIME;
00440
00441 /* The 'overlapped' data structure used by async I/O functions.
00442  */
00443 typedef struct {
00444         DWORD Internal;
00445         DWORD InternalHigh;
00446         DWORD Offset;
00447         DWORD OffsetHigh;
00448         HANDLE hEvent;
00449 } OVERLAPPED, *LPOVERLAPPED;
00450
00451 typedef VOID CALLBACK (*LPOVERLAPPED_COMPLETION_ROUTINE)(DWORD dwErrorCode, DWORD
      dwNumberOfBytesTransfered, LPOVERLAPPED lpOverlapped);
00452
00453 /* Process startup information.
00454  */
00455
00456 /* STARTUPINFO.dwFlags */
00457 #define STARTF_USESHOWWINDOW    0x00000001
00458 #define STARTF_USESIZE      0x00000002
00459 #define STARTF_USEPOSITION  0x00000004
00460 #define STARTF_USECOUNTCHARS    0x00000008
00461 #define STARTF_USEFILLATTRIBUTE 0x00000010
00462 #define STARTF_RUNFULLSCREEN    0x00000020
00463 #define STARTF_FORCEONFEEDBACK  0x00000040
00464 #define STARTF_FORCEOFFFEEDBACK 0x00000080
00465 #define STARTF_USESTDHANDLES    0x00000100
00466 #define STARTF_USEHOTKEY    0x00000200
00467
00468 typedef struct {
00469         DWORD cb;       /* 00: size of struct */
00470         LPSTR lpReserved;   /* 04: */
00471         LPSTR lpDesktop;    /* 08: */
00472         LPSTR lpTitle;      /* 0c: */
00473         DWORD dwX;      /* 10: */
00474         DWORD dwY;      /* 14: */
00475         DWORD dwXSize;      /* 18: */
00476         DWORD dwYSize;      /* 1c: */
```

```
00477         DWORD dwXCountChars;    /* 20: */
00478         DWORD dwYCountChars;    /* 24: */
00479         DWORD dwFillAttribute;  /* 28: */
00480         DWORD dwFlags;      /* 2c: */
00481         WORD wShowWindow;   /* 30: */
00482         WORD cbReserved2;   /* 32: */
00483         BYTE *lpReserved2;  /* 34: */
00484         HANDLE hStdInput;   /* 38: */
00485         HANDLE hStdOutput;  /* 3c: */
00486         HANDLE hStdError;   /* 40: */
00487 } STARTUPINFOA, *LPSTARTUPINFOA;
00488
00489 typedef struct {
00490         DWORD cb;
00491         LPWSTR lpReserved;
00492         LPWSTR lpDesktop;
00493         LPWSTR lpTitle;
00494         DWORD dwX;
00495         DWORD dwY;
00496         DWORD dwXSize;
00497         DWORD dwYSize;
00498         DWORD dwXCountChars;
00499         DWORD dwYCountChars;
00500         DWORD dwFillAttribute;
00501         DWORD dwFlags;
00502         WORD wShowWindow;
00503         WORD cbReserved2;
00504         BYTE *lpReserved2;
00505         HANDLE hStdInput;
00506         HANDLE hStdOutput;
00507         HANDLE hStdError;
00508 } STARTUPINFOW, *LPSTARTUPINFOW;
00509
00510 DECL_WINELIB_TYPE_AW(STARTUPINFO)
00511 DECL_WINELIB_TYPE_AW(LPSTARTUPINFO)
00512
00513 typedef struct {
00514     HANDLE  hProcess;
00515     HANDLE  hThread;
00516     DWORD       dwProcessId;
00517     DWORD       dwThreadId;
00518 } PROCESS_INFORMATION, *PPROCESS_INFORMATION, *LPPROCESS_INFORMATION;
00519
00520 typedef struct {
00521         LONG Bias;
00522         WCHAR StandardName[32];
00523         SYSTEMTIME StandardDate;
00524         LONG StandardBias;
00525         WCHAR DaylightName[32];
00526         SYSTEMTIME DaylightDate;
00527         LONG DaylightBias;
00528 } TIME_ZONE_INFORMATION, *PTIME_ZONE_INFORMATION, *LPTIME_ZONE_INFORMATION;
00529
00530 #define TIME_ZONE_ID_INVALID    ((DWORD)0xFFFFFFFF)
00531 #define TIME_ZONE_ID_UNKNOWN    0
00532 #define TIME_ZONE_ID_STANDARD   1
00533 #define TIME_ZONE_ID_DAYLIGHT   2
00534
00535 /* CreateProcess: dwCreationFlag values
00536  */
00537 #define DEBUG_PROCESS               0x00000001
00538 #define DEBUG_ONLY_THIS_PROCESS     0x00000002
00539 #define CREATE_SUSPENDED            0x00000004
00540 #define DETACHED_PROCESS            0x00000008
00541 #define CREATE_NEW_CONSOLE          0x00000010
00542 #define NORMAL_PRIORITY_CLASS       0x00000020
00543 #define IDLE_PRIORITY_CLASS         0x00000040
00544 #define HIGH_PRIORITY_CLASS         0x00000080
00545 #define REALTIME_PRIORITY_CLASS     0x00000100
00546 #define CREATE_NEW_PROCESS_GROUP    0x00000200
00547 #define CREATE_UNICODE_ENVIRONMENT  0x00000400
00548 #define CREATE_SEPARATE_WOW_VDM     0x00000800
00549 #define CREATE_SHARED_WOW_VDM       0x00001000
00550 #define CREATE_DEFAULT_ERROR_MODE   0x04000000
00551 #define CREATE_NO_WINDOW            0x08000000
00552 #define PROFILE_USER                0x10000000
00553 #define PROFILE_KERNEL              0x20000000
00554 #define PROFILE_SERVER              0x40000000
00555
00556
00557 /* File object type definitions
00558  */
00559 #define FILE_TYPE_UNKNOWN       0
00560 #define FILE_TYPE_DISK          1
00561 #define FILE_TYPE_CHAR          2
00562 #define FILE_TYPE_PIPE          3
00563 #define FILE_TYPE_REMOTE        32768
```

```
00564
00565 /* File creation flags
00566  */
00567 #define FILE_FLAG_WRITE_THROUGH    0x80000000UL
00568 #define FILE_FLAG_OVERLAPPED       0x40000000L
00569 #define FILE_FLAG_NO_BUFFERING     0x20000000L
00570 #define FILE_FLAG_RANDOM_ACCESS    0x10000000L
00571 #define FILE_FLAG_SEQUENTIAL_SCAN  0x08000000L
00572 #define FILE_FLAG_DELETE_ON_CLOSE  0x04000000L
00573 #define FILE_FLAG_BACKUP_SEMANTICS 0x02000000L
00574 #define FILE_FLAG_POSIX_SEMANTICS  0x01000000L
00575 #define CREATE_NEW              1
00576 #define CREATE_ALWAYS           2
00577 #define OPEN_EXISTING           3
00578 #define OPEN_ALWAYS             4
00579 #define TRUNCATE_EXISTING       5
00580
00581 /* Standard handle identifiers
00582  */
00583 #define STD_INPUT_HANDLE        ((DWORD) -10)
00584 #define STD_OUTPUT_HANDLE       ((DWORD) -11)
00585 #define STD_ERROR_HANDLE        ((DWORD) -12)
00586
00587 typedef struct
00588 {
00589   DWORD dwFileAttributes;
00590   FILETIME ftCreationTime;
00591   FILETIME ftLastAccessTime;
00592   FILETIME ftLastWriteTime;
00593   DWORD dwVolumeSerialNumber;
00594   DWORD nFileSizeHigh;
00595   DWORD nFileSizeLow;
00596   DWORD nNumberOfLinks;
00597   DWORD nFileIndexHigh;
00598   DWORD nFileIndexLow;
00599 } BY_HANDLE_FILE_INFORMATION, *PBY_HANDLE_FILE_INFORMATION, *LPBY_HANDLE_FILE_INFORMATION ;
00600
00601 #define PIPE_ACCESS_INBOUND  1
00602 #define PIPE_ACCESS_OUTBOUND 2
00603 #define PIPE_ACCESS_DUPLEX   3
00604
00605 #define PIPE_TYPE_BYTE    0
00606 #define PIPE_TYPE_MESSAGE 4
00607
00608 #define PIPE_READMODE_BYTE    0
00609 #define PIPE_READMODE_MESSAGE 2
00610
00611 #define PIPE_WAIT   0
00612 #define PIPE_NOWAIT 1
00613
00614 #define PIPE_UNLIMITED_INSTANCES 255
00615
00616 #define NMPWAIT_WAIT_FOREVER        0xffffffff
00617 #define NMPWAIT_NOWAIT          0x00000001
00618 #define NMPWAIT_USE_DEFAULT_WAIT    0x00000000
00619
00620 typedef struct _SYSTEM_POWER_STATUS
00621 {
00622   BYTE    ACLineStatus;
00623   BYTE    BatteryFlag;
00624   BYTE    BatteryLifePercent;
00625   BYTE    reserved;
00626   DWORD   BatteryLifeTime;
00627   DWORD   BatteryFullLifeTime;
00628 } SYSTEM_POWER_STATUS, *LPSYSTEM_POWER_STATUS;
00629
00630
00631 typedef struct tagSYSTEM_INFO
00632 {
00633     union u3 {
00634     DWORD   dwOemId; /* Obsolete field - do not use */
00635     struct splits {
00636         WORD wProcessorArchitecture;
00637         WORD wReserved;
00638     } DUMMYSTRUCTNAME;
00639     } DUMMYUNIONNAME;
00640     DWORD   dwPageSize;
00641     LPVOID  lpMinimumApplicationAddress;
00642     LPVOID  lpMaximumApplicationAddress;
00643     DWORD   dwActiveProcessorMask;
00644     DWORD   dwNumberOfProcessors;
00645     DWORD   dwProcessorType;
00646     DWORD   dwAllocationGranularity;
00647     WORD    wProcessorLevel;
00648     WORD    wProcessorRevision;
00649 } SYSTEM_INFO, *LPSYSTEM_INFO;
00650
```

```
00651 typedef BOOL CALLBACK (*ENUMRESTYPEPROCA)(HMODULE,LPSTR,LONG);
00652 typedef BOOL CALLBACK (*ENUMRESTYPEPROCW)(HMODULE,LPWSTR,LONG);
00653 typedef BOOL CALLBACK (*ENUMRESNAMEPROCA)(HMODULE,LPCSTR,LPSTR,LONG);
00654 typedef BOOL CALLBACK (*ENUMRESNAMEPROCW)(HMODULE,LPCWSTR,LPWSTR,LONG);
00655 typedef BOOL CALLBACK (*ENUMRESLANGPROCA)(HMODULE,LPCSTR,LPCSTR,WORD,LONG);
00656 typedef BOOL CALLBACK (*ENUMRESLANGPROCW)(HMODULE,LPCWSTR,LPCWSTR,WORD,LONG);
00657
00658 DECL_WINELIB_TYPE_AW(ENUMRESTYPEPROC)
00659 DECL_WINELIB_TYPE_AW(ENUMRESNAMEPROC)
00660 DECL_WINELIB_TYPE_AW(ENUMRESLANGPROC)
00661
00662 /* flags that can be passed to LoadLibraryEx */
00663 #define DONT_RESOLVE_DLL_REFERENCES 0x00000001
00664 #define LOAD_LIBRARY_AS_DATAFILE    0x00000002
00665 #define LOAD_WITH_ALTERED_SEARCH_PATH   0x00000008
00666
00667 /* ifdef _x86_ ... */
00668 typedef struct _LDT_ENTRY {
00669     WORD    LimitLow;
00670     WORD    BaseLow;
00671     union u4 {
00672     struct {
00673         BYTE    BaseMid;
00674         BYTE    Flags1;/*Declare as bytes to avoid alignment problems */
00675         BYTE    Flags2;
00676         BYTE    BaseHi;
00677     } Bytes;
00678     struct {
00679         unsigned    BaseMid     : 8;
00680         unsigned    Type        : 5;
00681         unsigned    Dpl     : 2;
00682         unsigned    Pres        : 1;
00683         unsigned    LimitHi     : 4;
00684         unsigned    Sys     : 1;
00685         unsigned    Reserved_0  : 1;
00686         unsigned    Default_Big : 1;
00687         unsigned    Granularity : 1;
00688         unsigned    BaseHi      : 8;
00689     } Bits;
00690     } HighWord;
00691 } LDT_ENTRY, *LPLDT_ENTRY;
00692
00693
00694 typedef enum _GET_FILEEX_INFO_LEVELS {
00695     GetFileExInfoStandard
00696 } GET_FILEEX_INFO_LEVELS;
00697
00698 typedef struct _WIN32_FILE_ATTRIBUTES_DATA {
00699     DWORD    dwFileAttributes;
00700     FILETIME ftCreationTime;
00701     FILETIME ftLastAccessTime;
00702     FILETIME ftLastWriteTime;
00703     DWORD    nFileSizeHigh;
00704     DWORD    nFileSizeLow;
00705 } WIN32_FILE_ATTRIBUTE_DATA, *LPWIN32_FILE_ATTRIBUTE_DATA;
00706
00707 /*
00708  * This one seems to be a Win32 only definition. It also is defined with
00709  * WINAPI instead of CALLBACK in the windows headers.
00710  */
00711 typedef DWORD CALLBACK (*LPPROGRESS_ROUTINE)(LARGE_INTEGER, LARGE_INTEGER, LARGE_INTEGER,
00712                                              LARGE_INTEGER, DWORD, DWORD, HANDLE,
00713                                              HANDLE, LPVOID);
00714
00715
00716 #define WAIT_FAILED     0xffffffff
00717 #define WAIT_OBJECT_0       0
00718 #define WAIT_ABANDONED      STATUS_ABANDONED_WAIT_0
00719 #define WAIT_ABANDONED_0    STATUS_ABANDONED_WAIT_0
00720 #define WAIT_IO_COMPLETION  STATUS_USER_APC
00721 #define WAIT_TIMEOUT        STATUS_TIMEOUT
00722 #define STILL_ACTIVE            STATUS_PENDING
00723
00724 #define FILE_BEGIN              0
00725 #define FILE_CURRENT            1
00726 #define FILE_END                2
00727
00728 #define FILE_MAP_COPY                   0x00000001
00729 #define FILE_MAP_WRITE                  0x00000002
00730 #define FILE_MAP_READ                   0x00000004
00731 #define FILE_MAP_ALL_ACCESS             0x000f001f
00732
00733 #define MOVEFILE_REPLACE_EXISTING       0x00000001
00734 #define MOVEFILE_COPY_ALLOWED           0x00000002
00735 #define MOVEFILE_DELAY_UNTIL_REBOOT     0x00000004
00736
00737 #define FS_CASE_SENSITIVE               FILE_CASE_SENSITIVE_SEARCH
```

```
00738 #define FS_CASE_IS_PRESERVED            FILE_CASE_PRESERVED_NAMES
00739 #define FS_UNICODE_STORED_ON_DISK       FILE_UNICODE_ON_DISK
00740 #define FS_PERSISTENT_ACLS              FILE_PERSISTENT_ACLS
00741 #define FS_VOL_IS_COMPRESSED            FILE_VOLUME_IS_COMPRESSED
00742 #define FS_FILE_COMPRESSION             FILE_FILE_COMPRESSION
00743
00744 #define EXCEPTION_ACCESS_VIOLATION          STATUS_ACCESS_VIOLATION
00745 #define EXCEPTION_DATATYPE_MISALIGNMENT     STATUS_DATATYPE_MISALIGNMENT
00746 #define EXCEPTION_BREAKPOINT                STATUS_BREAKPOINT
00747 #define EXCEPTION_SINGLE_STEP               STATUS_SINGLE_STEP
00748 #define EXCEPTION_ARRAY_BOUNDS_EXCEEDED     STATUS_ARRAY_BOUNDS_EXCEEDED
00749 #define EXCEPTION_FLT_DENORMAL_OPERAND      STATUS_FLOAT_DENORMAL_OPERAND
00750 #define EXCEPTION_FLT_DIVIDE_BY_ZERO        STATUS_FLOAT_DIVIDE_BY_ZERO
00751 #define EXCEPTION_FLT_INEXACT_RESULT        STATUS_FLOAT_INEXACT_RESULT
00752 #define EXCEPTION_FLT_INVALID_OPERATION     STATUS_FLOAT_INVALID_OPERATION
00753 #define EXCEPTION_FLT_OVERFLOW              STATUS_FLOAT_OVERFLOW
00754 #define EXCEPTION_FLT_STACK_CHECK           STATUS_FLOAT_STACK_CHECK
00755 #define EXCEPTION_FLT_UNDERFLOW             STATUS_FLOAT_UNDERFLOW
00756 #define EXCEPTION_INT_DIVIDE_BY_ZERO        STATUS_INTEGER_DIVIDE_BY_ZERO
00757 #define EXCEPTION_INT_OVERFLOW              STATUS_INTEGER_OVERFLOW
00758 #define EXCEPTION_PRIV_INSTRUCTION          STATUS_PRIVILEGED_INSTRUCTION
00759 #define EXCEPTION_IN_PAGE_ERROR             STATUS_IN_PAGE_ERROR
00760 #define EXCEPTION_ILLEGAL_INSTRUCTION       STATUS_ILLEGAL_INSTRUCTION
00761 #define EXCEPTION_NONCONTINUABLE_EXCEPTION  STATUS_NONCONTINUABLE_EXCEPTION
00762 #define EXCEPTION_STACK_OVERFLOW            STATUS_STACK_OVERFLOW
00763 #define EXCEPTION_INVALID_DISPOSITION       STATUS_INVALID_DISPOSITION
00764 #define EXCEPTION_GUARD_PAGE                STATUS_GUARD_PAGE_VIOLATION
00765 #define EXCEPTION_INVALID_HANDLE            STATUS_INVALID_HANDLE
00766 #define CONTROL_C_EXIT                      STATUS_CONTROL_C_EXIT
00767
00768 /* Wine extension; Windows doesn't have a name for this code */
00769 #define EXCEPTION_CRITICAL_SECTION_WAIT     0xc0000194
00770
00771 #define DUPLICATE_CLOSE_SOURCE      0x00000001
00772 #define DUPLICATE_SAME_ACCESS       0x00000002
00773
00774 #define HANDLE_FLAG_INHERIT             0x00000001
00775 #define HANDLE_FLAG_PROTECT_FROM_CLOSE  0x00000002
00776
00777 #define HINSTANCE_ERROR 32
00778
00779 #define THREAD_PRIORITY_LOWEST          THREAD_BASE_PRIORITY_MIN
00780 #define THREAD_PRIORITY_BELOW_NORMAL    (THREAD_PRIORITY_LOWEST+1)
00781 #define THREAD_PRIORITY_NORMAL          0
00782 #define THREAD_PRIORITY_HIGHEST         THREAD_BASE_PRIORITY_MAX
00783 #define THREAD_PRIORITY_ABOVE_NORMAL    (THREAD_PRIORITY_HIGHEST-1)
00784 #define THREAD_PRIORITY_ERROR_RETURN    (0x7fffffff)
00785 #define THREAD_PRIORITY_TIME_CRITICAL   THREAD_BASE_PRIORITY_LOWRT
00786 #define THREAD_PRIORITY_IDLE            THREAD_BASE_PRIORITY_IDLE
00787
00788 /* flags to FormatMessage */
00789 #define FORMAT_MESSAGE_ALLOCATE_BUFFER  0x00000100
00790 #define FORMAT_MESSAGE_IGNORE_INSERTS   0x00000200
00791 #define FORMAT_MESSAGE_FROM_STRING  0x00000400
00792 #define FORMAT_MESSAGE_FROM_HMODULE 0x00000800
00793 #define FORMAT_MESSAGE_FROM_SYSTEM  0x00001000
00794 #define FORMAT_MESSAGE_ARGUMENT_ARRAY   0x00002000
00795 #define FORMAT_MESSAGE_MAX_WIDTH_MASK   0x000000FF
00796
00797 #ifdef __WINE__
00798 #define CRITICAL_SECTION_INIT(name) { (void *)(__FILE__ ": " name), -1, 0, 0, 0, 0 }
00799 #endif
00800
00801 typedef struct {
00802     DWORD dwOSVersionInfoSize;
00803     DWORD dwMajorVersion;
00804     DWORD dwMinorVersion;
00805     DWORD dwBuildNumber;
00806     DWORD dwPlatformId;
00807     CHAR szCSDVersion[128];
00808 } OSVERSIONINFOA, *POSVERSIONINFOA, *LPOSVERSIONINFOA;
00809
00810 typedef struct {
00811     DWORD dwOSVersionInfoSize;
00812     DWORD dwMajorVersion;
00813     DWORD dwMinorVersion;
00814     DWORD dwBuildNumber;
00815     DWORD dwPlatformId;
00816     WCHAR szCSDVersion[128];
00817 } OSVERSIONINFOW, *POSVERSIONINFOW, *LPOSVERSIONINFOW;
00818
00819 DECL_WINELIB_TYPE_AW(OSVERSIONINFO)
00820 DECL_WINELIB_TYPE_AW(POSVERSIONINFO)
00821 DECL_WINELIB_TYPE_AW(LPOSVERSIONINFO)
00822
00823 #define VER_PLATFORM_WIN32s             0
00824 #define VER_PLATFORM_WIN32_WINDOWS      1
```

```
00825 #define VER_PLATFORM_WIN32_NT          2
00826
00827 typedef struct tagCOMSTAT
00828 {
00829     DWORD status;
00830     DWORD cbInQue;
00831     DWORD cbOutQue;
00832 } COMSTAT,*LPCOMSTAT;
00833
00834 typedef struct tagDCB
00835 {
00836     DWORD DCBlength;
00837     DWORD BaudRate;
00838     unsigned fBinary               :1;
00839     unsigned fParity               :1;
00840     unsigned fOutxCtsFlow          :1;
00841     unsigned fOutxDsrFlow          :1;
00842     unsigned fDtrControl           :2;
00843     unsigned fDsrSensitivity       :1;
00844     unsigned fTXContinueOnXoff     :1;
00845     unsigned fOutX                 :1;
00846     unsigned fInX                  :1;
00847     unsigned fErrorChar            :1;
00848     unsigned fNull                 :1;
00849     unsigned fRtsControl           :2;
00850     unsigned fAbortOnError         :1;
00851     unsigned fDummy2               :17;
00852     WORD wReserved;
00853     WORD XonLim;
00854     WORD XoffLim;
00855     BYTE ByteSize;
00856     BYTE Parity;
00857     BYTE StopBits;
00858     char XonChar;
00859     char XoffChar;
00860     char ErrorChar;
00861     char EofChar;
00862     char EvtChar;
00863 } DCB, *LPDCB;
00864
00865 typedef struct tagCOMMCONFIG {
00866     DWORD dwSize;
00867     WORD  wVersion;
00868     WORD  wReserved;
00869     DCB   dcb;
00870     DWORD dwProviderSubType;
00871     DWORD dwProviderOffset;
00872     DWORD dwProviderSize;
00873     DWORD wcProviderData[1];
00874 } COMMCONFIG, *LPCOMMCONFIG;
00875
00876 typedef struct tagCOMMPROP {
00877     WORD  wPacketLength;
00878     WORD  wPacketVersion;
00879     DWORD dwServiceMask;
00880     DWORD dwReserved1;
00881     DWORD dwMaxTxQueue;
00882     DWORD dwMaxRxQueue;
00883     DWORD dwMaxBaud;
00884     DWORD dwProvSubType;
00885     DWORD dwProvCapabilities;
00886     DWORD dwSettableParams;
00887     DWORD dwSettableBaud;
00888     WORD  wSettableData;
00889     WORD  wSettableStopParity;
00890     DWORD dwCurrentTxQueue;
00891     DWORD dwCurrentRxQueue;
00892     DWORD dwProvSpec1;
00893     DWORD dwProvSpec2;
00894     WCHAR wcProvChar[1];
00895 } COMMPROP, *LPCOMMPROP;
00896
00897 #define SP_SERIALCOMM ((DWORD)1)
00898
00899 #define BAUD_075     ((DWORD)0x01)
00900 #define BAUD_110     ((DWORD)0x02)
00901 #define BAUD_134_5   ((DWORD)0x04)
00902 #define BAUD_150     ((DWORD)0x08)
00903 #define BAUD_300     ((DWORD)0x10)
00904 #define BAUD_600     ((DWORD)0x20)
00905 #define BAUD_1200    ((DWORD)0x40)
00906 #define BAUD_1800    ((DWORD)0x80)
00907 #define BAUD_2400    ((DWORD)0x100)
00908 #define BAUD_4800    ((DWORD)0x200)
00909 #define BAUD_7200    ((DWORD)0x400)
00910 #define BAUD_9600    ((DWORD)0x800)
00911 #define BAUD_14400   ((DWORD)0x1000)
```

```
00912 #define BAUD_19200   ((DWORD)0x2000)
00913 #define BAUD_38400   ((DWORD)0x4000)
00914 #define BAUD_56K     ((DWORD)0x8000)
00915 #define BAUD_57600   ((DWORD)0x40000)
00916 #define BAUD_115200  ((DWORD)0x20000)
00917 #define BAUD_128K    ((DWORD)0x10000)
00918 #define BAUD_USER    ((DWORD)0x10000000)
00919
00920 #define PST_FAX             ((DWORD)0x21)
00921 #define PST_LAT             ((DWORD)0x101)
00922 #define PST_MODEM           ((DWORD)0x06)
00923 #define PST_NETWORK_BRIDGE  ((DWORD)0x100)
00924 #define PST_PARALLEL_PORT   ((DWORD)0x02)
00925 #define PST_RS232           ((DWORD)0x01)
00926 #define PST_RS442           ((DWORD)0x03)
00927 #define PST_RS423           ((DWORD)0x04)
00928 #define PST_RS449           ((DWORD)0x06)
00929 #define PST_SCANNER         ((DWORD)0x22)
00930 #define PST_TCPIP_TELNET    ((DWORD)0x102)
00931 #define PST_UNSPECIFIED     ((DWORD)0x00)
00932 #define PST_X25             ((DWORD)0x103)
00933
00934 #define PCF_16BITMODE     ((DWORD)0x200)
00935 #define PCF_DTRDSR        ((DWORD)0x01)
00936 #define PCF_INTTIMEOUTS   ((DWORD)0x80)
00937 #define PCF_PARITY_CHECK  ((DWORD)0x08)
00938 #define PCF_RLSD          ((DWORD)0x04)
00939 #define PCF_RTSCTS        ((DWORD)0x02)
00940 #define PCF_SETXCHAR      ((DWORD)0x20)
00941 #define PCF_SPECIALCHARS  ((DWORD)0x100)
00942 #define PCF_TOTALTIMEOUTS ((DWORD)0x40)
00943 #define PCF_XONXOFF       ((DWORD)0x10)
00944
00945 #define SP_BAUD         ((DWORD)0x02)
00946 #define SP_DATABITS     ((DWORD)0x04)
00947 #define SP_HANDSHAKING  ((DWORD)0x10)
00948 #define SP_PARITY       ((DWORD)0x01)
00949 #define SP_PARITY_CHECK ((DWORD)0x20)
00950 #define SP_RLSD         ((DWORD)0x40)
00951 #define SP_STOPBITS     ((DWORD)0x08)
00952
00953 #define DATABITS_5   ((DWORD)0x01)
00954 #define DATABITS_6   ((DWORD)0x02)
00955 #define DATABITS_7   ((DWORD)0x04)
00956 #define DATABITS_8   ((DWORD)0x08)
00957 #define DATABITS_16  ((DWORD)0x10)
00958 #define DATABITS_16X ((DWORD)0x20)
00959
00960 #define STOPBITS_10 ((DWORD)1)
00961 #define STOPBITS_15 ((DWORD)2)
00962 #define STOPBITS_20 ((DWORD)4)
00963
00964 #define PARITY_NONE  ((DWORD)0x100)
00965 #define PARITY_ODD   ((DWORD)0x200)
00966 #define PARITY_EVEN  ((DWORD)0x400)
00967 #define PARITY_MARK  ((DWORD)0x800)
00968 #define PARITY_SPACE ((DWORD)0x1000)
00969
00970 typedef struct tagCOMMTIMEOUTS {
00971     DWORD   ReadIntervalTimeout;
00972     DWORD   ReadTotalTimeoutMultiplier;
00973     DWORD   ReadTotalTimeoutConstant;
00974     DWORD   WriteTotalTimeoutMultiplier;
00975     DWORD   WriteTotalTimeoutConstant;
00976 } COMMTIMEOUTS,*LPCOMMTIMEOUTS;
00977
00978 typedef void CALLBACK (*PAPCFUNC)(ULONG_PTR);
00979 typedef void CALLBACK (*PTIMERAPCROUTINE)(LPVOID,DWORD,DWORD);
00980
00981 /*DWORD WINAPI GetVersion( void );*/
00982 BOOL WINAPI GetVersionExA(OSVERSIONINFOA*);
00983 BOOL WINAPI GetVersionExW(OSVERSIONINFOW*);
00984 #define GetVersionEx WINELIB_NAME_AW(GetVersionEx)
00985
00986 /*int WinMain(HINSTANCE, HINSTANCE prev, char *cmd, int show);*/
00987
00988 /* FIXME: need to use defines because we don't have proper imports everywhere yet */
00989 #ifndef have_proper_imports
00990 LONG        WINAPI RtlEnterCriticalSection( CRITICAL_SECTION *crit );
00991 LONG        WINAPI RtlLeaveCriticalSection( CRITICAL_SECTION *crit );
00992 LONG        WINAPI RtlDeleteCriticalSection( CRITICAL_SECTION *crit );
00993 BOOL        WINAPI RtlTryEnterCriticalSection( CRITICAL_SECTION *crit );
00994 PVOID       WINAPI RtlAllocateHeap(HANDLE,ULONG,ULONG);
00995 BOOLEAN     WINAPI RtlFreeHeap(HANDLE,ULONG,PVOID);
00996 PVOID       WINAPI RtlReAllocateHeap(HANDLE,ULONG,PVOID,ULONG);
00997 ULONG       WINAPI RtlSizeHeap(HANDLE,ULONG,PVOID);
00998 #define     HeapAlloc(heap,flags,size) RtlAllocateHeap(heap,flags,size)
```

```
00999 #define     HeapFree(heap,flags,ptr) RtlFreeHeap(heap,flags,ptr)
01000 #define     HeapReAlloc(heap,flags,ptr,size) RtlReAllocateHeap(heap,flags,ptr,size)
01001 #define     HeapSize(heap,flags,ptr) RtlSizeHeap(heap,flags,ptr)
01002 #define     EnterCriticalSection(crit) RtlEnterCriticalSection(crit)
01003 #define     LeaveCriticalSection(crit) RtlLeaveCriticalSection(crit)
01004 #define     DeleteCriticalSection(crit) RtlDeleteCriticalSection(crit)
01005 #define     TryEnterCriticalSection(crit) RtlTryEnterCriticalSection(crit)
01006 #else
01007 LPVOID      WINAPI HeapAlloc(HANDLE,DWORD,DWORD);
01008 BOOL        WINAPI HeapFree(HANDLE,DWORD,LPVOID);
01009 LPVOID      WINAPI HeapReAlloc(HANDLE,DWORD,LPVOID,DWORD);
01010 DWORD       WINAPI HeapSize(HANDLE,DWORD,LPVOID);
01011 void        WINAPI DeleteCriticalSection(CRITICAL_SECTION *lpCrit);
01012 void        WINAPI EnterCriticalSection(CRITICAL_SECTION *lpCrit);
01013 BOOL        WINAPI TryEnterCriticalSection(CRITICAL_SECTION *lpCrit);
01014 void        WINAPI LeaveCriticalSection(CRITICAL_SECTION *lpCrit);
01015 #endif
01016
01017 void      WINAPI InitializeCriticalSection(CRITICAL_SECTION *lpCrit);
01018 BOOL      WINAPI InitializeCriticalSectionAndSpinCount(CRITICAL_SECTION *,DWORD);
01019 void      WINAPI MakeCriticalSectionGlobal(CRITICAL_SECTION *lpCrit);
01020 BOOL      WINAPI GetProcessWorkingSetSize(HANDLE,LPDWORD,LPDWORD);
01021 DWORD     WINAPI QueueUserAPC(PAPCFUNC,HANDLE,ULONG_PTR);
01022 void      WINAPI RaiseException(DWORD,DWORD,DWORD,const LPDWORD);
01023 BOOL    WINAPI SetProcessWorkingSetSize(HANDLE,DWORD,DWORD);
01024 BOOL    WINAPI TerminateProcess(HANDLE,DWORD);
01025 BOOL    WINAPI TerminateThread(HANDLE,DWORD);
01026 BOOL    WINAPI GetExitCodeThread(HANDLE,LPDWORD);
01027
01028 /* GetBinaryType return values.
01029  */
01030
01031 #define SCS_32BIT_BINARY    0
01032 #define SCS_DOS_BINARY      1
01033 #define SCS_WOW_BINARY      2
01034 #define SCS_PIF_BINARY      3
01035 #define SCS_POSIX_BINARY    4
01036 #define SCS_OS216_BINARY    5
01037
01038 BOOL WINAPI GetBinaryTypeA( LPCSTR lpApplicationName, LPDWORD lpBinaryType );
01039 BOOL WINAPI GetBinaryTypeW( LPCWSTR lpApplicationName, LPDWORD lpBinaryType );
01040 #define GetBinaryType WINELIB_NAME_AW(GetBinaryType)
01041
01042 /* Declarations for functions that exist only in Win32 */
01043
01044 BOOL        WINAPI AddAccessAllowedAce(PACL,DWORD,DWORD,PSID);
01045 BOOL        WINAPI AttachThreadInput(DWORD,DWORD,BOOL);
01046 BOOL        WINAPI
      AccessCheck(PSECURITY_DESCRIPTOR,HANDLE,DWORD,PGENERIC_MAPPING,PPRIVILEGE_SET,LPDWORD,LPDWORD,LPBOOL);
01047 BOOL        WINAPI AdjustTokenPrivileges(HANDLE,BOOL,LPVOID,DWORD,LPVOID,LPDWORD);
01048 BOOL        WINAPI
      AllocateAndInitializeSid(PSID_IDENTIFIER_AUTHORITY,BYTE,DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,PSID
      *);
01049 BOOL        WINAPI AllocateLocallyUniqueId(PLUID);
01050 BOOL      WINAPI AreFileApisANSI(void);
01051 BOOL        WINAPI BackupEventLogA(HANDLE,LPCSTR);
01052 BOOL        WINAPI BackupEventLogW(HANDLE,LPCWSTR);
01053 #define     BackupEventLog WINELIB_NAME_AW(BackupEventLog)
01054 BOOL        WINAPI BackupRead(HANDLE,LPBYTE,DWORD,LPDWORD,BOOL,BOOL,LPVOID*);
01055 BOOL        WINAPI BackupSeek(HANDLE,DWORD,DWORD,LPDWORD,LPDWORD,LPVOID*);
01056 BOOL        WINAPI BackupWrite(HANDLE,LPBYTE,DWORD,LPDWORD,BOOL,BOOL,LPVOID*);
01057 BOOL        WINAPI Beep(DWORD,DWORD);
01058 BOOL        WINAPI BuildCommDCBA(LPCSTR,LPDCB);
01059 BOOL        WINAPI BuildCommDCBW(LPCWSTR,LPDCB);
01060 #define     BuildCommDCB WINELIB_NAME_AW(BuildCommDCB)
01061 BOOL        WINAPI BuildCommDCBAndTimeoutsA(LPCSTR,LPDCB,LPCOMMTIMEOUTS);
01062 BOOL        WINAPI BuildCommDCBAndTimeoutsW(LPCWSTR,LPDCB,LPCOMMTIMEOUTS);
01063 #define     BuildCommDCBAndTimeouts WINELIB_NAME_AW(BuildCommDCBAndTimeouts)
01064 BOOL        WINAPI CancelIo(HANDLE);
01065 BOOL        WINAPI CancelWaitableTimer(HANDLE);
01066 BOOL        WINAPI ClearCommBreak(HANDLE);
01067 BOOL        WINAPI ClearCommError(HANDLE,LPDWORD,LPCOMSTAT);
01068 BOOL        WINAPI ClearEventLogA(HANDLE,LPCSTR);
01069 BOOL        WINAPI ClearEventLogW(HANDLE,LPCWSTR);
01070 #define     ClearEventLog WINELIB_NAME_AW(ClearEventLog)
01071 BOOL        WINAPI CloseEventLog(HANDLE);
01072 BOOL        WINAPI CloseHandle(HANDLE);
01073 BOOL        WINAPI CommConfigDialogA(LPCSTR,HANDLE,LPCOMMCONFIG);
01074 BOOL        WINAPI CommConfigDialogW(LPCWSTR,HANDLE,LPCOMMCONFIG);
01075 #define     CommConfigDialog WINELIB_NAME_AW(CommConfigDialog)
01076 BOOL        WINAPI ConnectNamedPipe(HANDLE,LPOVERLAPPED);
01077 BOOL      WINAPI ContinueDebugEvent(DWORD,DWORD,DWORD);
01078 HANDLE    WINAPI ConvertToGlobalHandle(HANDLE hSrc);
01079 BOOL      WINAPI CopyFileA(LPCSTR,LPCSTR,BOOL);
01080 BOOL      WINAPI CopyFileW(LPCWSTR,LPCWSTR,BOOL);
01081 #define     CopyFile WINELIB_NAME_AW(CopyFile)
01082 BOOL      WINAPI CopyFileExA(LPCSTR, LPCSTR, LPPROGRESS_ROUTINE, LPVOID, LPBOOL, DWORD);
```

```
01083 BOOL      WINAPI CopyFileExW(LPCWSTR, LPCWSTR, LPPROGRESS_ROUTINE, LPVOID, LPBOOL, DWORD);
01084 #define     CopyFileEx WINELIB_NAME_AW(CopyFileEx)
01085 BOOL        WINAPI CopySid(DWORD,PSID,PSID);
01086 INT       WINAPI CompareFileTime(LPFILETIME,LPFILETIME);
01087 HANDLE    WINAPI CreateEventA(LPSECURITY_ATTRIBUTES,BOOL,BOOL,LPCSTR);
01088 HANDLE    WINAPI CreateEventW(LPSECURITY_ATTRIBUTES,BOOL,BOOL,LPCWSTR);
01089 #define     CreateEvent WINELIB_NAME_AW(CreateEvent)
01090 HANDLE     WINAPI CreateFileA(LPCSTR,DWORD,DWORD,LPSECURITY_ATTRIBUTES,
01091                                DWORD,DWORD,HANDLE);
01092 HANDLE     WINAPI CreateFileW(LPCWSTR,DWORD,DWORD,LPSECURITY_ATTRIBUTES,
01093                                DWORD,DWORD,HANDLE);
01094 #define     CreateFile WINELIB_NAME_AW(CreateFile)
01095 HANDLE    WINAPI CreateFileMappingA(HANDLE,LPSECURITY_ATTRIBUTES,DWORD,
01096                                     DWORD,DWORD,LPCSTR);
01097 HANDLE    WINAPI CreateFileMappingW(HANDLE,LPSECURITY_ATTRIBUTES,DWORD,
01098                                     DWORD,DWORD,LPCWSTR);
01099 #define     CreateFileMapping WINELIB_NAME_AW(CreateFileMapping)
01100 HANDLE    WINAPI CreateMutexA(LPSECURITY_ATTRIBUTES,BOOL,LPCSTR);
01101 HANDLE    WINAPI CreateMutexW(LPSECURITY_ATTRIBUTES,BOOL,LPCWSTR);
01102 #define     CreateMutex WINELIB_NAME_AW(CreateMutex)
01103 HANDLE      WINAPI CreateNamedPipeA(LPCSTR,DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,LPSECURITY_ATTRIBUTES);
01104 HANDLE      WINAPI
      CreateNamedPipeW(LPCWSTR,DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,LPSECURITY_ATTRIBUTES);
01105 #define     CreateNamedPipe WINELIB_NAME_AW(CreateNamedPipe)
01106 BOOL      WINAPI CreatePipe(PHANDLE,PHANDLE,LPSECURITY_ATTRIBUTES,DWORD);
01107 BOOL      WINAPI CreateProcessA(LPCSTR,LPSTR,LPSECURITY_ATTRIBUTES,
01108                                 LPSECURITY_ATTRIBUTES,BOOL,DWORD,LPVOID,LPCSTR,
01109                                 LPSTARTUPINFOA,LPPROCESS_INFORMATION);
01110 BOOL      WINAPI CreateProcessW(LPCWSTR,LPWSTR,LPSECURITY_ATTRIBUTES,
01111                                 LPSECURITY_ATTRIBUTES,BOOL,DWORD,LPVOID,LPCWSTR,
01112                                 LPSTARTUPINFOW,LPPROCESS_INFORMATION);
01113 #define     CreateProcess WINELIB_NAME_AW(CreateProcess)
01114 HANDLE      WINAPI
      CreateRemoteThread(HANDLE,LPSECURITY_ATTRIBUTES,DWORD,LPTHREAD_START_ROUTINE,LPVOID,DWORD,LPDWORD);
01115 HANDLE    WINAPI CreateSemaphoreA(LPSECURITY_ATTRIBUTES,LONG,LONG,LPCSTR);
01116 HANDLE    WINAPI CreateSemaphoreW(LPSECURITY_ATTRIBUTES,LONG,LONG,LPCWSTR);
01117 #define     CreateSemaphore WINELIB_NAME_AW(CreateSemaphore)
01118 DWORD       WINAPI CreateTapePartition(HANDLE,DWORD,DWORD,DWORD);
01119 HANDLE      WINAPI
      CreateThread(LPSECURITY_ATTRIBUTES,DWORD,LPTHREAD_START_ROUTINE,LPVOID,DWORD,LPDWORD);
01120 HANDLE      WINAPI CreateWaitableTimerA(LPSECURITY_ATTRIBUTES,BOOL,LPCSTR);
01121 HANDLE      WINAPI CreateWaitableTimerW(LPSECURITY_ATTRIBUTES,BOOL,LPCWSTR);
01122 #define     CreateWaitableTimer WINELIB_NAME_AW(CreateWaitableTimer)
01123 BOOL        WINAPI DebugActiveProcess(DWORD);
01124 void        WINAPI DebugBreak(void);
01125 BOOL        WINAPI DeregisterEventSource(HANDLE);
01126 BOOL        WINAPI DeviceIoControl(HANDLE,DWORD,LPVOID,DWORD,LPVOID,DWORD,LPDWORD,LPOVERLAPPED);
01127 BOOL        WINAPI DisableThreadLibraryCalls(HMODULE);
01128 BOOL        WINAPI DosDateTimeToFileTime(WORD,WORD,LPFILETIME);
01129 BOOL        WINAPI DuplicateHandle(HANDLE,HANDLE,HANDLE,HANDLE*,DWORD,BOOL,DWORD);
01130 BOOL        WINAPI EscapeCommFunction(HANDLE,UINT);
01131 BOOL      WINAPI EnumResourceLanguagesA(HMODULE,LPCSTR,LPCSTR,
01132                                         ENUMRESLANGPROCA,LONG);
01133 BOOL      WINAPI EnumResourceLanguagesW(HMODULE,LPCWSTR,LPCWSTR,
01134                                         ENUMRESLANGPROCW,LONG);
01135 #define     EnumResourceLanguages WINELIB_NAME_AW(EnumResourceLanguages)
01136 BOOL      WINAPI EnumResourceNamesA(HMODULE,LPCSTR,ENUMRESNAMEPROCA,
01137                                     LONG);
01138 BOOL      WINAPI EnumResourceNamesW(HMODULE,LPCWSTR,ENUMRESNAMEPROCW,
01139                                     LONG);
01140 #define     EnumResourceNames WINELIB_NAME_AW(EnumResourceNames)
01141 BOOL      WINAPI EnumResourceTypesA(HMODULE,ENUMRESTYPEPROCA,LONG);
01142 BOOL      WINAPI EnumResourceTypesW(HMODULE,ENUMRESTYPEPROCW,LONG);
01143 #define     EnumResourceTypes WINELIB_NAME_AW(EnumResourceTypes)
01144 BOOL        WINAPI EqualSid(PSID, PSID);
01145 BOOL        WINAPI EqualPrefixSid(PSID,PSID);
01146 DWORD       WINAPI EraseTape(HANDLE,DWORD,BOOL);
01147 VOID        WINAPI ExitProcess(DWORD) WINE_NORETURN;
01148 VOID        WINAPI ExitThread(DWORD) WINE_NORETURN;
01149 DWORD       WINAPI ExpandEnvironmentStringsA(LPCSTR,LPSTR,DWORD);
01150 DWORD       WINAPI ExpandEnvironmentStringsW(LPCWSTR,LPWSTR,DWORD);
01151 #define     ExpandEnvironmentStrings WINELIB_NAME_AW(ExpandEnvironmentStrings)
01152 BOOL      WINAPI FileTimeToDosDateTime(const FILETIME*,LPWORD,LPWORD);
01153 BOOL      WINAPI FileTimeToLocalFileTime(const FILETIME*,LPFILETIME);
01154 BOOL      WINAPI FileTimeToSystemTime(const FILETIME*,LPSYSTEMTIME);
01155 HANDLE    WINAPI FindFirstChangeNotificationA(LPCSTR,BOOL,DWORD);
01156 HANDLE    WINAPI FindFirstChangeNotificationW(LPCWSTR,BOOL,DWORD);
01157 #define     FindFirstChangeNotification WINELIB_NAME_AW(FindFirstChangeNotification)
01158 BOOL      WINAPI FindNextChangeNotification(HANDLE);
01159 BOOL      WINAPI FindCloseChangeNotification(HANDLE);
01160 HRSRC     WINAPI FindResourceExA(HMODULE,LPCSTR,LPCSTR,WORD);
01161 HRSRC     WINAPI FindResourceExW(HMODULE,LPCWSTR,LPCWSTR,WORD);
01162 #define     FindResourceEx WINELIB_NAME_AW(FindResourceEx)
01163 BOOL      WINAPI FlushFileBuffers(HANDLE);
01164 BOOL      WINAPI FlushViewOfFile(LPCVOID, DWORD);
01165 DWORD       WINAPI FormatMessageA(DWORD,LPCVOID,DWORD,DWORD,LPSTR,DWORD,va_list*);
01166 DWORD       WINAPI FormatMessageW(DWORD,LPCVOID,DWORD,DWORD,LPWSTR,DWORD,va_list*);
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01167 #define     FormatMessage WINELIB_NAME_AW(FormatMessage)
01168 BOOL      WINAPI FreeEnvironmentStringsA(LPSTR);
01169 BOOL      WINAPI FreeEnvironmentStringsW(LPWSTR);
01170 #define     FreeEnvironmentStrings WINELIB_NAME_AW(FreeEnvironmentStrings)
01171 VOID        WINAPI FreeLibraryAndExitThread(HINSTANCE,DWORD);
01172 PVOID       WINAPI FreeSid(PSID);
01173 BOOL        WINAPI GetCommConfig(HANDLE,LPCOMMCONFIG,LPDWORD);
01174 BOOL        WINAPI GetCommMask(HANDLE,LPDWORD);
01175 BOOL        WINAPI GetCommModemStatus(HANDLE,LPDWORD);
01176 BOOL        WINAPI GetCommProperties(HANDLE,LPCOMMPROP);
01177 BOOL        WINAPI GetCommState(HANDLE,LPDCB);
01178 BOOL        WINAPI GetCommTimeouts(HANDLE,LPCOMMTIMEOUTS);
01179 LPSTR       WINAPI GetCommandLineA(void);
01180 LPWSTR      WINAPI GetCommandLineW(void);
01181 #define     GetCommandLine WINELIB_NAME_AW(GetCommandLine)
01182 BOOL      WINAPI GetComputerNameA(LPSTR,LPDWORD);
01183 BOOL      WINAPI GetComputerNameW(LPWSTR,LPDWORD);
01184 #define     GetComputerName WINELIB_NAME_AW(GetComputerName)
01185 HANDLE      WINAPI GetCurrentProcess(void);
01186 HANDLE      WINAPI GetCurrentThread(void);
01187 BOOL        WINAPI GetDefaultCommConfigA(LPCSTR,LPCOMMCONFIG,LPDWORD);
01188 BOOL        WINAPI GetDefaultCommConfigW(LPCWSTR,LPCOMMCONFIG,LPDWORD);
01189 #define     GetDefaultCommConfig WINELIB_NAME_AW(GetDefaultCommConfig)
01190 LPSTR       WINAPI GetEnvironmentStringsA(void);
01191 LPWSTR      WINAPI GetEnvironmentStringsW(void);
01192 #define     GetEnvironmentStrings WINELIB_NAME_AW(GetEnvironmentStrings)
01193 DWORD       WINAPI GetEnvironmentVariableA(LPCSTR,LPSTR,DWORD);
01194 DWORD       WINAPI GetEnvironmentVariableW(LPCWSTR,LPWSTR,DWORD);
01195 #define     GetEnvironmentVariable WINELIB_NAME_AW(GetEnvironmentVariable)
01196 BOOL      WINAPI GetFileAttributesExA(LPCSTR,GET_FILEEX_INFO_LEVELS,LPVOID);
01197 BOOL      WINAPI GetFileAttributesExW(LPCWSTR,GET_FILEEX_INFO_LEVELS,LPVOID);
01198 #define     GetFileattributesEx WINELIB_NAME_AW(GetFileAttributesEx)
01199 DWORD       WINAPI GetFileInformationByHandle(HANDLE,BY_HANDLE_FILE_INFORMATION*);
01200 BOOL        WINAPI GetFileSecurityA(LPCSTR,SECURITY_INFORMATION,PSECURITY_DESCRIPTOR,DWORD,LPDWORD);
01201 BOOL        WINAPI GetFileSecurityW(LPCWSTR,SECURITY_INFORMATION,PSECURITY_DESCRIPTOR,DWORD,LPDWORD);
01202 #define     GetFileSecurity WINELIB_NAME_AW(GetFileSecurity)
01203 DWORD       WINAPI GetFileSize(HANDLE,LPDWORD);
01204 BOOL        WINAPI GetFileTime(HANDLE,LPFILETIME,LPFILETIME,LPFILETIME);
01205 DWORD       WINAPI GetFileType(HANDLE);
01206 DWORD       WINAPI GetFullPathNameA(LPCSTR,DWORD,LPSTR,LPSTR*);
01207 DWORD       WINAPI GetFullPathNameW(LPCWSTR,DWORD,LPWSTR,LPWSTR*);
01208 #define     GetFullPathName WINELIB_NAME_AW(GetFullPathName)
01209 BOOL      WINAPI GetHandleInformation(HANDLE,LPDWORD);
01210 DWORD       WINAPI GetLengthSid(PSID);
01211 VOID        WINAPI GetLocalTime(LPSYSTEMTIME);
01212 DWORD       WINAPI GetLogicalDrives(void);
01213 DWORD       WINAPI GetLongPathNameA(LPCSTR,LPSTR,DWORD);
01214 DWORD       WINAPI GetLongPathNameW(LPCWSTR,LPWSTR,DWORD);
01215 #define     GetLongPathName WINELIB_NAME_AW(GetLongPathName)
01216 BOOL        WINAPI GetNumberOfEventLogRecords(HANDLE,PDWORD);
01217 BOOL        WINAPI GetOldestEventLogRecord(HANDLE,PDWORD);
01218 DWORD       WINAPI GetPriorityClass(HANDLE);
01219 BOOL        WINAPI GetProcessTimes(HANDLE,LPFILETIME,LPFILETIME,LPFILETIME,LPFILETIME);
01220 DWORD       WINAPI GetProcessVersion(DWORD);
01221 BOOL        WINAPI
      GetSecurityDescriptorControl(PSECURITY_DESCRIPTOR,PSECURITY_DESCRIPTOR_CONTROL,LPDWORD);
01222 BOOL        WINAPI GetSecurityDescriptorDacl(PSECURITY_DESCRIPTOR,LPBOOL,PACL *,LPBOOL);
01223 BOOL        WINAPI GetSecurityDescriptorGroup(PSECURITY_DESCRIPTOR,PSID *,LPBOOL);
01224 DWORD       WINAPI GetSecurityDescriptorLength(PSECURITY_DESCRIPTOR);
01225 BOOL        WINAPI GetSecurityDescriptorOwner(PSECURITY_DESCRIPTOR,PSID *,LPBOOL);
01226 BOOL        WINAPI GetSecurityDescriptorSacl(PSECURITY_DESCRIPTOR,LPBOOL,PACL *,LPBOOL);
01227 PSID_IDENTIFIER_AUTHORITY WINAPI GetSidIdentifierAuthority(PSID);
01228 DWORD       WINAPI GetSidLengthRequired(BYTE);
01229 PDWORD      WINAPI GetSidSubAuthority(PSID,DWORD);
01230 PUCHAR      WINAPI GetSidSubAuthorityCount(PSID);
01231 DWORD       WINAPI GetShortPathNameA(LPCSTR,LPSTR,DWORD);
01232 DWORD       WINAPI GetShortPathNameW(LPCWSTR,LPWSTR,DWORD);
01233 #define     GetShortPathName WINELIB_NAME_AW(GetShortPathName)
01234 HANDLE      WINAPI GetStdHandle(DWORD);
01235 VOID        WINAPI GetSystemInfo(LPSYSTEM_INFO);
01236 BOOL        WINAPI GetSystemPowerStatus(LPSYSTEM_POWER_STATUS);
01237 VOID        WINAPI GetSystemTime(LPSYSTEMTIME);
01238 VOID        WINAPI GetSystemTimeAsFileTime(LPFILETIME);
01239 DWORD       WINAPI GetTapeParameters(HANDLE,DWORD,LPDWORD,LPVOID);
01240 DWORD       WINAPI GetTapePosition(HANDLE,DWORD,LPDWORD,LPDWORD,LPDWORD);
01241 DWORD       WINAPI GetTapeStatus(HANDLE);
01242 DWORD       WINAPI GetTimeZoneInformation(LPTIME_ZONE_INFORMATION);
01243 BOOL        WINAPI GetThreadContext(HANDLE,CONTEXT *);
01244 INT       WINAPI GetThreadPriority(HANDLE);
01245 BOOL        WINAPI GetThreadPriorityBoost(HANDLE,PBOOL);
01246 BOOL      WINAPI GetThreadSelectorEntry(HANDLE,DWORD,LPLDT_ENTRY);
01247 BOOL        WINAPI GetThreadTimes(HANDLE,LPFILETIME,LPFILETIME,LPFILETIME,LPFILETIME);
01248 BOOL        WINAPI GetTokenInformation(HANDLE,TOKEN_INFORMATION_CLASS,LPVOID,DWORD,LPDWORD);
01249 BOOL        WINAPI GetUserNameA(LPSTR,LPDWORD);
01250 BOOL        WINAPI GetUserNameW(LPWSTR,LPDWORD);
01251 #define     GetUserName WINELIB_NAME_AW(GetUserName)
01252 VOID        WINAPI GlobalMemoryStatus(LPMEMORYSTATUS);
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01253 DWORD       WINAPI HeapCompact(HANDLE,DWORD);
01254 HANDLE    WINAPI HeapCreate(DWORD,DWORD,DWORD);
01255 BOOL      WINAPI HeapDestroy(HANDLE);
01256 BOOL      WINAPI HeapLock(HANDLE);
01257 BOOL      WINAPI HeapUnlock(HANDLE);
01258 BOOL      WINAPI HeapValidate(HANDLE,DWORD,LPCVOID);
01259 BOOL        WINAPI HeapWalk(HANDLE,LPPROCESS_HEAP_ENTRY);
01260 DWORD       WINAPI InitializeAcl(PACL,DWORD,DWORD);
01261 BOOL        WINAPI InitializeSecurityDescriptor(PSECURITY_DESCRIPTOR,DWORD);
01262 BOOL        WINAPI InitializeSid(PSID,PSID_IDENTIFIER_AUTHORITY,BYTE);
01263 BOOL        WINAPI IsTextUnicode(CONST LPVOID lpBuffer, int cb, LPINT lpi);
01264 BOOL        WINAPI IsValidSecurityDescriptor(PSECURITY_DESCRIPTOR);
01265 BOOL        WINAPI IsValidSid(PSID);
01266 BOOL        WINAPI ImpersonateSelf(SECURITY_IMPERSONATION_LEVEL);
01267 BOOL        WINAPI IsProcessorFeaturePresent(DWORD);
01268 BOOL        WINAPI LookupAccountSidA(LPCSTR,PSID,LPSTR,LPDWORD,LPSTR,LPDWORD,PSID_NAME_USE);
01269 BOOL        WINAPI LookupAccountSidW(LPCWSTR,PSID,LPWSTR,LPDWORD,LPWSTR,LPDWORD,PSID_NAME_USE);
01270 #define     LookupAccountSid WINELIB_NAME_AW(LookupAccountSid)
01271 BOOL        WINAPI LocalFileTimeToFileTime(const FILETIME*,LPFILETIME);
01272 BOOL        WINAPI LockFile(HANDLE,DWORD,DWORD,DWORD,DWORD);
01273 BOOL        WINAPI LockFileEx(HANDLE, DWORD, DWORD, DWORD, DWORD, LPOVERLAPPED);
01274 BOOL        WINAPI LookupPrivilegeValueA(LPCSTR,LPCSTR,LPVOID);
01275 BOOL        WINAPI LookupPrivilegeValueW(LPCWSTR,LPCWSTR,LPVOID);
01276 #define     LookupPrivilegeValue WINELIB_NAME_AW(LookupPrivilegeValue)
01277 BOOL        WINAPI MakeSelfRelativeSD(PSECURITY_DESCRIPTOR,PSECURITY_DESCRIPTOR,LPDWORD);
01278 HMODULE     WINAPI MapHModuleSL(WORD);
01279 WORD        WINAPI MapHModuleLS(HMODULE);
01280 LPVOID      WINAPI MapViewOfFile(HANDLE,DWORD,DWORD,DWORD,DWORD);
01281 LPVOID      WINAPI MapViewOfFileEx(HANDLE,DWORD,DWORD,DWORD,DWORD,LPVOID);
01282 BOOL      WINAPI MoveFileA(LPCSTR,LPCSTR);
01283 BOOL      WINAPI MoveFileW(LPCWSTR,LPCWSTR);
01284 #define     MoveFile WINELIB_NAME_AW(MoveFile)
01285 BOOL      WINAPI MoveFileExA(LPCSTR,LPCSTR,DWORD);
01286 BOOL      WINAPI MoveFileExW(LPCWSTR,LPCWSTR,DWORD);
01287 #define     MoveFileEx WINELIB_NAME_AW(MoveFileEx)
01288 BOOL        WINAPI NotifyChangeEventLog(HANDLE,HANDLE);
01289 HANDLE      WINAPI OpenBackupEventLogA(LPCSTR,LPCSTR);
01290 HANDLE      WINAPI OpenBackupEventLogW(LPCWSTR,LPCWSTR);
01291 #define     OpenBackupEventLog WINELIB_NAME_AW(OpenBackupEventLog)
01292 HANDLE    WINAPI OpenEventA(DWORD,BOOL,LPCSTR);
01293 HANDLE    WINAPI OpenEventW(DWORD,BOOL,LPCWSTR);
01294 #define     OpenEvent WINELIB_NAME_AW(OpenEvent)
01295 HANDLE      WINAPI OpenEventLogA(LPCSTR,LPCSTR);
01296 HANDLE      WINAPI OpenEventLogW(LPCWSTR,LPCWSTR);
01297 #define     OpenEventLog WINELIB_NAME_AW(OpenEventLog)
01298 HANDLE    WINAPI OpenFileMappingA(DWORD,BOOL,LPCSTR);
01299 HANDLE    WINAPI OpenFileMappingW(DWORD,BOOL,LPCWSTR);
01300 #define     OpenFileMapping WINELIB_NAME_AW(OpenFileMapping)
01301 HANDLE    WINAPI OpenMutexA(DWORD,BOOL,LPCSTR);
01302 HANDLE    WINAPI OpenMutexW(DWORD,BOOL,LPCWSTR);
01303 #define     OpenMutex WINELIB_NAME_AW(OpenMutex)
01304 HANDLE    WINAPI OpenProcess(DWORD,BOOL,DWORD);
01305 BOOL        WINAPI OpenProcessToken(HANDLE,DWORD,PHANDLE);
01306 HANDLE    WINAPI OpenSemaphoreA(DWORD,BOOL,LPCSTR);
01307 HANDLE    WINAPI OpenSemaphoreW(DWORD,BOOL,LPCWSTR);
01308 #define     OpenSemaphore WINELIB_NAME_AW(OpenSemaphore)
01309 BOOL        WINAPI OpenThreadToken(HANDLE,DWORD,BOOL,PHANDLE);
01310 HANDLE      WINAPI OpenWaitableTimerA(DWORD,BOOL,LPCSTR);
01311 HANDLE      WINAPI OpenWaitableTimerW(DWORD,BOOL,LPCWSTR);
01312 #define     OpenWaitableTimer WINELIB_NAME_AW(OpenWaitableTimer)
01313 DWORD       WINAPI PrepareTape(HANDLE,DWORD,BOOL);
01314 BOOL        WINAPI PulseEvent(HANDLE);
01315 BOOL        WINAPI PurgeComm(HANDLE,DWORD);
01316 DWORD       WINAPI QueryDosDeviceA(LPCSTR,LPSTR,DWORD);
01317 DWORD       WINAPI QueryDosDeviceW(LPCWSTR,LPWSTR,DWORD);
01318 #define     QueryDosDevice WINELIB_NAME_AW(QueryDosDevice)
01319 BOOL        WINAPI QueryPerformanceCounter(LARGE_INTEGER*);
01320 BOOL        WINAPI QueryPerformanceFrequency(LARGE_INTEGER*);
01321 BOOL        WINAPI ReadEventLogA(HANDLE,DWORD,DWORD,LPVOID,DWORD,DWORD *,DWORD *);
01322 BOOL        WINAPI ReadEventLogW(HANDLE,DWORD,DWORD,LPVOID,DWORD,DWORD *,DWORD *);
01323 #define     ReadEventLog WINELIB_NAME_AW(ReadEventLog)
01324 BOOL        WINAPI ReadFile(HANDLE,LPVOID,DWORD,LPDWORD,LPOVERLAPPED);
01325 BOOL        WINAPI ReadFileEx(HANDLE,LPVOID,DWORD,LPOVERLAPPED,LPOVERLAPPED_COMPLETION_ROUTINE);
01326 HANDLE      WINAPI RegisterEventSourceA(LPCSTR,LPCSTR);
01327 HANDLE      WINAPI RegisterEventSourceW(LPCWSTR,LPCWSTR);
01328 #define     RegisterEventSource WINELIB_NAME_AW(RegisterEventSource)
01329 BOOL        WINAPI ReleaseMutex(HANDLE);
01330 BOOL        WINAPI ReleaseSemaphore(HANDLE,LONG,LPLONG);
01331 BOOL        WINAPI ReportEventA(HANDLE,WORD,WORD,DWORD,PSID,WORD,DWORD,LPCSTR *,LPVOID);
01332 BOOL        WINAPI ReportEventW(HANDLE,WORD,WORD,DWORD,PSID,WORD,DWORD,LPCWSTR *,LPVOID);
01333 #define     ReportEvent WINELIB_NAME_AW(ReportEvent)
01334 BOOL        WINAPI ResetEvent(HANDLE);
01335 DWORD       WINAPI ResumeThread(HANDLE);
01336 BOOL        WINAPI RevertToSelf(void);
01337 DWORD       WINAPI SearchPathA(LPCSTR,LPCSTR,LPCSTR,DWORD,LPSTR,LPSTR*);
01338 DWORD       WINAPI SearchPathW(LPCWSTR,LPCWSTR,LPCWSTR,DWORD,LPWSTR,LPWSTR*);
01339 #define     SearchPath WINELIB_NAME_AW(SearchPath)
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01340 BOOL        WINAPI SetCommConfig(HANDLE,LPCOMMCONFIG,DWORD);
01341 BOOL        WINAPI SetCommBreak(HANDLE);
01342 BOOL        WINAPI SetCommMask(HANDLE,DWORD);
01343 BOOL        WINAPI SetCommState(HANDLE,LPDCB);
01344 BOOL        WINAPI SetCommTimeouts(HANDLE,LPCOMMTIMEOUTS);
01345 BOOL      WINAPI SetComputerNameA(LPCSTR);
01346 BOOL      WINAPI SetComputerNameW(LPCWSTR);
01347 #define     SetComputerName WINELIB_NAME_AW(SetComputerName)
01348 BOOL        WINAPI SetDefaultCommConfigA(LPCSTR,LPCOMMCONFIG,DWORD);
01349 BOOL        WINAPI SetDefaultCommConfigW(LPCWSTR,LPCOMMCONFIG,DWORD);
01350 #define     SetDefaultCommConfig WINELIB_NAME_AW(SetDefaultCommConfig)
01351 BOOL      WINAPI SetEndOfFile(HANDLE);
01352 BOOL      WINAPI SetEnvironmentVariableA(LPCSTR,LPCSTR);
01353 BOOL      WINAPI SetEnvironmentVariableW(LPCWSTR,LPCWSTR);
01354 #define     SetEnvironmentVariable WINELIB_NAME_AW(SetEnvironmentVariable)
01355 BOOL      WINAPI SetEvent(HANDLE);
01356 VOID        WINAPI SetFileApisToANSI(void);
01357 VOID        WINAPI SetFileApisToOEM(void);
01358 DWORD       WINAPI SetFilePointer(HANDLE,LONG,LPLONG,DWORD);
01359 BOOL        WINAPI SetFileSecurityA(LPCSTR,SECURITY_INFORMATION,PSECURITY_DESCRIPTOR);
01360 BOOL        WINAPI SetFileSecurityW(LPCWSTR,SECURITY_INFORMATION,PSECURITY_DESCRIPTOR);
01361 #define     SetFileSecurity WINELIB_NAME_AW(SetFileSecurity)
01362 BOOL        WINAPI SetFileTime(HANDLE,const FILETIME*,const FILETIME*,const FILETIME*);
01363 BOOL        WINAPI SetHandleInformation(HANDLE,DWORD,DWORD);
01364 BOOL        WINAPI SetKernelObjectSecurity(HANDLE,SECURITY_INFORMATION,PSECURITY_DESCRIPTOR);
01365 BOOL        WINAPI SetPriorityClass(HANDLE,DWORD);
01366 BOOL        WINAPI SetLocalTime(const SYSTEMTIME*);
01367 BOOL        WINAPI SetSecurityDescriptorDacl(PSECURITY_DESCRIPTOR,BOOL,PACL,BOOL);
01368 BOOL        WINAPI SetSecurityDescriptorGroup(PSECURITY_DESCRIPTOR,PSID,BOOL);
01369 BOOL        WINAPI SetSecurityDescriptorOwner(PSECURITY_DESCRIPTOR,PSID,BOOL);
01370 BOOL        WINAPI SetSecurityDescriptorSacl(PSECURITY_DESCRIPTOR,BOOL,PACL,BOOL);
01371 BOOL      WINAPI SetStdHandle(DWORD,HANDLE);
01372 BOOL      WINAPI SetSystemPowerState(BOOL,BOOL);
01373 BOOL      WINAPI SetSystemTime(const SYSTEMTIME*);
01374 DWORD       WINAPI SetTapeParameters(HANDLE,DWORD,LPVOID);
01375 DWORD       WINAPI SetTapePosition(HANDLE,DWORD,DWORD,DWORD,DWORD,BOOL);
01376 DWORD       WINAPI SetThreadAffinityMask(HANDLE,DWORD);
01377 BOOL        WINAPI SetThreadContext(HANDLE,const CONTEXT *);
01378 DWORD       WINAPI SetThreadExecutionState(EXECUTION_STATE);
01379 BOOL        WINAPI SetThreadPriority(HANDLE,INT);
01380 BOOL        WINAPI SetThreadPriorityBoost(HANDLE,BOOL);
01381 BOOL        WINAPI SetThreadToken(PHANDLE,HANDLE);
01382 BOOL        WINAPI SetTimeZoneInformation(const LPTIME_ZONE_INFORMATION);
01383 BOOL        WINAPI SetWaitableTimer(HANDLE,const LARGE_INTEGER*,LONG,PTIMERAPCROUTINE,LPVOID,BOOL);
01384 BOOL        WINAPI SetupComm(HANDLE,DWORD,DWORD);
01385 VOID        WINAPI Sleep(DWORD);
01386 DWORD       WINAPI SleepEx(DWORD,BOOL);
01387 DWORD       WINAPI SuspendThread(HANDLE);
01388 BOOL        WINAPI SystemTimeToFileTime(const SYSTEMTIME*,LPFILETIME);
01389 DWORD       WINAPI TlsAlloc(void);
01390 BOOL        WINAPI TlsFree(DWORD);
01391 LPVOID      WINAPI TlsGetValue(DWORD);
01392 BOOL        WINAPI TlsSetValue(DWORD,LPVOID);
01393 BOOL        WINAPI TransmitCommChar(HANDLE,CHAR);
01394 BOOL        WINAPI UnlockFile(HANDLE,DWORD,DWORD,DWORD,DWORD);
01395 BOOL        WINAPI UnmapViewOfFile(LPVOID);
01396 LPVOID      WINAPI VirtualAlloc(LPVOID,DWORD,DWORD,DWORD);
01397 LPVOID      WINAPI VirtualAllocEx(HANDLE,LPVOID,DWORD,DWORD,DWORD);
01398 BOOL      WINAPI VirtualFree(LPVOID,DWORD,DWORD);
01399 BOOL      WINAPI VirtualLock(LPVOID,DWORD);
01400 BOOL      WINAPI VirtualProtect(LPVOID,DWORD,DWORD,LPDWORD);
01401 BOOL      WINAPI VirtualProtectEx(HANDLE,LPVOID,DWORD,DWORD,LPDWORD);
01402 DWORD       WINAPI VirtualQuery(LPCVOID,LPMEMORY_BASIC_INFORMATION,DWORD);
01403 DWORD       WINAPI VirtualQueryEx(HANDLE,LPCVOID,LPMEMORY_BASIC_INFORMATION,DWORD);
01404 BOOL      WINAPI VirtualUnlock(LPVOID,DWORD);
01405 BOOL      WINAPI WaitCommEvent(HANDLE,LPDWORD,LPOVERLAPPED);
01406 BOOL      WINAPI WaitForDebugEvent(LPDEBUG_EVENT,DWORD);
01407 DWORD       WINAPI WaitForMultipleObjects(DWORD,const HANDLE*,BOOL,DWORD);
01408 DWORD       WINAPI WaitForMultipleObjectsEx(DWORD,const HANDLE*,BOOL,DWORD,BOOL);
01409 DWORD       WINAPI WaitForSingleObject(HANDLE,DWORD);
01410 DWORD       WINAPI WaitForSingleObjectEx(HANDLE,DWORD,BOOL);
01411 BOOL        WINAPI WaitNamedPipeA(LPCSTR,DWORD);
01412 BOOL        WINAPI WaitNamedPipeW(LPCWSTR,DWORD);
01413 #define     WaitNamedPipe WINELIB_NAME_AW(WaitNamedPipe)
01414 BOOL      WINAPI WriteFile(HANDLE,LPCVOID,DWORD,LPDWORD,LPOVERLAPPED);
01415 BOOL        WINAPI WriteFileEx(HANDLE,LPCVOID,DWORD,LPOVERLAPPED,LPOVERLAPPED_COMPLETION_ROUTINE);
01416 DWORD       WINAPI WriteTapemark(HANDLE,DWORD,DWORD,BOOL);
01417 ATOM        WINAPI AddAtomA(LPCSTR);
01418 ATOM        WINAPI AddAtomW(LPCWSTR);
01419 #define     AddAtom WINELIB_NAME_AW(AddAtom)
01420 BOOL      WINAPI CreateDirectoryA(LPCSTR,LPSECURITY_ATTRIBUTES);
01421 BOOL      WINAPI CreateDirectoryW(LPCWSTR,LPSECURITY_ATTRIBUTES);
01422 #define     CreateDirectory WINELIB_NAME_AW(CreateDirectory)
01423 BOOL      WINAPI CreateDirectoryExA(LPCSTR,LPCSTR,LPSECURITY_ATTRIBUTES);
01424 BOOL      WINAPI CreateDirectoryExW(LPCWSTR,LPCWSTR,LPSECURITY_ATTRIBUTES);
01425 #define     CreateDirectoryEx WINELIB_NAME_AW(CreateDirectoryEx)
01426 BOOL        WINAPI DefineDosDeviceA(DWORD,LPCSTR,LPCSTR);
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01427 #define     DefineHandleTable(w) ((w),TRUE)
01428 ATOM        WINAPI DeleteAtom(ATOM);
01429 BOOL      WINAPI DeleteFileA(LPCSTR);
01430 BOOL      WINAPI DeleteFileW(LPCWSTR);
01431 #define     DeleteFile WINELIB_NAME_AW(DeleteFile)
01432 void        WINAPI FatalAppExitA(UINT,LPCSTR);
01433 void        WINAPI FatalAppExitW(UINT,LPCWSTR);
01434 #define     FatalAppExit WINELIB_NAME_AW(FatalAppExit)
01435 ATOM        WINAPI FindAtomA(LPCSTR);
01436 ATOM        WINAPI FindAtomW(LPCWSTR);
01437 #define     FindAtom WINELIB_NAME_AW(FindAtom)
01438 BOOL        WINAPI FindClose(HANDLE);
01439 HANDLE      WINAPI FindFirstFileA(LPCSTR,LPWIN32_FIND_DATAA);
01440 HANDLE      WINAPI FindFirstFileW(LPCWSTR,LPWIN32_FIND_DATAW);
01441 #define     FindFirstFile WINELIB_NAME_AW(FindFirstFile)
01442 HANDLE      WINAPI FindFirstFileExA(LPCSTR,FINDEX_INFO_LEVELS,LPVOID,FINDEX_SEARCH_OPS,LPVOID,DWORD);
01443 HANDLE      WINAPI FindFirstFileExW(LPCWSTR,FINDEX_INFO_LEVELS,LPVOID,FINDEX_SEARCH_OPS,LPVOID,DWORD);
01444 #define     FindFirstFileEx WINELIB_NAME_AW(FindFirstFileEx)
01445 BOOL        WINAPI FindNextFileA(HANDLE,LPWIN32_FIND_DATAA);
01446 BOOL        WINAPI FindNextFileW(HANDLE,LPWIN32_FIND_DATAW);
01447 #define     FindNextFile WINELIB_NAME_AW(FindNextFile)
01448 HRSRC     WINAPI FindResourceA(HMODULE,LPCSTR,LPCSTR);
01449 HRSRC     WINAPI FindResourceW(HMODULE,LPCWSTR,LPCWSTR);
01450 #define     FindResource WINELIB_NAME_AW(FindResource)
01451 BOOL        WINAPI FreeLibrary(HMODULE);
01452 #define     FreeModule(handle) FreeLibrary(handle)
01453 #define     FreeProcInstance(proc) /*nothing*/
01454 BOOL      WINAPI FreeResource(HGLOBAL);
01455 UINT      WINAPI GetAtomNameA(ATOM,LPSTR,INT);
01456 UINT      WINAPI GetAtomNameW(ATOM,LPWSTR,INT);
01457 #define     GetAtomName WINELIB_NAME_AW(GetAtomName)
01458 UINT      WINAPI GetCurrentDirectoryA(UINT,LPSTR);
01459 UINT      WINAPI GetCurrentDirectoryW(UINT,LPWSTR);
01460 #define     GetCurrentDirectory WINELIB_NAME_AW(GetCurrentDirectory)
01461 #define     GetCurrentTime() GetTickCount()
01462 BOOL      WINAPI GetDiskFreeSpaceA(LPCSTR,LPDWORD,LPDWORD,LPDWORD,LPDWORD);
01463 BOOL      WINAPI GetDiskFreeSpaceW(LPCWSTR,LPDWORD,LPDWORD,LPDWORD,LPDWORD);
01464 #define     GetDiskFreeSpace WINELIB_NAME_AW(GetDiskFreeSpace)
01465 BOOL      WINAPI GetDiskFreeSpaceExA(LPCSTR,PULARGE_INTEGER,PULARGE_INTEGER,PULARGE_INTEGER);
01466 BOOL      WINAPI GetDiskFreeSpaceExW(LPCWSTR,PULARGE_INTEGER,PULARGE_INTEGER,PULARGE_INTEGER);
01467 #define     GetDiskFreeSpaceEx WINELIB_NAME_AW(GetDiskFreeSpaceEx)
01468 UINT      WINAPI GetDriveTypeA(LPCSTR);
01469 UINT      WINAPI GetDriveTypeW(LPCWSTR);
01470 #define     GetDriveType WINELIB_NAME_AW(GetDriveType)
01471 BOOL        WINAPI GetExitCodeProcess(HANDLE,LPDWORD);
01472 DWORD       WINAPI GetFileAttributesA(LPCSTR);
01473 DWORD       WINAPI GetFileAttributesW(LPCWSTR);
01474 #define     GetFileAttributes WINELIB_NAME_AW(GetFileAttributes)
01475 #define     GetFreeSpace(w) (0x100000L)
01476 UINT      WINAPI GetLogicalDriveStringsA(UINT,LPSTR);
01477 UINT      WINAPI GetLogicalDriveStringsW(UINT,LPWSTR);
01478 #define     GetLogicalDriveStrings WINELIB_NAME_AW(GetLogicalDriveStrings)
01479 DWORD       WINAPI GetModuleFileNameA(HMODULE,LPSTR,DWORD);
01480 DWORD       WINAPI GetModuleFileNameW(HMODULE,LPWSTR,DWORD);
01481 #define     GetModuleFileName WINELIB_NAME_AW(GetModuleFileName)
01482 HMODULE     WINAPI GetModuleHandleA(LPCSTR);
01483 HMODULE     WINAPI GetModuleHandleW(LPCWSTR);
01484 #define     GetModuleHandle WINELIB_NAME_AW(GetModuleHandle)
01485 BOOL        WINAPI GetOverlappedResult(HANDLE,LPOVERLAPPED,LPDWORD,BOOL);
01486 UINT        WINAPI GetPrivateProfileIntA(LPCSTR,LPCSTR,INT,LPCSTR);
01487 UINT        WINAPI GetPrivateProfileIntW(LPCWSTR,LPCWSTR,INT,LPCWSTR);
01488 #define     GetPrivateProfileInt WINELIB_NAME_AW(GetPrivateProfileInt)
01489 INT         WINAPI GetPrivateProfileSectionA(LPCSTR,LPSTR,DWORD,LPCSTR);
01490 INT         WINAPI GetPrivateProfileSectionW(LPCWSTR,LPWSTR,DWORD,LPCWSTR);
01491 #define     GetPrivateProfileSection WINELIB_NAME_AW(GetPrivateProfileSection)
01492 DWORD       WINAPI GetPrivateProfileSectionNamesA(LPSTR,DWORD,LPCSTR);
01493 DWORD       WINAPI GetPrivateProfileSectionNamesW(LPWSTR,DWORD,LPCWSTR);
01494 #define     GetPrivateProfileSectionNames WINELIB_NAME_AW(GetPrivateProfileSectionNames)
01495 INT       WINAPI GetPrivateProfileStringA(LPCSTR,LPCSTR,LPCSTR,LPSTR,UINT,LPCSTR);
01496 INT       WINAPI GetPrivateProfileStringW(LPCWSTR,LPCWSTR,LPCWSTR,LPWSTR,UINT,LPCWSTR);
01497 #define     GetPrivateProfileString WINELIB_NAME_AW(GetPrivateProfileString)
01498 BOOL      WINAPI GetPrivateProfileStructA(LPCSTR,LPCSTR,LPVOID,UINT,LPCSTR);
01499 BOOL      WINAPI GetPrivateProfileStructW(LPCWSTR,LPCWSTR,LPVOID,UINT,LPCWSTR);
01500 #define     GetPrivateProfileStruct WINELIB_NAME_AW(GetPrivateProfileStruct)
01501 FARPROC   WINAPI GetProcAddress(HMODULE,LPCSTR);
01502 UINT      WINAPI GetProfileIntA(LPCSTR,LPCSTR,INT);
01503 UINT      WINAPI GetProfileIntW(LPCWSTR,LPCWSTR,INT);
01504 #define     GetProfileInt WINELIB_NAME_AW(GetProfileInt)
01505 INT       WINAPI GetProfileSectionA(LPCSTR,LPSTR,DWORD);
01506 INT       WINAPI GetProfileSectionW(LPCWSTR,LPWSTR,DWORD);
01507 #define     GetProfileSection WINELIB_NAME_AW(GetProfileSection)
01508 INT       WINAPI GetProfileStringA(LPCSTR,LPCSTR,LPCSTR,LPSTR,UINT);
01509 INT       WINAPI GetProfileStringW(LPCWSTR,LPCWSTR,LPCWSTR,LPWSTR,UINT);
01510 #define     GetProfileString WINELIB_NAME_AW(GetProfileString)
01511 VOID        WINAPI GetStartupInfoA(LPSTARTUPINFOA);
01512 VOID        WINAPI GetStartupInfoW(LPSTARTUPINFOW);
01513 #define     GetStartupInfo WINELIB_NAME_AW(GetStartupInfo)
```

```
01514 UINT        WINAPI GetSystemDirectoryA(LPSTR,UINT);
01515 UINT        WINAPI GetSystemDirectoryW(LPWSTR,UINT);
01516 #define     GetSystemDirectory WINELIB_NAME_AW(GetSystemDirectory)
01517 DWORD       WINAPI GetTickCount(void);
01518 UINT        WINAPI GetTempFileNameA(LPCSTR,LPCSTR,UINT,LPSTR);
01519 UINT        WINAPI GetTempFileNameW(LPCWSTR,LPCWSTR,UINT,LPWSTR);
01520 #define     GetTempFileName WINELIB_NAME_AW(GetTempFileName)
01521 UINT      WINAPI GetTempPathA(UINT,LPSTR);
01522 UINT      WINAPI GetTempPathW(UINT,LPWSTR);
01523 #define     GetTempPath WINELIB_NAME_AW(GetTempPath)
01524 LONG        WINAPI GetVersion(void);
01525 BOOL      WINAPI GetVolumeInformationA(LPCSTR,LPSTR,DWORD,LPDWORD,LPDWORD,LPDWORD,LPSTR,DWORD);
01526 BOOL      WINAPI GetVolumeInformationW(LPCWSTR,LPWSTR,DWORD,LPDWORD,LPDWORD,LPDWORD,LPWSTR,DWORD);
01527 #define     GetVolumeInformation WINELIB_NAME_AW(GetVolumeInformation)
01528 UINT      WINAPI GetWindowsDirectoryA(LPSTR,UINT);
01529 UINT      WINAPI GetWindowsDirectoryW(LPWSTR,UINT);
01530 #define     GetWindowsDirectory WINELIB_NAME_AW(GetWindowsDirectory)
01531 ATOM        WINAPI GlobalAddAtomA(LPCSTR);
01532 ATOM        WINAPI GlobalAddAtomW(LPCWSTR);
01533 #define     GlobalAddAtom WINELIB_NAME_AW(GlobalAddAtom)
01534 HGLOBAL     WINAPI GlobalAlloc(UINT,DWORD);
01535 DWORD       WINAPI GlobalCompact(DWORD);
01536 ATOM        WINAPI GlobalDeleteAtom(ATOM);
01537 ATOM        WINAPI GlobalFindAtomA(LPCSTR);
01538 ATOM        WINAPI GlobalFindAtomW(LPCWSTR);
01539 #define     GlobalFindAtom WINELIB_NAME_AW(GlobalFindAtom)
01540 UINT        WINAPI GlobalFlags(HGLOBAL);
01541 HGLOBAL     WINAPI GlobalFree(HGLOBAL);
01542 UINT        WINAPI GlobalGetAtomNameA(ATOM,LPSTR,INT);
01543 UINT        WINAPI GlobalGetAtomNameW(ATOM,LPWSTR,INT);
01544 #define     GlobalGetAtomName WINELIB_NAME_AW(GlobalGetAtomName)
01545 HGLOBAL     WINAPI GlobalHandle(LPCVOID);
01546 VOID        WINAPI GlobalFix(HGLOBAL);
01547 LPVOID      WINAPI GlobalLock(HGLOBAL);
01548 HGLOBAL     WINAPI GlobalReAlloc(HGLOBAL,DWORD,UINT);
01549 DWORD       WINAPI GlobalSize(HGLOBAL);
01550 VOID        WINAPI GlobalUnfix(HGLOBAL);
01551 BOOL        WINAPI GlobalUnlock(HGLOBAL);
01552 BOOL        WINAPI GlobalUnWire(HGLOBAL);
01553 LPVOID      WINAPI GlobalWire(HGLOBAL);
01554 #define   HasOverlappedCompleted(lpOverlapped) ((lpOverlapped)->Internal != STATUS_PENDING)
01555 BOOL      WINAPI InitAtomTable(DWORD);
01556 BOOL      WINAPI IsBadCodePtr(FARPROC);
01557 BOOL      WINAPI IsBadHugeReadPtr(LPCVOID,UINT);
01558 BOOL      WINAPI IsBadHugeWritePtr(LPVOID,UINT);
01559 BOOL      WINAPI IsBadReadPtr(LPCVOID,UINT);
01560 BOOL      WINAPI IsBadStringPtrA(LPCSTR,UINT);
01561 BOOL      WINAPI IsBadStringPtrW(LPCWSTR,UINT);
01562 #define     IsBadStringPtr WINELIB_NAME_AW(IsBadStringPtr)
01563 BOOL        WINAPI IsBadWritePtr(LPVOID,UINT);
01564 BOOL        WINAPI IsDebuggerPresent(void);
01565 HMODULE     WINAPI LoadLibraryA(LPCSTR);
01566 HMODULE     WINAPI LoadLibraryW(LPCWSTR);
01567 #define     LoadLibrary WINELIB_NAME_AW(LoadLibrary)
01568 HMODULE     WINAPI LoadLibraryExA(LPCSTR,HANDLE,DWORD);
01569 HMODULE     WINAPI LoadLibraryExW(LPCWSTR,HANDLE,DWORD);
01570 #define     LoadLibraryEx WINELIB_NAME_AW(LoadLibraryEx)
01571 HINSTANCE WINAPI LoadModule(LPCSTR,LPVOID);
01572 HGLOBAL   WINAPI LoadResource(HMODULE,HRSRC);
01573 HLOCAL    WINAPI LocalAlloc(UINT,DWORD);
01574 UINT      WINAPI LocalCompact(UINT);
01575 UINT      WINAPI LocalFlags(HLOCAL);
01576 HLOCAL    WINAPI LocalFree(HLOCAL);
01577 HLOCAL    WINAPI LocalHandle(LPCVOID);
01578 LPVOID      WINAPI LocalLock(HLOCAL);
01579 HLOCAL    WINAPI LocalReAlloc(HLOCAL,DWORD,UINT);
01580 UINT      WINAPI LocalShrink(HGLOBAL,UINT);
01581 UINT      WINAPI LocalSize(HLOCAL);
01582 BOOL      WINAPI LocalUnlock(HLOCAL);
01583 LPVOID      WINAPI LockResource(HGLOBAL);
01584 #define     LockSegment(handle) GlobalFix((HANDLE)(handle))
01585 #define     MakeProcInstance(proc,inst) (proc)
01586 HFILE       WINAPI OpenFile(LPCSTR,OFSTRUCT*,UINT);
01587 VOID        WINAPI OutputDebugStringA(LPCSTR);
01588 VOID        WINAPI OutputDebugStringW(LPCWSTR);
01589 #define     OutputDebugString WINELIB_NAME_AW(OutputDebugString)
01590 BOOL        WINAPI ReadProcessMemory(HANDLE, LPCVOID, LPVOID, DWORD, LPDWORD);
01591 BOOL        WINAPI RemoveDirectoryA(LPCSTR);
01592 BOOL        WINAPI RemoveDirectoryW(LPCWSTR);
01593 #define     RemoveDirectory WINELIB_NAME_AW(RemoveDirectory)
01594 BOOL      WINAPI SetCurrentDirectoryA(LPCSTR);
01595 BOOL      WINAPI SetCurrentDirectoryW(LPCWSTR);
01596 #define     SetCurrentDirectory WINELIB_NAME_AW(SetCurrentDirectory)
01597 UINT      WINAPI SetErrorMode(UINT);
01598 BOOL      WINAPI SetFileAttributesA(LPCSTR,DWORD);
01599 BOOL      WINAPI SetFileAttributesW(LPCWSTR,DWORD);
01600 #define     SetFileAttributes WINELIB_NAME_AW(SetFileAttributes)
```

```
01601 UINT      WINAPI SetHandleCount(UINT);
01602 #define     SetSwapAreaSize(w) (w)
01603 BOOL        WINAPI SetVolumeLabelA(LPCSTR,LPCSTR);
01604 BOOL        WINAPI SetVolumeLabelW(LPCWSTR,LPCWSTR);
01605 #define     SetVolumeLabel WINELIB_NAME_AW(SetVolumeLabel)
01606 DWORD       WINAPI SizeofResource(HMODULE,HRSRC);
01607 BOOL        WINAPI UnlockFileEx(HFILE,DWORD,DWORD,DWORD,LPOVERLAPPED);
01608 #define     UnlockSegment(handle) GlobalUnfix((HANDLE)(handle))
01609 BOOL      WINAPI WritePrivateProfileSectionA(LPCSTR,LPCSTR,LPCSTR);
01610 BOOL      WINAPI WritePrivateProfileSectionW(LPCWSTR,LPCWSTR,LPCWSTR);
01611 #define     WritePrivateProfileSection WINELIB_NAME_AW(WritePrivateProfileSection)
01612 BOOL      WINAPI WritePrivateProfileStringA(LPCSTR,LPCSTR,LPCSTR,LPCSTR);
01613 BOOL      WINAPI WritePrivateProfileStringW(LPCWSTR,LPCWSTR,LPCWSTR,LPCWSTR);
01614 #define     WritePrivateProfileString WINELIB_NAME_AW(WritePrivateProfileString)
01615 BOOL         WINAPI WriteProfileSectionA(LPCSTR,LPCSTR);
01616 BOOL         WINAPI WriteProfileSectionW(LPCWSTR,LPCWSTR);
01617 #define     WritePrivateProfileSection WINELIB_NAME_AW(WritePrivateProfileSection)
01618 BOOL      WINAPI WritePrivateProfileStructA(LPCSTR,LPCSTR,LPVOID,UINT,LPCSTR);
01619 BOOL      WINAPI WritePrivateProfileStructW(LPCWSTR,LPCWSTR,LPVOID,UINT,LPCWSTR);
01620 #define     WritePrivateProfileStruct WINELIB_NAME_AW(WritePrivateProfileStruct)
01621 BOOL        WINAPI WriteProcessMemory(HANDLE,LPVOID,LPCVOID,DWORD,LPDWORD);
01622 BOOL        WINAPI WriteProfileStringA(LPCSTR,LPCSTR,LPCSTR);
01623 BOOL        WINAPI WriteProfileStringW(LPCWSTR,LPCWSTR,LPCWSTR);
01624 #define     WriteProfileString WINELIB_NAME_AW(WriteProfileString)
01625 #define     Yield()
01626 LPSTR       WINAPI lstrcatA(LPSTR,LPCSTR);
01627 LPWSTR      WINAPI lstrcatW(LPWSTR,LPCWSTR);
01628 #define     lstrcat WINELIB_NAME_AW(lstrcat)
01629 LPSTR       WINAPI lstrcpyA(LPSTR,LPCSTR);
01630 LPWSTR      WINAPI lstrcpyW(LPWSTR,LPCWSTR);
01631 #define     lstrcpy WINELIB_NAME_AW(lstrcpy)
01632 LPSTR       WINAPI lstrcpynA(LPSTR,LPCSTR,INT);
01633 LPWSTR      WINAPI lstrcpynW(LPWSTR,LPCWSTR,INT);
01634 #define     lstrcpyn WINELIB_NAME_AW(lstrcpyn)
01635 INT       WINAPI lstrlenA(LPCSTR);
01636 INT       WINAPI lstrlenW(LPCWSTR);
01637 #define     lstrlen WINELIB_NAME_AW(lstrlen)
01638 HINSTANCE WINAPI WinExec(LPCSTR,UINT);
01639 LONG        WINAPI _hread(HFILE,LPVOID,LONG);
01640 LONG        WINAPI _hwrite(HFILE,LPCSTR,LONG);
01641 HFILE     WINAPI _lcreat(LPCSTR,INT);
01642 HFILE     WINAPI _lclose(HFILE);
01643 LONG        WINAPI _llseek(HFILE,LONG,INT);
01644 HFILE     WINAPI _lopen(LPCSTR,INT);
01645 UINT      WINAPI _lread(HFILE,LPVOID,UINT);
01646 UINT      WINAPI _lwrite(HFILE,LPCSTR,UINT);
01647 INT       WINAPI lstrcmpA(LPCSTR,LPCSTR);
01648 INT       WINAPI lstrcmpW(LPCWSTR,LPCWSTR);
01649 #define     lstrcmp WINELIB_NAME_AW(lstrcmp)
01650 INT       WINAPI lstrcmpiA(LPCSTR,LPCSTR);
01651 INT       WINAPI lstrcmpiW(LPCWSTR,LPCWSTR);
01652 #define     lstrcmpi WINELIB_NAME_AW(lstrcmpi)
01653
01654 /* compatibility macros */
01655 #define     FillMemory RtlFillMemory
01656 #define     MoveMemory RtlMoveMemory
01657 #define     ZeroMemory RtlZeroMemory
01658 #define     CopyMemory RtlCopyMemory
01659
01660 /* undocumented functions */
01661
01662 typedef struct tagSYSLEVEL
01663 {
01664     CRITICAL_SECTION crst;
01665     INT              level;
01666 } SYSLEVEL;
01667
01668 /* [GS]etProcessDword offsets */
01669 #define  GPD_APP_COMPAT_FLAGS    (-56)
01670 #define  GPD_LOAD_DONE_EVENT     (-52)
01671 #define  GPD_HINSTANCE16         (-48)
01672 #define  GPD_WINDOWS_VERSION     (-44)
01673 #define  GPD_THDB                (-40)
01674 #define  GPD_PDB                 (-36)
01675 #define  GPD_STARTF_SHELLDATA    (-32)
01676 #define  GPD_STARTF_HOTKEY       (-28)
01677 #define  GPD_STARTF_SHOWWINDOW   (-24)
01678 #define  GPD_STARTF_SIZE         (-20)
01679 #define  GPD_STARTF_POSITION     (-16)
01680 #define  GPD_STARTF_FLAGS        (-12)
01681 #define  GPD_PARENT              (- 8)
01682 #define  GPD_FLAGS               (- 4)
01683 #define  GPD_USERDATA            (  0)
01684
01685 void        WINAPI DisposeLZ32Handle(HANDLE);
01686 HANDLE      WINAPI DosFileHandleToWin32Handle(HFILE);
01687 DWORD       WINAPI GetProcessDword(DWORD,INT);
```

```
01688 VOID        WINAPI GetpWin16Lock(SYSLEVEL**);
01689 DWORD       WINAPI MapLS(LPCVOID);
01690 DWORD       WINAPI MapProcessHandle(HANDLE);
01691 LPVOID      WINAPI MapSL(DWORD);
01692 VOID        WINAPI ReleaseThunkLock(DWORD*);
01693 VOID        WINAPI RestoreThunkLock(DWORD);
01694 void        WINAPI SetProcessDword(DWORD,INT,DWORD);
01695 VOID        WINAPI UnMapLS(DWORD);
01696 HFILE       WINAPI Win32HandleToDosFileHandle(HANDLE);
01697 VOID        WINAPI _CheckNotSysLevel(SYSLEVEL *lock);
01698 DWORD       WINAPI _ConfirmWin16Lock(void);
01699 DWORD       WINAPI _ConfirmSysLevel(SYSLEVEL*);
01700 VOID        WINAPI _EnterSysLevel(SYSLEVEL*);
01701 VOID        WINAPI _LeaveSysLevel(SYSLEVEL*);
01702
01703
01704 /* Wine internal functions */
01705
01706 BOOL        WINAPI wine_get_unix_file_name( LPCSTR dos, LPSTR buffer, DWORD len );
01707
01708
01709 /* a few optimizations for i386/gcc */
01710
01711 /*#if defined(__i386__) && defined(__GNUC__)*/
01712 /* Deleted these since the real WINE environment is not available */
01713 #if 0
01714
01715 extern inline LONG WINAPI InterlockedCompareExchange( PLONG dest, LONG xchg, LONG compare );
01716 extern inline LONG WINAPI InterlockedCompareExchange( PLONG dest, LONG xchg, LONG compare )
01717 {
01718     LONG ret;
01719     __asm__ __volatile__( "lock; cmpxchgl %2,(%1)"
01720                           : "=a" (ret) : "r" (dest), "r" (xchg), "0" (compare) : "memory" );
01721     return ret;
01722 }
01723
01724 extern inline LONG WINAPI InterlockedExchange( PLONG dest, LONG val );
01725 extern inline LONG WINAPI InterlockedExchange( PLONG dest, LONG val )
01726 {
01727     LONG ret;
01728     __asm__ __volatile__( "lock; xchgl %0,(%1)"
01729                           : "=r" (ret) :"r" (dest), "0" (val) : "memory" );
01730     return ret;
01731 }
01732
01733 extern inline LONG WINAPI InterlockedExchangeAdd( PLONG dest, LONG incr );
01734 extern inline LONG WINAPI InterlockedExchangeAdd( PLONG dest, LONG incr )
01735 {
01736     LONG ret;
01737     __asm__ __volatile__( "lock; xaddl %0,(%1)"
01738                           : "=r" (ret) : "r" (dest), "0" (incr) : "memory" );
01739     return ret;
01740 }
01741
01742 extern inline LONG WINAPI InterlockedIncrement( PLONG dest );
01743 extern inline LONG WINAPI InterlockedIncrement( PLONG dest )
01744 {
01745     return InterlockedExchangeAdd( dest, 1 ) + 1;
01746 }
01747
01748 extern inline LONG WINAPI InterlockedDecrement( PLONG dest );
01749 extern inline LONG WINAPI InterlockedDecrement( PLONG dest )
01750 {
01751     return InterlockedExchangeAdd( dest, -1 ) - 1;
01752 }
01753
01754 extern inline DWORD WINAPI GetLastError(void);
01755 extern inline DWORD WINAPI GetLastError(void)
01756 {
01757     DWORD ret;
01758     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x60,%0" : "=r" (ret) );
01759     return ret;
01760 }
01761
01762 extern inline DWORD WINAPI GetCurrentProcessId(void);
01763 extern inline DWORD WINAPI GetCurrentProcessId(void)
01764 {
01765     DWORD ret;
01766     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x20,%0" : "=r" (ret) );
01767     return ret;
01768 }
01769
01770 extern inline DWORD WINAPI GetCurrentThreadId(void);
01771 extern inline DWORD WINAPI GetCurrentThreadId(void)
01772 {
01773     DWORD ret;
01774     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x24,%0" : "=r" (ret) );
```

```
01775     return ret;
01776 }
01777
01778 extern inline void WINAPI SetLastError( DWORD err );
01779 extern inline void WINAPI SetLastError( DWORD err )
01780 {
01781     __asm__ __volatile__( ".byte 0x64\n\tmovl %0,0x60" : : "r" (err) : "memory" );
01782 }
01783
01784 extern inline HANDLE WINAPI GetProcessHeap(void);
01785 extern inline HANDLE WINAPI GetProcessHeap(void)
01786 {
01787     HANDLE *pdb;
01788     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x30,%0" : "=r" (pdb) );
01789     return pdb[0x18 / sizeof(HANDLE)];  /* get dword at offset 0x18 in pdb */
01790 }
01791
01792 #else  /* __i386__ && __GNUC__ */
01793 DWORD       WINAPI GetCurrentProcessId(void);
01794 DWORD       WINAPI GetCurrentThreadId(void);
01795 DWORD       WINAPI GetLastError(void);
01796 HANDLE      WINAPI GetProcessHeap(void);
01797 LONG        WINAPI InterlockedCompareExchange(LONG*,LONG,LONG);
01798 LONG        WINAPI InterlockedDecrement(PLONG);
01799 LONG        WINAPI InterlockedExchange(PLONG,LONG);
01800 LONG        WINAPI InterlockedExchangeAdd(PLONG,LONG);
01801 LONG        WINAPI InterlockedIncrement(PLONG);
01802 VOID        WINAPI SetLastError(DWORD);
01803 #endif  /* __i386__ && __GNUC__ */
01804
01805 /* FIXME: should handle platforms where sizeof(void*) != sizeof(long) */
01806 #if 0
01807   /* Unused in libEMF */
01808 static inline PVOID WINAPI InterlockedCompareExchangePointer( PVOID *dest, PVOID xchg, PVOID compare )
01809 {
01810     return (PVOID)InterlockedCompareExchange( (PLONG)dest, (LONG)xchg, (LONG)compare );
01811 }
01812
01813 static inline PVOID WINAPI InterlockedExchangePointer( PVOID *dest, PVOID val )
01814 {
01815     return (PVOID)InterlockedExchange( (PLONG)dest, (LONG)val );
01816 }
01817 #endif
01818 #ifdef __WINE__
01819 #define GetCurrentProcess() ((HANDLE)0xffffffff)
01820 #define GetCurrentThread()  ((HANDLE)0xfffffffe)
01821 #endif
01822
01823 /* WinMain(entry point) must be declared in winbase.h. */
01824 /* If this is not declared, we cannot compile many sources written with C++. */
01825 int WINAPI WinMain(HINSTANCE,HINSTANCE,LPSTR,int);
01826
01827 #ifdef __cplusplus
01828 }
01829 #endif
01830
01831 #endif  /* __WINE_WINBASE_H */
```

5.9 windef.h

```
00001 /*
00002  * Basic types definitions
00003  *
00004  * Copyright 1996 Alexandre Julliard
00005  */
00006
00007 #ifndef __WINE_WINDEF_H
00008 #define __WINE_WINDEF_H
00009
00010 #ifdef __WINE__
00011 # undef UNICODE
00012 #endif  /* __WINE__ */
00013
00014 #define WINVER 0x0500
00015
00016 #include "winnt.h"
00017
00018
00019 #ifdef __cplusplus
00020 extern "C" {
00021 #endif
00022
00023
00024 /* Macros to map Winelib names to the correct implementation name */
```

```
00025 /* depending on __WINE__ and UNICODE macros.                        */
00026 /* Note that Winelib is purely Win32.                               */
00027
00028 #ifdef __WINE__
00029 # define WINELIB_NAME_AW(func) \
00030     func##_must_be_suffixed_with_W_or_A_in_this_context \
00031     func##_must_be_suffixed_with_W_or_A_in_this_context
00032 #else  /* __WINE__ */
00033 # ifdef UNICODE
00034 #  define WINELIB_NAME_AW(func) func##W
00035 # else
00036 #  define WINELIB_NAME_AW(func) func##A
00037 # endif  /* UNICODE */
00038 #endif  /* __WINE__ */
00039
00040 #ifdef __WINE__
00041 # define DECL_WINELIB_TYPE_AW(type)  /* nothing */
00042 #else   /* __WINE__ */
00043 # define DECL_WINELIB_TYPE_AW(type)  typedef WINELIB_NAME_AW(type) type;
00044 #endif  /* __WINE__ */
00045
00046
00047 /* Integer types */
00048 typedef UINT            WPARAM;
00049 typedef LONG            LPARAM;
00050 typedef LONG            LRESULT;
00051 typedef WORD            ATOM;
00052 typedef WORD            CATCHBUF[9];
00053 typedef WORD           *LPCATCHBUF;
00054 typedef DWORD           COLORREF, *LPCOLORREF;
00055
00056
00057 /* Handle types that exist both in Win16 and Win32. */
00058
00059 typedef int HFILE;
00060 DECLARE_OLD_HANDLE(HACCEL);
00061 DECLARE_OLD_HANDLE(HBITMAP);
00062 DECLARE_OLD_HANDLE(HBRUSH);
00063 DECLARE_HANDLE(HCOLORSPACE);
00064 DECLARE_OLD_HANDLE(HDC);
00065 DECLARE_HANDLE(HDESK);
00066 DECLARE_OLD_HANDLE(HENHMETAFILE);
00067 DECLARE_OLD_HANDLE(HFONT);
00068 DECLARE_OLD_HANDLE(HHOOK);
00069 DECLARE_OLD_HANDLE(HICON);
00070 DECLARE_OLD_HANDLE(HINSTANCE);
00071 DECLARE_OLD_HANDLE(HKEY);
00072 DECLARE_OLD_HANDLE(HKL);
00073 DECLARE_OLD_HANDLE(HMENU);
00074 DECLARE_OLD_HANDLE(HMETAFILE);
00075 DECLARE_OLD_HANDLE(HMONITOR);
00076 DECLARE_OLD_HANDLE(HPALETTE);
00077 DECLARE_OLD_HANDLE(HPEN);
00078 DECLARE_OLD_HANDLE(HRGN);
00079 DECLARE_OLD_HANDLE(HRSRC);
00080 DECLARE_OLD_HANDLE(HTASK);
00081 DECLARE_HANDLE(HWINSTA);
00082 DECLARE_OLD_HANDLE(HWND);
00083
00084 /* Handle types that must remain interchangeable even with strict on */
00085
00086 typedef HINSTANCE HMODULE;
00087 typedef HANDLE HGDIOBJ;
00088 typedef HANDLE HGLOBAL;
00089 typedef HANDLE HLOCAL;
00090 typedef HANDLE GLOBALHANDLE;
00091 typedef HANDLE LOCALHANDLE;
00092 typedef HICON HCURSOR;
00093
00094 /* Callback function pointers types */
00095
00096 typedef INT     CALLBACK (*FARPROC)();
00097 typedef INT     CALLBACK (*PROC)();
00098
00099
00100 /* Macros to split words and longs. */
00101
00102 #define LOBYTE(w)               ((BYTE)(WORD)(w))
00103 #define HIBYTE(w)               ((BYTE)((WORD)(w) » 8))
00104
00105 #define LOWORD(l)               ((WORD)(DWORD)(l))
00106 #define HIWORD(l)               ((WORD)((DWORD)(l) » 16))
00107
00108 #define SLOWORD(l)              ((SHORT)(LONG)(l))
00109 #define SHIWORD(l)              ((SHORT)((LONG)(l) » 16))
00110
00111 #define MAKEWORD(low,high)      ((WORD)(((BYTE)(low)) | ((WORD)((BYTE)(high))) « 8))
```

```
00112 #define MAKELONG(low,high)      ((LONG)(((WORD)(low)) | (((DWORD)((WORD)(high))) << 16)))
00113 #define MAKELPARAM(low,high)    ((LPARAM)MAKELONG(low,high))
00114 #define MAKEWPARAM(low,high)    ((WPARAM)MAKELONG(low,high))
00115 #define MAKELRESULT(low,high)   ((LRESULT)MAKELONG(low,high))
00116
00117 #define SELECTOROF(ptr)      (HIWORD(ptr))
00118 #define OFFSETOF(ptr)        (LOWORD(ptr))
00119
00120 #ifdef __WINE__
00121 /* macros to set parts of a DWORD (not in the Windows API) */
00122 #define SET_LOWORD(dw,val)  ((dw) = ((dw) & 0xffff0000) | LOWORD(val))
00123 #define SET_LOBYTE(dw,val)  ((dw) = ((dw) & 0xffffff00) | LOBYTE(val))
00124 #define SET_HIBYTE(dw,val)  ((dw) = ((dw) & 0xffff00ff) | (LOBYTE(val) << 8))
00125 #define ADD_LOWORD(dw,val)  ((dw) = ((dw) & 0xffff0000) | LOWORD((DWORD)(dw)+(val)))
00126 #endif
00127
00128 /* min and max macros */
00129 #ifndef NOMINMAX
00130 #ifndef max
00131 #define max(a,b)    (((a) > (b)) ? (a) : (b))
00132 #endif
00133 #ifndef min
00134 #define min(a,b)    (((a) < (b)) ? (a) : (b))
00135 #endif
00136 #endif  /* NOMINMAX */
00137
00138 #ifndef _MAX_PATH
00139 /* FIXME: These are supposed to be in stdlib.h only */
00140 #define _MAX_DRIVE          3
00141 #define _MAX_FNAME          256
00142 #define _MAX_DIR            _MAX_FNAME
00143 #define _MAX_EXT            _MAX_FNAME
00144 #define _MAX_PATH           260
00145 #endif
00146 #define MAX_PATH            _MAX_PATH
00147
00148
00149 #define HFILE_ERROR     ((HFILE)-1)
00150
00151 /* The SIZE structure */
00152 typedef struct tagSIZE
00153 {
00154     LONG cx;
00155     LONG cy;
00156 } SIZE, *PSIZE, *LPSIZE;
00157
00158 typedef SIZE SIZEL, *PSIZEL, *LPSIZEL;
00159
00160 /* The POINT structure */
00161 typedef struct tagPOINT
00162 {
00163     LONG  x;
00164     LONG  y;
00165 } POINT, *PPOINT, *LPPOINT;
00166
00167 typedef struct _POINTL
00168 {
00169     LONG x;
00170     LONG y;
00171 } POINTL;
00172
00173 /* The POINTS structure */
00174
00175 typedef struct tagPOINTS
00176 {
00177     SHORT x;
00178     SHORT y;
00179 } POINTS, *PPOINTS, *LPPOINTS;
00180
00181 /* The RECT structure */
00182 typedef struct tagRECT
00183 {
00184     INT  left;
00185     INT  top;
00186     INT  right;
00187     INT  bottom;
00188 } RECT, *PRECT, *LPRECT;
00189 typedef const RECT *LPCRECT;
00190
00191
00192 typedef struct tagRECTL
00193 {
00194     LONG left;
00195     LONG top;
00196     LONG right;
00197     LONG bottom;
00198 } RECTL, *PRECTL, *LPRECTL;
```

```
00199
00200 typedef const RECTL *LPCRECTL;
00201
00202 #ifdef __cplusplus
00203 }
00204 #endif
00205
00206 #endif /* __WINE_WINDEF_H */
```

5.10 winerror.h

```
00001 #ifndef __WINE_WINERROR_H
00002 #define __WINE_WINERROR_H
00003
00004
00005 extern int WIN32_LastError;
00006
00007 #define FACILITY_NULL      0
00008 #define FACILITY_RPC       1
00009 #define FACILITY_DISPATCH  2
00010 #define FACILITY_STORAGE   3
00011 #define FACILITY_ITF        4
00012 #define FACILITY_WIN32      7
00013 #define FACILITY_WINDOWS   8
00014 #define FACILITY_SSPI      9
00015 #define FACILITY_CONTROL   10
00016 #define FACILITY_CERT      11
00017 #define FACILITY_INTERNET  12
00018
00019 #define SEVERITY_SUCCESS    0
00020 #define SEVERITY_ERROR      1
00021
00022
00023 #define MAKE_HRESULT(sev,fac,code) \
00024     ((HRESULT) (((unsigned long)(sev)«31) | ((unsigned long)(fac)«16) | ((unsigned long)(code))) )
00025 #define MAKE_SCODE(sev,fac,code) \
00026         ((SCODE) (((unsigned long)(sev)«31) | ((unsigned long)(fac)«16) | ((unsigned long)(code))) )
00027 #define SUCCEEDED(stat) ((HRESULT)(stat)>=0)
00028 #define FAILED(stat) ((HRESULT)(stat)<0)
00029 #define IS_ERROR(stat) (((unsigned long)(stat)»31) == SEVERITY_ERROR)
00030
00031 #define HRESULT_CODE(hr) ((hr) & 0xFFFF)
00032 #define SCODE_CODE(sc)   ((sc) & 0xFFFF)
00033
00034 #define HRESULT_FACILITY(hr)  (((hr) » 16) & 0x1FFF)
00035 #define SCODE_FACILITY(sc)  (((sc) » 16) & 0x1FFF)
00036
00037 #define HRESULT_SEVERITY(hr)    (((hr) » 31) & 0x1)
00038 #define SCODE_SEVERITY(sc)      (((sc) » 31) & 0x1)
00039
00040 #define FACILITY_NT_BIT         0x10000000
00041 #define HRESULT_FROM_WIN32(x)   ((x) ? ((HRESULT) (((x) & 0x0000FFFF) | (FACILITY_WIN32 « 16) |
      0x80000000)) : 0 )
00042 #define HRESULT_FROM_NT(x)      ((HRESULT) ((x) | FACILITY_NT_BIT))
00043
00044 /* SCODE <-> HRESULT functions */
00045 /* This macros is obsolete and should not be used in new apps. */
00046 #define GetScode(hr)         ((SCODE)(hr))
00047 /* This macros is obsolete and should not be used in new apps. */
00048 #define ResultFromScode(sc)  ((HRESULT)(sc))
00049
00050 /* ERROR_UNKNOWN is a placeholder for error conditions which haven't
00051  * been tested yet so we're not exactly sure what will be returned.
00052  * All instances of ERROR_UNKNOWN should be tested under Win95/NT
00053  * and replaced.
00054  */
00055 #define ERROR_UNKNOWN                                    99999
00056
00057 #define NO_ERROR                                         0
00058 #define ERROR_SUCCESS                                    0
00059 #define ERROR_INVALID_FUNCTION                           1
00060 #define ERROR_FILE_NOT_FOUND                             2
00061 #define ERROR_PATH_NOT_FOUND                             3
00062 #define ERROR_TOO_MANY_OPEN_FILES                        4
00063 #define ERROR_ACCESS_DENIED                              5
00064 #define ERROR_INVALID_HANDLE                             6
00065 #define ERROR_ARENA_TRASHED                              7
00066 #define ERROR_NOT_ENOUGH_MEMORY                          8
00067 #define ERROR_INVALID_BLOCK                              9
00068 #define ERROR_BAD_ENVIRONMENT                            10
00069 #define ERROR_BAD_FORMAT                                 11
00070 #define ERROR_INVALID_ACCESS                             12
00071 #define ERROR_INVALID_DATA                               13
00072 #define ERROR_OUTOFMEMORY                                14
```

```
00073 #define ERROR_INVALID_DRIVE                              15
00074 #define ERROR_CURRENT_DIRECTORY                          16
00075 #define ERROR_NOT_SAME_DEVICE                            17
00076 #define ERROR_NO_MORE_FILES                              18
00077 #define ERROR_WRITE_PROTECT                              19
00078 #define ERROR_BAD_UNIT                                   20
00079 #define ERROR_NOT_READY                                  21
00080 #define ERROR_BAD_COMMAND                                22
00081 #define ERROR_CRC                                        23
00082 #define ERROR_BAD_LENGTH                                 24
00083 #define ERROR_SEEK                                       25
00084 #define ERROR_NOT_DOS_DISK                               26
00085 #define ERROR_SECTOR_NOT_FOUND                           27
00086 #define ERROR_OUT_OF_PAPER                               28
00087 #define ERROR_WRITE_FAULT                                29
00088 #define ERROR_READ_FAULT                                 30
00089 #define ERROR_GEN_FAILURE                                31
00090 #define ERROR_SHARING_VIOLATION                          32
00091 #define ERROR_LOCK_VIOLATION                             33
00092 #define ERROR_WRONG_DISK                                 34
00093 /* FIXME: 35 gets returned for some unsuccessful DeviceIoControl calls */
00094 #define ERROR_UNKNOWN_NAME_01                            35
00095 #define ERROR_SHARING_BUFFER_EXCEEDED                    36
00096 #define ERROR_HANDLE_EOF                                 38
00097 #define ERROR_HANDLE_DISK_FULL                           39
00098 #define ERROR_NOT_SUPPORTED                              50
00099 #define ERROR_REM_NOT_LIST                               51
00100 #define ERROR_DUP_NAME                                   52
00101 #define ERROR_BAD_NETPATH                                53
00102 #define ERROR_NETWORK_BUSY                               54
00103 #define ERROR_DEV_NOT_EXIST                              55
00104 #define ERROR_TOO_MANY_CMDS                              56
00105 #define ERROR_ADAP_HDW_ERR                               57
00106 #define ERROR_BAD_NET_RESP                               58
00107 #define ERROR_UNEXP_NET_ERR                              59
00108 #define ERROR_BAD_REM_ADAP                               60
00109 #define ERROR_PRINTQ_FULL                                61
00110 #define ERROR_NO_SPOOL_SPACE                             62
00111 #define ERROR_PRINT_CANCELLED                            63
00112 #define ERROR_NETNAME_DELETED                            64
00113 #define ERROR_NETWORK_ACCESS_DENIED                      65
00114 #define ERROR_BAD_DEV_TYPE                               66
00115 #define ERROR_BAD_NET_NAME                               67
00116 #define ERROR_TOO_MANY_NAMES                             68
00117 #define ERROR_TOO_MANY_SESS                              69
00118 #define ERROR_SHARING_PAUSED                             70
00119 #define ERROR_REQ_NOT_ACCEP                              71
00120 #define ERROR_REDIR_PAUSED                               72
00121 #define ERROR_FILE_EXISTS                                80
00122 #define ERROR_CANNOT_MAKE                                82
00123 #define ERROR_FAIL_I24                                   83
00124 #define ERROR_OUT_OF_STRUCTURES                          84
00125 #define ERROR_ALREADY_ASSIGNED                           85
00126 #define ERROR_INVALID_PASSWORD                           86
00127 #define ERROR_INVALID_PARAMETER                          87
00128 #define ERROR_NET_WRITE_FAULT                            88
00129 #define ERROR_NO_PROC_SLOTS                              89
00130 #define ERROR_TOO_MANY_SEMAPHORES                        100
00131 #define ERROR_EXCL_SEM_ALREADY_OWNED                     101
00132 #define ERROR_SEM_IS_SET                                 102
00133 #define ERROR_TOO_MANY_SEM_REQUESTS                      103
00134 #define ERROR_INVALID_AT_INTERRUPT_TIME                  104
00135 #define ERROR_SEM_OWNER_DIED                             105
00136 #define ERROR_SEM_USER_LIMIT                             106
00137 #define ERROR_DISK_CHANGE                                107
00138 #define ERROR_DRIVE_LOCKED                               108
00139 #define ERROR_BROKEN_PIPE                                109
00140 #define ERROR_OPEN_FAILED                                110
00141 #define ERROR_BUFFER_OVERFLOW                            111
00142 #define ERROR_DISK_FULL                                  112
00143 #define ERROR_NO_MORE_SEARCH_HANDLES                     113
00144 #define ERROR_INVALID_TARGET_HANDLE                      114
00145 #define ERROR_INVALID_CATEGORY                           117
00146 #define ERROR_INVALID_VERIFY_SWITCH                      118
00147 #define ERROR_BAD_DRIVER_LEVEL                           119
00148 #define ERROR_CALL_NOT_IMPLEMENTED                       120
00149 #define ERROR_SEM_TIMEOUT                                121
00150 #define ERROR_INSUFFICIENT_BUFFER                        122
00151 #define ERROR_INVALID_NAME                               123
00152 #define ERROR_INVALID_LEVEL                              124
00153 #define ERROR_NO_VOLUME_LABEL                            125
00154 #define ERROR_MOD_NOT_FOUND                              126
00155 #define ERROR_PROC_NOT_FOUND                             127
00156 #define ERROR_WAIT_NO_CHILDREN                           128
00157 #define ERROR_CHILD_NOT_COMPLETE                         129
00158 #define ERROR_DIRECT_ACCESS_HANDLE                       130
00159 #define ERROR_NEGATIVE_SEEK                              131
```

```
00160 #define ERROR_SEEK_ON_DEVICE                    132
00161 #define ERROR_IS_JOIN_TARGET                    133
00162 #define ERROR_IS_JOINED                         134
00163 #define ERROR_IS_SUBSTED                        135
00164 #define ERROR_NOT_JOINED                        136
00165 #define ERROR_NOT_SUBSTED                       137
00166 #define ERROR_JOIN_TO_JOIN                      138
00167 #define ERROR_SUBST_TO_SUBST                    139
00168 #define ERROR_JOIN_TO_SUBST                     140
00169 #define ERROR_SUBST_TO_JOIN                     141
00170 #define ERROR_BUSY_DRIVE                        142
00171 #define ERROR_SAME_DRIVE                        143
00172 #define ERROR_DIR_NOT_ROOT                      144
00173 #define ERROR_DIR_NOT_EMPTY                     145
00174 #define ERROR_IS_SUBST_PATH                     146
00175 #define ERROR_IS_JOIN_PATH                      147
00176 #define ERROR_PATH_BUSY                         148
00177 #define ERROR_IS_SUBST_TARGET                   149
00178 #define ERROR_SYSTEM_TRACE                      150
00179 #define ERROR_INVALID_EVENT_COUNT               151
00180 #define ERROR_TOO_MANY_MUXWAITERS               152
00181 #define ERROR_INVALID_LIST_FORMAT               153
00182 #define ERROR_LABEL_TOO_LONG                    154
00183 #define ERROR_TOO_MANY_TCBS                     155
00184 #define ERROR_SIGNAL_REFUSED                    156
00185 #define ERROR_DISCARDED                         157
00186 #define ERROR_NOT_LOCKED                        158
00187 #define ERROR_BAD_THREADID_ADDR                 159
00188 #define ERROR_BAD_ARGUMENTS                     160
00189 #define ERROR_BAD_PATHNAME                      161
00190 #define ERROR_SIGNAL_PENDING                    162
00191 #define ERROR_MAX_THRDS_REACHED                 164
00192 #define ERROR_LOCK_FAILED                       167
00193 #define ERROR_BUSY                              170
00194 #define ERROR_CANCEL_VIOLATION                  173
00195 #define ERROR_ATOMIC_LOCKS_NOT_SUPPORTED        174
00196 #define ERROR_INVALID_SEGMENT_NUMBER            180
00197 #define ERROR_INVALID_ORDINAL                   182
00198 #define ERROR_ALREADY_EXISTS                    183
00199 #define ERROR_INVALID_FLAG_NUMBER               186
00200 #define ERROR_SEM_NOT_FOUND                     187
00201 #define ERROR_INVALID_STARTING_CODESEG          188
00202 #define ERROR_INVALID_STACKSEG                  189
00203 #define ERROR_INVALID_MODULETYPE                190
00204 #define ERROR_INVALID_EXE_SIGNATURE             191
00205 #define ERROR_EXE_MARKED_INVALID                192
00206 #define ERROR_BAD_EXE_FORMAT                    193
00207 #define ERROR_ITERATED_DATA_EXCEEDS_64k         194
00208 #define ERROR_INVALID_MINALLOCSIZE              195
00209 #define ERROR_DYNLINK_FROM_INVALID_RING         196
00210 #define ERROR_IOPL_NOT_ENABLED                  197
00211 #define ERROR_INVALID_SEGDPL                    198
00212 #define ERROR_AUTODATASEG_EXCEEDS_64k           199
00213 #define ERROR_RING2SEG_MUST_BE_MOVABLE          200
00214 #define ERROR_RELOC_CHAIN_XEEDS_SEGLIM          201
00215 #define ERROR_INFLOOP_IN_RELOC_CHAIN            202
00216 #define ERROR_ENVVAR_NOT_FOUND                  203
00217 #define ERROR_NO_SIGNAL_SENT                    205
00218 #define ERROR_FILENAME_EXCED_RANGE              206
00219 #define ERROR_RING2_STACK_IN_USE                207
00220 #define ERROR_META_EXPANSION_TOO_LONG           208
00221 #define ERROR_INVALID_SIGNAL_NUMBER             209
00222 #define ERROR_THREAD_1_INACTIVE                 210
00223 #define ERROR_LOCKED                            212
00224 #define ERROR_TOO_MANY_MODULES                  214
00225 #define ERROR_NESTING_NOT_ALLOWED               215
00226 #define ERROR_EXE_MACHINE_TYPE_MISMATCH         216
00227 #define ERROR_BAD_PIPE                          230
00228 #define ERROR_PIPE_BUSY                         231
00229 #define ERROR_NO_DATA                           232
00230 #define ERROR_PIPE_NOT_CONNECTED                233
00231 #define ERROR_MORE_DATA                         234
00232 #define ERROR_VC_DISCONNECTED                   240
00233 #define ERROR_INVALID_EA_NAME                   254
00234 #define ERROR_EA_LIST_INCONSISTENT              255
00235 #define ERROR_NO_MORE_ITEMS                     259
00236 #define ERROR_CANNOT_COPY                       266
00237 #define ERROR_DIRECTORY                         267
00238 #define ERROR_EAS_DIDNT_FIT                     275
00239 #define ERROR_EA_FILE_CORRUPT                   276
00240 #define ERROR_EA_TABLE_FULL                     277
00241 #define ERROR_INVALID_EA_HANDLE                 278
00242 #define ERROR_EAS_NOT_SUPPORTED                 282
00243 #define ERROR_NOT_OWNER                         288
00244 #define ERROR_TOO_MANY_POSTS                    298
00245 #define ERROR_PARTIAL_COPY                      299
00246 #define ERROR_OPLOCK_NOT_GRANTED                300
```

```
00247 #define ERROR_INVALID_OPLOCK_PROTOCOL                    301
00248 #define ERROR_MR_MID_NOT_FOUND                           317
00249 #define ERROR_INVALID_ADDRESS                            487
00250 #define ERROR_ARITHMETIC_OVERFLOW                        534
00251 #define ERROR_PIPE_CONNECTED                             535
00252 #define ERROR_PIPE_LISTENING                             536
00253 #define ERROR_EA_ACCESS_DENIED                           994
00254 #define ERROR_OPERATION_ABORTED                          995
00255 #define ERROR_IO_INCOMPLETE                              996
00256 #define ERROR_IO_PENDING                                 997
00257 #define ERROR_NOACCESS                                   998
00258 #define ERROR_SWAPERROR                                  999
00259 #define ERROR_STACK_OVERFLOW                             1001
00260 #define ERROR_INVALID_MESSAGE                            1002
00261 #define ERROR_CAN_NOT_COMPLETE                           1003
00262 #define ERROR_INVALID_FLAGS                              1004
00263 #define ERROR_UNRECOGNIZED_VOLUME                        1005
00264 #define ERROR_FILE_INVALID                               1006
00265 #define ERROR_FULLSCREEN_MODE                            1007
00266 #define ERROR_NO_TOKEN                                   1008
00267 #define ERROR_BADDB                                      1009
00268 #define ERROR_BADKEY                                     1010
00269 #define ERROR_CANTOPEN                                   1011
00270 #define ERROR_CANTREAD                                   1012
00271 #define ERROR_CANTWRITE                                  1013
00272 #define ERROR_REGISTRY_RECOVERED                         1014
00273 #define ERROR_REGISTRY_CORRUPT                           1015
00274 #define ERROR_REGISTRY_IO_FAILED                         1016
00275 #define ERROR_NOT_REGISTRY_FILE                          1017
00276 #define ERROR_KEY_DELETED                                1018
00277 #define ERROR_NO_LOG_SPACE                               1019
00278 #define ERROR_KEY_HAS_CHILDREN                           1020
00279 #define ERROR_CHILD_MUST_BE_VOLATILE                     1021
00280 #define ERROR_NOTIFY_ENUM_DIR                            1022
00281 #define ERROR_DEPENDENT_SERVICES_RUNNING                 1051
00282 #define ERROR_INVALID_SERVICE_CONTROL                    1052
00283 #define ERROR_SERVICE_REQUEST_TIMEOUT                    1053
00284 #define ERROR_SERVICE_NO_THREAD                          1054
00285 #define ERROR_SERVICE_DATABASE_LOCKED                    1055
00286 #define ERROR_SERVICE_ALREADY_RUNNING                    1056
00287 #define ERROR_INVALID_SERVICE_ACCOUNT                    1057
00288 #define ERROR_SERVICE_DISABLED                           1058
00289 #define ERROR_CIRCULAR_DEPENDENCY                        1059
00290 #define ERROR_SERVICE_DOES_NOT_EXIST                     1060
00291 #define ERROR_SERVICE_CANNOT_ACCEPT_CTRL                 1061
00292 #define ERROR_SERVICE_NOT_ACTIVE                         1062
00293 #define ERROR_FAILED_SERVICE_CONTROLLER_CONNECT          1063
00294 #define ERROR_EXCEPTION_IN_SERVICE                       1064
00295 #define ERROR_DATABASE_DOES_NOT_EXIST                    1065
00296 #define ERROR_SERVICE_SPECIFIC_ERROR                     1066
00297 #define ERROR_PROCESS_ABORTED                            1067
00298 #define ERROR_SERVICE_DEPENDENCY_FAIL                    1068
00299 #define ERROR_SERVICE_LOGON_FAILED                       1069
00300 #define ERROR_SERVICE_START_HANG                         1070
00301 #define ERROR_INVALID_SERVICE_LOCK                       1071
00302 #define ERROR_SERVICE_MARKED_FOR_DELETE                  1072
00303 #define ERROR_SERVICE_EXISTS                             1073
00304 #define ERROR_ALREADY_RUNNING_LKG                        1074
00305 #define ERROR_SERVICE_DEPENDENCY_DELETED                 1075
00306 #define ERROR_BOOT_ALREADY_ACCEPTED                      1076
00307 #define ERROR_SERVICE_NEVER_STARTED                      1077
00308 #define ERROR_DUPLICATE_SERVICE_NAME                     1078
00309 #define ERROR_DIFFERENT_SERVICE_ACCOUNT                  1079
00310 #define ERROR_CANNOT_DETECT_DRIVER_FAILURE               1080
00311 #define ERROR_CANNOT_DETECT_PROCESS_ABORT                1081
00312 #define ERROR_NO_RECOVERY_PROGRAM                        1082
00313 #define ERROR_SERVICE_NOT_IN_EXE                         1083
00314 #define ERROR_END_OF_MEDIA                               1100
00315 #define ERROR_FILEMARK_DETECTED                          1101
00316 #define ERROR_BEGINNING_OF_MEDIA                         1102
00317 #define ERROR_SETMARK_DETECTED                           1103
00318 #define ERROR_NO_DATA_DETECTED                           1104
00319 #define ERROR_PARTITION_FAILURE                          1105
00320 #define ERROR_INVALID_BLOCK_LENGTH                       1106
00321 #define ERROR_DEVICE_NOT_PARTITIONED                     1107
00322 #define ERROR_UNABLE_TO_LOCK_MEDIA                       1108
00323 #define ERROR_UNABLE_TO_UNLOAD_MEDIA                     1109
00324 #define ERROR_MEDIA_CHANGED                              1110
00325 #define ERROR_BUS_RESET                                  1111
00326 #define ERROR_NO_MEDIA_IN_DRIVE                          1112
00327 #define ERROR_NO_UNICODE_TRANSLATION                     1113
00328 #define ERROR_DLL_INIT_FAILED                            1114
00329 #define ERROR_SHUTDOWN_IN_PROGRESS                       1115
00330 #define ERROR_NO_SHUTDOWN_IN_PROGRESS                    1116
00331 #define ERROR_IO_DEVICE                                  1117
00332 #define ERROR_SERIAL_NO_DEVICE                           1118
00333 #define ERROR_IRQ_BUSY                                   1119
```

```
00334 #define ERROR_MORE_WRITES                                1120
00335 #define ERROR_COUNTER_TIMEOUT                            1121
00336 #define ERROR_FLOPPY_ID_MARK_NOT_FOUND                   1122
00337 #define ERROR_FLOPPY_WRONG_CYLINDER                      1123
00338 #define ERROR_FLOPPY_UNKNOWN_ERROR                       1124
00339 #define ERROR_FLOPPY_BAD_REGISTERS                       1125
00340 #define ERROR_DISK_RECALIBRATE_FAILED                    1126
00341 #define ERROR_DISK_OPERATION_FAILED                      1127
00342 #define ERROR_DISK_RESET_FAILED                          1128
00343 #define ERROR_EOM_OVERFLOW                               1129
00344 #define ERROR_NOT_ENOUGH_SERVER_MEMORY                   1130
00345 #define ERROR_POSSIBLE_DEADLOCK                          1131
00346 #define ERROR_MAPPED_ALIGNMENT                           1132
00347 #define ERROR_SET_POWER_STATE_VETOED                     1140
00348 #define ERROR_SET_POWER_STATE_FAILED                     1141
00349 #define ERROR_TOO_MANY_LINKS                             1142
00350 #define ERROR_OLD_WIN_VERSION                            1150
00351 #define ERROR_APP_WRONG_OS                               1151
00352 #define ERROR_SINGLE_INSTANCE_APP                        1152
00353 #define ERROR_RMODE_APP                                  1153
00354 #define ERROR_INVALID_DLL                                1154
00355 #define ERROR_NO_ASSOCIATION                             1155
00356 #define ERROR_DDE_FAIL                                   1156
00357 #define ERROR_DLL_NOT_FOUND                              1157
00358 #define ERROR_NO_MORE_USER_HANDLES                       1158
00359 #define ERROR_MESSAGE_SYNC_ONLY                          1159
00360 #define ERROR_SOURCE_ELEMENT_EMPTY                       1160
00361 #define ERROR_DESTINATION_ELEMENT_FULL                   1161
00362 #define ERROR_ILLEGAL_ELEMENT_ADDRESS                    1162
00363 #define ERROR_MAGAZINE_NOT_PRESENT                       1163
00364 #define ERROR_DEVICE_REINITIALIZATION_NEEDED             1164
00365 #define ERROR_DEVICE_REQUIRES_CLEANING                   1165
00366 #define ERROR_DEVICE_DOOR_OPEN                           1166
00367 #define ERROR_DEVICE_NOT_CONNECTED                       1167
00368 #define ERROR_NOT_FOUND                                  1168
00369 #define ERROR_NO_MATCH                                   1169
00370 #define ERROR_SET_NOT_FOUND                              1170
00371 #define ERROR_POINT_NOT_FOUND                            1171
00372 #define ERROR_NO_TRACKING_SERVICE                        1172
00373 #define ERROR_NO_VOLUME_ID                               1173
00374 #define ERROR_UNABLE_TO_REMOVE_REPLACED                  1175
00375 #define ERROR_UNABLE_TO_MOVE_REPLACEMENT                 1176
00376 #define ERROR_UNABLE_TO_MOVE_REPLACEMENT_2               1177
00377 #define ERROR_JOURNAL_DELETE_IN_PROGRESS                 1178
00378 #define ERROR_JOURNAL_NOT_ACTIVE                         1179
00379 #define ERROR_POTENTIAL_FILE_FOUND                       1180
00380 #define ERROR_JOURNAL_ENTRY_DELETED                      1181
00381 #define ERROR_BAD_DEVICE                                 1200
00382 #define ERROR_CONNECTION_UNAVAIL                         1201
00383 #define ERROR_DEVICE_ALREADY_REMEMBERED                  1202
00384 #define ERROR_NO_NET_OR_BAD_PATH                         1203
00385 #define ERROR_BAD_PROVIDER                               1204
00386 #define ERROR_CANNOT_OPEN_PROFILE                        1205
00387 #define ERROR_BAD_PROFILE                                1206
00388 #define ERROR_NOT_CONTAINER                              1207
00389 #define ERROR_EXTENDED_ERROR                             1208
00390 #define ERROR_INVALID_GROUPNAME                          1209
00391 #define ERROR_INVALID_COMPUTERNAME                       1210
00392 #define ERROR_INVALID_EVENTNAME                          1211
00393 #define ERROR_INVALID_DOMAINNAME                         1212
00394 #define ERROR_INVALID_SERVICENAME                        1213
00395 #define ERROR_INVALID_NETNAME                            1214
00396 #define ERROR_INVALID_SHARENAME                          1215
00397 #define ERROR_INVALID_PASSWORDNAME                       1216
00398 #define ERROR_INVALID_MESSAGENAME                        1217
00399 #define ERROR_INVALID_MESSAGEDEST                        1218
00400 #define ERROR_SESSION_CREDENTIAL_CONFLICT                1219
00401 #define ERROR_REMOTE_SESSION_LIMIT_EXCEEDED              1220
00402 #define ERROR_DUP_DOMAINNAME                             1221
00403 #define ERROR_NO_NETWORK                                 1222
00404 #define ERROR_CANCELLED                                  1223
00405 #define ERROR_USER_MAPPED_FILE                           1224
00406 #define ERROR_CONNECTION_REFUSED                         1225
00407 #define ERROR_GRACEFUL_DISCONNECT                        1226
00408 #define ERROR_ADDRESS_ALREADY_ASSOCIATED                 1227
00409 #define ERROR_ADDRESS_NOT_ASSOCIATED                     1228
00410 #define ERROR_CONNECTION_INVALID                         1229
00411 #define ERROR_CONNECTION_ACTIVE                          1230
00412 #define ERROR_NETWORK_UNREACHABLE                        1231
00413 #define ERROR_HOST_UNREACHABLE                           1232
00414 #define ERROR_PROTOCOL_UNREACHABLE                       1233
00415 #define ERROR_PORT_UNREACHABLE                           1234
00416 #define ERROR_REQUEST_ABORTED                            1235
00417 #define ERROR_CONNECTION_ABORTED                         1236
00418 #define ERROR_RETRY                                      1237
00419 #define ERROR_CONNECTION_COUNT_LIMIT                     1238
00420 #define ERROR_LOGIN_TIME_RESTRICTION                     1239
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00421 #define ERROR_LOGIN_WKSTA_RESTRICTION                    1240
00422 #define ERROR_INCORRECT_ADDRESS                          1241
00423 #define ERROR_ALREADY_REGISTERED                         1242
00424 #define ERROR_SERVICE_NOT_FOUND                          1243
00425 #define ERROR_NOT_AUTHENTICATED                          1244
00426 #define ERROR_NOT_LOGGED_ON                              1245
00427 #define ERROR_CONTINUE                                   1246
00428 #define ERROR_ALREADY_INITIALIZED                        1247
00429 #define ERROR_NO_MORE_DEVICES                            1248
00430 #define ERROR_NO_SUCH_SITE                               1249
00431 #define ERROR_DOMAIN_CONTROLLER_EXISTS                   1250
00432 #define ERROR_ONLY_IF_CONNECTED                          1251
00433 #define ERROR_OVERRIDE_NOCHANGES                         1252
00434 #define ERROR_BAD_USER_PROFILE                           1253
00435 #define ERROR_NOT_SUPPORTED_ON_SBS                       1254
00436 #define ERROR_NOT_ALL_ASSIGNED                           1300
00437 #define ERROR_SOME_NOT_MAPPED                            1301
00438 #define ERROR_NO_QUOTAS_FOR_ACCOUNT                      1302
00439 #define ERROR_LOCAL_USER_SESSION_KEY                     1303
00440 #define ERROR_NULL_LM_PASSWORD                           1304
00441 #define ERROR_UNKNOWN_REVISION                           1305
00442 #define ERROR_REVISION_MISMATCH                          1306
00443 #define ERROR_INVALID_OWNER                              1307
00444 #define ERROR_INVALID_PRIMARY_GROUP                      1308
00445 #define ERROR_NO_IMPERSONATION_TOKEN                     1309
00446 #define ERROR_CANT_DISABLE_MANDATORY                     1310
00447 #define ERROR_NO_LOGON_SERVERS                           1311
00448 #define ERROR_NO_SUCH_LOGON_SESSION                      1312
00449 #define ERROR_NO_SUCH_PRIVILEGE                          1313
00450 #define ERROR_PRIVILEGE_NOT_HELD                         1314
00451 #define ERROR_INVALID_ACCOUNT_NAME                       1315
00452 #define ERROR_USER_EXISTS                                1316
00453 #define ERROR_NO_SUCH_USER                               1317
00454 #define ERROR_GROUP_EXISTS                               1318
00455 #define ERROR_NO_SUCH_GROUP                              1319
00456 #define ERROR_MEMBER_IN_GROUP                            1320
00457 #define ERROR_MEMBER_NOT_IN_GROUP                        1321
00458 #define ERROR_LAST_ADMIN                                 1322
00459 #define ERROR_WRONG_PASSWORD                             1323
00460 #define ERROR_ILL_FORMED_PASSWORD                        1324
00461 #define ERROR_PASSWORD_RESTRICTION                       1325
00462 #define ERROR_LOGON_FAILURE                              1326
00463 #define ERROR_ACCOUNT_RESTRICTION                        1327
00464 #define ERROR_INVALID_LOGON_HOURS                        1328
00465 #define ERROR_INVALID_WORKSTATION                        1329
00466 #define ERROR_PASSWORD_EXPIRED                           1330
00467 #define ERROR_ACCOUNT_DISABLED                           1331
00468 #define ERROR_NONE_MAPPED                                1332
00469 #define ERROR_TOO_MANY_LUIDS_REQUESTED                   1333
00470 #define ERROR_LUIDS_EXHAUSTED                            1334
00471 #define ERROR_INVALID_SUB_AUTHORITY                      1335
00472 #define ERROR_INVALID_ACL                                1336
00473 #define ERROR_INVALID_SID                                1337
00474 #define ERROR_INVALID_SECURITY_DESCR                     1338
00475 #define ERROR_BAD_INHERITANCE_ACL                        1340
00476 #define ERROR_SERVER_DISABLED                            1341
00477 #define ERROR_SERVER_NOT_DISABLED                        1342
00478 #define ERROR_INVALID_ID_AUTHORITY                       1343
00479 #define ERROR_ALLOTTED_SPACE_EXCEEDED                    1344
00480 #define ERROR_INVALID_GROUP_ATTRIBUTES                   1345
00481 #define ERROR_BAD_IMPERSONATION_LEVEL                    1346
00482 #define ERROR_CANT_OPEN_ANONYMOUS                        1347
00483 #define ERROR_BAD_VALIDATION_CLASS                       1348
00484 #define ERROR_BAD_TOKEN_TYPE                             1349
00485 #define ERROR_NO_SECURITY_ON_OBJECT                      1350
00486 #define ERROR_CANT_ACCESS_DOMAIN_INFO                    1351
00487 #define ERROR_INVALID_SERVER_STATE                       1352
00488 #define ERROR_INVALID_DOMAIN_STATE                       1353
00489 #define ERROR_INVALID_DOMAIN_ROLE                        1354
00490 #define ERROR_NO_SUCH_DOMAIN                             1355
00491 #define ERROR_DOMAIN_EXISTS                              1356
00492 #define ERROR_DOMAIN_LIMIT_EXCEEDED                      1357
00493 #define ERROR_INTERNAL_DB_CORRUPTION                     1358
00494 #define ERROR_INTERNAL_ERROR                             1359
00495 #define ERROR_GENERIC_NOT_MAPPED                         1360
00496 #define ERROR_BAD_DESCRIPTOR_FORMAT                      1361
00497 #define ERROR_NOT_LOGON_PROCESS                          1362
00498 #define ERROR_LOGON_SESSION_EXISTS                       1363
00499 #define ERROR_NO_SUCH_PACKAGE                            1364
00500 #define ERROR_BAD_LOGON_SESSION_STATE                    1365
00501 #define ERROR_LOGON_SESSION_COLLISION                    1366
00502 #define ERROR_INVALID_LOGON_TYPE                         1367
00503 #define ERROR_CANNOT_IMPERSONATE                         1368
00504 #define ERROR_RXACT_INVALID_STATE                        1369
00505 #define ERROR_RXACT_COMMIT_FAILURE                       1370
00506 #define ERROR_SPECIAL_ACCOUNT                            1371
00507 #define ERROR_SPECIAL_GROUP                              1372
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00508 #define ERROR_SPECIAL_USER                                1373
00509 #define ERROR_MEMBERS_PRIMARY_GROUP                       1374
00510 #define ERROR_TOKEN_ALREADY_IN_USE                        1375
00511 #define ERROR_NO_SUCH_ALIAS                               1376
00512 #define ERROR_MEMBER_NOT_IN_ALIAS                         1377
00513 #define ERROR_MEMBER_IN_ALIAS                             1378
00514 #define ERROR_ALIAS_EXISTS                                1379
00515 #define ERROR_LOGON_NOT_GRANTED                           1380
00516 #define ERROR_TOO_MANY_SECRETS                            1381
00517 #define ERROR_SECRET_TOO_LONG                             1382
00518 #define ERROR_INTERNAL_DB_ERROR                           1383
00519 #define ERROR_TOO_MANY_CONTEXT_IDS                        1384
00520 #define ERROR_LOGON_TYPE_NOT_GRANTED                      1385
00521 #define ERROR_NT_CROSS_ENCRYPTION_REQUIRED                1386
00522 #define ERROR_NO_SUCH_MEMBER                              1387
00523 #define ERROR_INVALID_MEMBER                              1388
00524 #define ERROR_TOO_MANY_SIDS                               1389
00525 #define ERROR_LM_CROSS_ENCRYPTION_REQUIRED                1390
00526 #define ERROR_NO_INHERITANCE                              1391
00527 #define ERROR_FILE_CORRUPT                                1392
00528 #define ERROR_DISK_CORRUPT                                1393
00529 #define ERROR_NO_USER_SESSION_KEY                         1394
00530 #define ERROR_LICENSE_QUOTA_EXCEEDED                      1395
00531 #define ERROR_WRONG_TARGET_NAME                           1396
00532 #define ERROR_MUTUAL_AUTH_FAILED                          1397
00533 #define ERROR_TIME_SKEW                                   1398
00534 #define ERROR_INVALID_WINDOW_HANDLE                       1400
00535 #define ERROR_INVALID_MENU_HANDLE                         1401
00536 #define ERROR_INVALID_CURSOR_HANDLE                       1402
00537 #define ERROR_INVALID_ACCEL_HANDLE                        1403
00538 #define ERROR_INVALID_HOOK_HANDLE                         1404
00539 #define ERROR_INVALID_DWP_HANDLE                          1405
00540 #define ERROR_TLW_WITH_WSCHILD                            1406
00541 #define ERROR_CANNOT_FIND_WND_CLASS                       1407
00542 #define ERROR_WINDOW_OF_OTHER_THREAD                      1408
00543 #define ERROR_HOTKEY_ALREADY_REGISTERED                   1409
00544 #define ERROR_CLASS_ALREADY_EXISTS                        1410
00545 #define ERROR_CLASS_DOES_NOT_EXIST                        1411
00546 #define ERROR_CLASS_HAS_WINDOWS                           1412
00547 #define ERROR_INVALID_INDEX                               1413
00548 #define ERROR_INVALID_ICON_HANDLE                         1414
00549 #define ERROR_PRIVATE_DIALOG_INDEX                        1415
00550 #define ERROR_LISTBOX_ID_NOT_FOUND                        1416
00551 #define ERROR_NO_WILDCARD_CHARACTERS                      1417
00552 #define ERROR_CLIPBOARD_NOT_OPEN                          1418
00553 #define ERROR_HOTKEY_NOT_REGISTERED                       1419
00554 #define ERROR_WINDOW_NOT_DIALOG                           1420
00555 #define ERROR_CONTROL_ID_NOT_FOUND                        1421
00556 #define ERROR_INVALID_COMBOBOX_MESSAGE                    1422
00557 #define ERROR_WINDOW_NOT_COMBOBOX                         1423
00558 #define ERROR_INVALID_EDIT_HEIGHT                         1424
00559 #define ERROR_DC_NOT_FOUND                                1425
00560 #define ERROR_INVALID_HOOK_FILTER                         1426
00561 #define ERROR_INVALID_FILTER_PROC                         1427
00562 #define ERROR_HOOK_NEEDS_HMOD                             1428
00563 #define ERROR_GLOBAL_ONLY_HOOK                            1429
00564 #define ERROR_JOURNAL_HOOK_SET                            1430
00565 #define ERROR_HOOK_NOT_INSTALLED                          1431
00566 #define ERROR_INVALID_LB_MESSAGE                          1432
00567 #define ERROR_SETCOUNT_ON_BAD_LB                          1433
00568 #define ERROR_LB_WITHOUT_TABSTOPS                         1434
00569 #define ERROR_DESTROY_OBJECT_OF_OTHER_THREAD              1435
00570 #define ERROR_CHILD_WINDOW_MENU                           1436
00571 #define ERROR_NO_SYSTEM_MENU                              1437
00572 #define ERROR_INVALID_MSGBOX_STYLE                        1438
00573 #define ERROR_INVALID_SPI_VALUE                           1439
00574 #define ERROR_SCREEN_ALREADY_LOCKED                       1440
00575 #define ERROR_HWNDS_HAVE_DIFF_PARENT                      1441
00576 #define ERROR_NOT_CHILD_WINDOW                            1442
00577 #define ERROR_INVALID_GW_COMMAND                          1443
00578 #define ERROR_INVALID_THREAD_ID                           1444
00579 #define ERROR_NON_MDICHILD_WINDOW                         1445
00580 #define ERROR_POPUP_ALREADY_ACTIVE                        1446
00581 #define ERROR_NO_SCROLLBARS                               1447
00582 #define ERROR_INVALID_SCROLLBAR_RANGE                     1448
00583 #define ERROR_INVALID_SHOWWIN_COMMAND                     1449
00584 #define ERROR_NO_SYSTEM_RESOURCES                         1450
00585 #define ERROR_NONPAGED_SYSTEM_RESOURCES                   1451
00586 #define ERROR_PAGED_SYSTEM_RESOURCES                      1452
00587 #define ERROR_WORKING_SET_QUOTA                           1453
00588 #define ERROR_PAGEFILE_QUOTA                              1454
00589 #define ERROR_COMMITMENT_LIMIT                            1455
00590 #define ERROR_MENU_ITEM_NOT_FOUND                         1456
00591 #define ERROR_INVALID_KEYBOARD_HANDLE                     1457
00592 #define ERROR_HOOK_TYPE_NOT_ALLOWED                       1458
00593 #define ERROR_REQUIRES_INTERACTIVE_WINDOWSTATION          1459
00594 #define ERROR_TIMEOUT                                     1460
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00595 #define ERROR_INVALID_MONITOR_HANDLE                     1461
00596 #define ERROR_EVENTLOG_FILE_CORRUPT                      1500
00597 #define ERROR_EVENTLOG_CANT_START                        1501
00598 #define ERROR_LOG_FILE_FULL                              1502
00599 #define ERROR_EVENTLOG_FILE_CHANGED                      1503
00600 #define ERROR_INSTALL_SERVICE_FAILURE                    1601
00601 #define ERROR_INSTALL_USEREXIT                           1602
00602 #define ERROR_INSTALL_FAILURE                            1603
00603 #define ERROR_INSTALL_SUSPEND                            1604
00604 #define ERROR_UNKNOWN_PRODUCT                            1605
00605 #define ERROR_UNKNOWN_FEATURE                            1606
00606 #define ERROR_UNKNOWN_COMPONENT                          1607
00607 #define ERROR_UNKNOWN_PROPERTY                           1608
00608 #define ERROR_INVALID_HANDLE_STATE                       1609
00609 #define ERROR_BAD_CONFIGURATION                          1610
00610 #define ERROR_INDEX_ABSENT                               1611
00611 #define ERROR_INSTALL_SOURCE_ABSENT                      1612
00612 #define ERROR_INSTALL_PACKAGE_VERSION                    1613
00613 #define ERROR_PRODUCT_UNINSTALLED                        1614
00614 #define ERROR_BAD_QUERY_SYNTAX                           1615
00615 #define ERROR_INVALID_FIELD                              1616
00616 #define ERROR_DEVICE_REMOVED                             1617
00617 #define ERROR_INSTALL_ALREADY_RUNNING                    1618
00618 #define ERROR_INSTALL_PACKAGE_OPEN_FAILED                1619
00619 #define ERROR_INSTALL_PACKAGE_INVALID                    1620
00620 #define ERROR_INSTALL_UI_FAILURE                         1621
00621 #define ERROR_INSTALL_LOG_FAILURE                        1622
00622 #define ERROR_INSTALL_LANGUAGE_UNSUPPORTED               1623
00623 #define ERROR_INSTALL_TRANSFORM_FAILURE                  1624
00624 #define ERROR_INSTALL_PACKAGE_REJECTED                   1625
00625 #define ERROR_FUNCTION_NOT_CALLED                        1626
00626 #define ERROR_FUNCTION_FAILED                            1627
00627 #define ERROR_INVALID_TABLE                              1628
00628 #define ERROR_DATATYPE_MISMATCH                          1629
00629 #define ERROR_UNSUPPORTED_TYPE                           1630
00630 #define ERROR_CREATE_FAILED                              1631
00631 #define ERROR_INSTALL_TEMP_UNWRITABLE                    1632
00632 #define ERROR_INSTALL_PLATFORM_UNSUPPORTED               1633
00633 #define ERROR_INSTALL_NOTUSED                            1634
00634 #define ERROR_PATCH_PACKAGE_OPEN_FAILED                  1635
00635 #define ERROR_PATCH_PACKAGE_INVALID                      1636
00636 #define ERROR_PATCH_PACKAGE_UNSUPPORTED                  1637
00637 #define ERROR_PRODUCT_VERSION                            1638
00638 #define ERROR_INVALID_COMMAND_LINE                       1639
00639 #define ERROR_INSTALL_REMOTE_DISALLOWED                  1640
00640 #define ERROR_SUCCESS_REBOOT_INITIATED                   1641
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00642 #define RPC_S_WRONG_KIND_OF_BINDING                      1701
00643 #define RPC_S_INVALID_BINDING                            1702
00644 #define RPC_S_PROTSEQ_NOT_SUPPORTED                      1703
00645 #define RPC_S_INVALID_RPC_PROTSEQ                        1704
00646 #define RPC_S_INVALID_STRING_UUID                        1705
00647 #define RPC_S_INVALID_ENDPOINT_FORMAT                    1706
00648 #define RPC_S_INVALID_NET_ADDR                           1707
00649 #define RPC_S_NO_ENDPOINT_FOUND                          1708
00650 #define RPC_S_INVALID_TIMEOUT                            1709
00651 #define RPC_S_OBJECT_NOT_FOUND                           1710
00652 #define RPC_S_ALREADY_REGISTERED                         1711
00653 #define RPC_S_TYPE_ALREADY_REGISTERED                    1712
00654 #define RPC_S_ALREADY_LISTENING                          1713
00655 #define RPC_S_NO_PROTSEQS_REGISTERED                     1714
00656 #define RPC_S_NOT_LISTENING                              1715
00657 #define RPC_S_UNKNOWN_MGR_TYPE                           1716
00658 #define RPC_S_UNKNOWN_IF                                 1717
00659 #define RPC_S_NO_BINDINGS                                1718
00660 #define RPC_S_NO_PROTSEQS                                1719
00661 #define RPC_S_CANT_CREATE_ENDPOINT                       1720
00662 #define RPC_S_OUT_OF_RESOURCES                           1721
00663 #define RPC_S_SERVER_UNAVAILABLE                         1722
00664 #define RPC_S_SERVER_TOO_BUSY                            1723
00665 #define RPC_S_INVALID_NETWORK_OPTIONS                    1724
00666 #define RPC_S_NO_CALL_ACTIVE                             1725
00667 #define RPC_S_CALL_FAILED                                1726
00668 #define RPC_S_CALL_FAILED_DNE                            1727
00669 #define RPC_S_PROTOCOL_ERROR                             1728
00670 #define RPC_S_UNSUPPORTED_TRANS_SYN                      1730
00671 #define RPC_S_UNSUPPORTED_TYPE                           1732
00672 #define RPC_S_INVALID_TAG                                1733
00673 #define RPC_S_INVALID_BOUND                              1734
00674 #define RPC_S_NO_ENTRY_NAME                              1735
00675 #define RPC_S_INVALID_NAME_SYNTAX                        1736
00676 #define RPC_S_UNSUPPORTED_NAME_SYNTAX                    1737
00677 #define RPC_S_UUID_NO_ADDRESS                            1739
00678 #define RPC_S_DUPLICATE_ENDPOINT                         1740
00679 #define RPC_S_UNKNOWN_AUTHN_TYPE                         1741
00680 #define RPC_S_MAX_CALLS_TOO_SMALL                        1742
00681 #define RPC_S_STRING_TOO_LONG                            1743
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00683 #define RPC_S_PROCNUM_OUT_OF_RANGE                       1745
00684 #define RPC_S_BINDING_HAS_NO_AUTH                        1746
00685 #define RPC_S_UNKNOWN_AUTHN_SERVICE                      1747
00686 #define RPC_S_UNKNOWN_AUTHN_LEVEL                        1748
00687 #define RPC_S_INVALID_AUTH_IDENTITY                      1749
00688 #define RPC_S_UNKNOWN_AUTHZ_SERVICE                      1750
00689 #define EPT_S_INVALID_ENTRY                              1751
00690 #define EPT_S_CANT_PERFORM_OP                            1752
00691 #define EPT_S_NOT_REGISTERED                             1753
00692 #define RPC_S_NOTHING_TO_EXPORT                          1754
00693 #define RPC_S_INCOMPLETE_NAME                            1755
00694 #define RPC_S_INVALID_VERS_OPTION                        1756
00695 #define RPC_S_NO_MORE_MEMBERS                            1757
00696 #define RPC_S_NOT_ALL_OBJS_UNEXPORTED                    1758
00697 #define RPC_S_INTERFACE_NOT_FOUND                        1759
00698 #define RPC_S_ENTRY_ALREADY_EXISTS                       1760
00699 #define RPC_S_ENTRY_NOT_FOUND                            1761
00700 #define RPC_S_NAME_SERVICE_UNAVAILABLE                   1762
00701 #define RPC_S_INVALID_NAF_ID                             1763
00702 #define RPC_S_CANNOT_SUPPORT                             1764
00703 #define RPC_S_NO_CONTEXT_AVAILABLE                       1765
00704 #define RPC_S_INTERNAL_ERROR                             1766
00705 #define RPC_S_ZERO_DIVIDE                                1767
00706 #define RPC_S_ADDRESS_ERROR                              1768
00707 #define RPC_S_FP_DIV_ZERO                                1769
00708 #define RPC_S_FP_UNDERFLOW                               1770
00709 #define RPC_S_FP_OVERFLOW                                1771
00710 #define RPC_X_NO_MORE_ENTRIES                            1772
00711 #define RPC_X_SS_CHAR_TRANS_OPEN_FAIL                    1773
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00713 #define RPC_X_SS_IN_NULL_CONTEXT                         1775
00714 #define RPC_X_SS_CONTEXT_DAMAGED                         1777
00715 #define RPC_X_SS_HANDLES_MISMATCH                        1778
00716 #define RPC_X_SS_CANNOT_GET_CALL_HANDLE                  1779
00717 #define RPC_X_NULL_REF_POINTER                           1780
00718 #define RPC_X_ENUM_VALUE_OUT_OF_RANGE                    1781
00719 #define RPC_X_BYTE_COUNT_TOO_SMALL                       1782
00720 #define RPC_X_BAD_STUB_DATA                              1783
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00722 #define ERROR_UNRECOGNIZED_MEDIA                         1785
00723 #define ERROR_NO_TRUST_LSA_SECRET                        1786
00724 #define ERROR_NO_TRUST_SAM_ACCOUNT                       1787
00725 #define ERROR_TRUSTED_DOMAIN_FAILURE                     1788
00726 #define ERROR_TRUSTED_RELATIONSHIP_FAILURE               1789
00727 #define ERROR_TRUST_FAILURE                              1790
00728 #define RPC_S_CALL_IN_PROGRESS                           1791
00729 #define ERROR_NETLOGON_NOT_STARTED                       1792
00730 #define ERROR_ACCOUNT_EXPIRED                            1793
00731 #define ERROR_REDIRECTOR_HAS_OPEN_HANDLES                1794
00732 #define ERROR_PRINTER_DRIVER_ALREADY_INSTALLED           1795
00733 #define ERROR_UNKNOWN_PORT                               1796
00734 #define ERROR_UNKNOWN_PRINTER_DRIVER                     1797
00735 #define ERROR_UNKNOWN_PRINTPROCESSOR                     1798
00736 #define ERROR_INVALID_SEPARATOR_FILE                     1799
00737 #define ERROR_INVALID_PRIORITY                           1800
00738 #define ERROR_INVALID_PRINTER_NAME                       1801
00739 #define ERROR_PRINTER_ALREADY_EXISTS                     1802
00740 #define ERROR_INVALID_PRINTER_COMMAND                    1803
00741 #define ERROR_INVALID_DATATYPE                           1804
00742 #define ERROR_INVALID_ENVIRONMENT                        1805
00743 #define RPC_S_NO_MORE_BINDINGS                           1806
00744 #define ERROR_NOLOGON_INTERDOMAIN_TRUST_ACCOUNT          1807
00745 #define ERROR_NOLOGON_WORKSTATION_TRUST_ACCOUNT          1808
00746 #define ERROR_NOLOGON_SERVER_TRUST_ACCOUNT               1809
00747 #define ERROR_DOMAIN_TRUST_INCONSISTENT                  1810
00748 #define ERROR_SERVER_HAS_OPEN_HANDLES                    1811
00749 #define ERROR_RESOURCE_DATA_NOT_FOUND                    1812
00750 #define ERROR_RESOURCE_TYPE_NOT_FOUND                    1813
00751 #define ERROR_RESOURCE_NAME_NOT_FOUND                    1814
00752 #define ERROR_RESOURCE_LANG_NOT_FOUND                    1815
00753 #define ERROR_NOT_ENOUGH_QUOTA                           1816
00754 #define RPC_S_NO_INTERFACES                              1817
00755 #define RPC_S_CALL_CANCELLED                             1818
00756 #define RPC_S_BINDING_INCOMPLETE                         1819
00757 #define RPC_S_COMM_FAILURE                               1820
00758 #define RPC_S_UNSUPPORTED_AUTHN_LEVEL                    1821
00759 #define RPC_S_NO_PRINC_NAME                              1822
00760 #define RPC_S_NOT_RPC_ERROR                              1823
00761 #define RPC_S_UUID_LOCAL_ONLY                            1824
00762 #define RPC_S_SEC_PKG_ERROR                              1825
00763 #define RPC_S_NOT_CANCELLED                              1826
00764 #define RPC_X_INVALID_ES_ACTION                          1827
00765 #define RPC_X_WRONG_ES_VERSION                           1828
00766 #define RPC_X_WRONG_STUB_VERSION                         1829
00767 #define RPC_X_INVALID_PIPE_OBJECT                        1830
00768 #define RPC_X_WRONG_PIPE_ORDER                           1831
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00770 #define RPC_S_GROUP_MEMBER_NOT_FOUND                     1898
00771 #define EPT_S_CANT_CREATE                                1899
00772 #define RPC_S_INVALID_OBJECT                             1900
00773 #define ERROR_INVALID_TIME                               1901
00774 #define ERROR_INVALID_FORM_NAME                          1902
00775 #define ERROR_INVALID_FORM_SIZE                          1903
00776 #define ERROR_ALREADY_WAITING                            1904
00777 #define ERROR_PRINTER_DELETED                            1905
00778 #define ERROR_INVALID_PRINTER_STATE                      1906
00779 #define ERROR_PASSWORD_MUST_CHANGE                       1907
00780 #define ERROR_DOMAIN_CONTROLLER_NOT_FOUND                1908
00781 #define ERROR_ACCOUNT_LOCKED_OUT                         1909
00782 #define OR_INVALID_OXID                                  1910
00783 #define OR_INVALID_OID                                   1911
00784 #define OR_INVALID_SET                                   1912
00785 #define RPC_S_SEND_INCOMPLETE                            1913
00786 #define RPC_S_INVALID_ASYNC_HANDLE                       1914
00787 #define RPC_S_INVALID_ASYNC_CALL                         1915
00788 #define RPC_X_PIPE_CLOSED                                1916
00789 #define RPC_X_PIPE_DISCIPLINE_ERROR                      1917
00790 #define RPC_X_PIPE_EMPTY                                 1918
00791 #define ERROR_NO_SITENAME                                1919
00792 #define ERROR_CANT_ACCESS_FILE                           1920
00793 #define ERROR_CANT_RESOLVE_FILENAME                      1921
00794 #define RPC_S_ENTRY_TYPE_MISMATCH                        1922
00795 #define RPC_S_NOT_ALL_OBJS_EXPORTED                      1923
00796 #define RPC_S_INTERFACE_NOT_EXPORTED                     1924
00797 #define RPC_S_PROFILE_NOT_ADDED                          1925
00798 #define RPC_S_PRF_ELT_NOT_ADDED                          1926
00799 #define RPC_S_PRF_ELT_NOT_REMOVED                        1927
00800 #define RPC_S_GRP_ELT_NOT_ADDED                          1928
00801 #define RPC_S_GRP_ELT_NOT_REMOVED                        1929
00802 #define ERROR_INVALID_PIXEL_FORMAT                       2000
00803 #define ERROR_BAD_DRIVER                                 2001
00804 #define ERROR_INVALID_WINDOW_STYLE                       2002
00805 #define ERROR_METAFILE_NOT_SUPPORTED                     2003
00806 #define ERROR_TRANSFORM_NOT_SUPPORTED                    2004
00807 #define ERROR_CLIPPING_NOT_SUPPORTED                     2005
00808 #define ERROR_INVALID_CMM                                2010
00809 #define ERROR_INVALID_PROFILE                            2011
00810 #define ERROR_TAG_NOT_FOUND                              2012
00811 #define ERROR_TAG_NOT_PRESENT                            2013
00812 #define ERROR_DUPLICATE_TAG                              2014
00813 #define ERROR_PROFILE_NOT_ASSOCIATED_WITH_DEVICE         2015
00814 #define ERROR_PROFILE_NOT_FOUND                          2016
00815 #define ERROR_INVALID_COLORSPACE                         2017
00816 #define ERROR_ICM_NOT_ENABLED                            2018
00817 #define ERROR_DELETING_ICM_XFORM                         2019
00818 #define ERROR_INVALID_TRANSFORM                          2020
00819 #define ERROR_COLORSPACE_MISMATCH                        2021
00820 #define ERROR_INVALID_COLORINDEX                         2022
00821 #define ERROR_CONNECTED_OTHER_PASSWORD                   2108
00822 #define ERROR_BAD_USERNAME                               2202
00823 #define ERROR_NOT_CONNECTED                              2250
00824 #define ERROR_OPEN_FILES                                 2401
00825 #define ERROR_ACTIVE_CONNECTIONS                         2402
00826 #define ERROR_DEVICE_IN_USE                              2404
00827 #define ERROR_UNKNOWN_PRINT_MONITOR                      3000
00828 #define ERROR_PRINTER_DRIVER_IN_USE                      3001
00829 #define ERROR_SPOOL_FILE_NOT_FOUND                       3002
00830 #define ERROR_SPL_NO_STARTDOC                            3003
00831 #define ERROR_SPL_NO_ADDJOB                              3004
00832 #define ERROR_PRINT_PROCESSOR_ALREADY_INSTALLED          3005
00833 #define ERROR_PRINT_MONITOR_ALREADY_INSTALLED            3006
00834 #define ERROR_INVALID_PRINT_MONITOR                      3007
00835 #define ERROR_PRINT_MONITOR_IN_USE                       3008
00836 #define ERROR_PRINTER_HAS_JOBS_QUEUED                    3009
00837 #define ERROR_SUCCESS_REBOOT_REQUIRED                    3010
00838 #define ERROR_SUCCESS_RESTART_REQUIRED                   3011
00839 #define ERROR_PRINTER_NOT_FOUND                          3012
00840 #define ERROR_WINS_INTERNAL                              4000
00841 #define ERROR_CAN_NOT_DEL_LOCAL_WINS                     4001
00842 #define ERROR_STATIC_INIT                                4002
00843 #define ERROR_INC_BACKUP                                 4003
00844 #define ERROR_FULL_BACKUP                                4004
00845 #define ERROR_REC_NON_EXISTENT                           4005
00846 #define ERROR_RPL_NOT_ALLOWED                            4006
00847 #define ERROR_DHCP_ADDRESS_CONFLICT                      4100
00848 #define ERROR_WMI_GUID_NOT_FOUND                         4200
00849 #define ERROR_WMI_INSTANCE_NOT_FOUND                     4201
00850 #define ERROR_WMI_ITEMID_NOT_FOUND                       4202
00851 #define ERROR_WMI_TRY_AGAIN                              4203
00852 #define ERROR_WMI_DP_NOT_FOUND                           4204
00853 #define ERROR_WMI_UNRESOLVED_INSTANCE_REF                4205
00854 #define ERROR_WMI_ALREADY_ENABLED                        4206
00855 #define ERROR_WMI_GUID_DISCONNECTED                      4207
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00856 #define ERROR_WMI_SERVER_UNAVAILABLE                    4208
00857 #define ERROR_WMI_DP_FAILED                             4209
00858 #define ERROR_WMI_INVALID_MOF                           4210
00859 #define ERROR_WMI_INVALID_REGINFO                       4211
00860 #define ERROR_WMI_ALREADY_DISABLED                      4212
00861 #define ERROR_WMI_READ_ONLY                             4213
00862 #define ERROR_WMI_SET_FAILURE                           4214
00863 #define ERROR_INVALID_MEDIA                             4300
00864 #define ERROR_INVALID_LIBRARY                           4301
00865 #define ERROR_INVALID_MEDIA_POOL                        4302
00866 #define ERROR_DRIVE_MEDIA_MISMATCH                      4303
00867 #define ERROR_MEDIA_OFFLINE                             4304
00868 #define ERROR_LIBRARY_OFFLINE                           4305
00869 #define ERROR_EMPTY                                     4306
00870 #define ERROR_NOT_EMPTY                                 4307
00871 #define ERROR_MEDIA_UNAVAILABLE                         4308
00872 #define ERROR_RESOURCE_DISABLED                         4309
00873 #define ERROR_INVALID_CLEANER                           4310
00874 #define ERROR_UNABLE_TO_CLEAN                           4311
00875 #define ERROR_OBJECT_NOT_FOUND                          4312
00876 #define ERROR_DATABASE_FAILURE                          4313
00877 #define ERROR_DATABASE_FULL                             4314
00878 #define ERROR_MEDIA_INCOMPATIBLE                        4315
00879 #define ERROR_RESOURCE_NOT_PRESENT                      4316
00880 #define ERROR_INVALID_OPERATION                         4317
00881 #define ERROR_MEDIA_NOT_AVAILABLE                       4318
00882 #define ERROR_DEVICE_NOT_AVAILABLE                      4319
00883 #define ERROR_REQUEST_REFUSED                           4320
00884 #define ERROR_INVALID_DRIVE_OBJECT                      4321
00885 #define ERROR_LIBRARY_FULL                              4322
00886 #define ERROR_MEDIUM_NOT_ACCESSIBLE                     4323
00887 #define ERROR_UNABLE_TO_LOAD_MEDIUM                     4324
00888 #define ERROR_UNABLE_TO_INVENTORY_DRIVE                 4325
00889 #define ERROR_UNABLE_TO_INVENTORY_SLOT                  4326
00890 #define ERROR_UNABLE_TO_INVENTORY_TRANSPORT             4327
00891 #define ERROR_TRANSPORT_FULL                            4328
00892 #define ERROR_CONTROLLING_IEPORT                        4329
00893 #define ERROR_UNABLE_TO_EJECT_MOUNTED_MEDIA             4330
00894 #define ERROR_CLEANER_SLOT_SET                          4331
00895 #define ERROR_CLEANER_SLOT_NOT_SET                      4332
00896 #define ERROR_CLEANER_CARTRIDGE_SPENT                   4333
00897 #define ERROR_UNEXPECTED_OMID                           4334
00898 #define ERROR_CANT_DELETE_LAST_ITEM                     4335
00899 #define ERROR_MESSAGE_EXCEEDS_MAX_SIZE                  4336
00900 #define ERROR_VOLUME_CONTAINS_SYS_FILES                 4337
00901 #define ERROR_INDIGENOUS_TYPE                           4338
00902 #define ERROR_NO_SUPPORTING_DRIVES                      4339
00903 #define ERROR_FILE_OFFLINE                              4350
00904 #define ERROR_REMOTE_STORAGE_NOT_ACTIVE                 4351
00905 #define ERROR_REMOTE_STORAGE_MEDIA_ERROR                4352
00906 #define ERROR_NOT_A_REPARSE_POINT                       4390
00907 #define ERROR_REPARSE_ATTRIBUTE_CONFLICT                4391
00908 #define ERROR_INVALID_REPARSE_DATA                      4392
00909 #define ERROR_REPARSE_TAG_INVALID                       4393
00910 #define ERROR_REPARSE_TAG_MISMATCH                      4394
00911 #define ERROR_VOLUME_NOT_SIS_ENABLED                    4500
00912 #define ERROR_DEPENDENT_RESOURCE_EXISTS                 5001
00913 #define ERROR_DEPENDENCY_NOT_FOUND                      5002
00914 #define ERROR_DEPENDENCY_ALREADY_EXISTS                 5003
00915 #define ERROR_RESOURCE_NOT_ONLINE                       5004
00916 #define ERROR_HOST_NODE_NOT_AVAILABLE                   5005
00917 #define ERROR_RESOURCE_NOT_AVAILABLE                    5006
00918 #define ERROR_RESOURCE_NOT_FOUND                        5007
00919 #define ERROR_SHUTDOWN_CLUSTER                          5008
00920 #define ERROR_CANT_EVICT_ACTIVE_NODE                    5009
00921 #define ERROR_OBJECT_ALREADY_EXISTS                     5010
00922 #define ERROR_OBJECT_IN_LIST                            5011
00923 #define ERROR_GROUP_NOT_AVAILABLE                       5012
00924 #define ERROR_GROUP_NOT_FOUND                           5013
00925 #define ERROR_GROUP_NOT_ONLINE                          5014
00926 #define ERROR_HOST_NODE_NOT_RESOURCE_OWNER              5015
00927 #define ERROR_HOST_NODE_NOT_GROUP_OWNER                 5016
00928 #define ERROR_RESMON_CREATE_FAILED                      5017
00929 #define ERROR_RESMON_ONLINE_FAILED                      5018
00930 #define ERROR_RESOURCE_ONLINE                           5019
00931 #define ERROR_QUORUM_RESOURCE                           5020
00932 #define ERROR_NOT_QUORUM_CAPABLE                        5021
00933 #define ERROR_CLUSTER_SHUTTING_DOWN                     5022
00934 #define ERROR_INVALID_STATE                             5023
00935 #define ERROR_RESOURCE_PROPERTIES_STORED                5024
00936 #define ERROR_NOT_QUORUM_CLASS                          5025
00937 #define ERROR_CORE_RESOURCE                             5026
00938 #define ERROR_QUORUM_RESOURCE_ONLINE_FAILED             5027
00939 #define ERROR_QUORUMLOG_OPEN_FAILED                     5028
00940 #define ERROR_CLUSTERLOG_CORRUPT                        5029
00941 #define ERROR_CLUSTERLOG_RECORD_EXCEEDS_MAXSIZE         5030
00942 #define ERROR_CLUSTERLOG_EXCEEDS_MAXSIZE                5031
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00943 #define ERROR_CLUSTERLOG_CHKPOINT_NOT_FOUND              5032
00944 #define ERROR_CLUSTERLOG_NOT_ENOUGH_SPACE                5033
00945 #define ERROR_QUORUM_OWNER_ALIVE                         5034
00946 #define ERROR_NETWORK_NOT_AVAILABLE                      5035
00947 #define ERROR_NODE_NOT_AVAILABLE                         5036
00948 #define ERROR_ALL_NODES_NOT_AVAILABLE                    5037
00949 #define ERROR_RESOURCE_FAILED                            5038
00950 #define ERROR_CLUSTER_INVALID_NODE                       5039
00951 #define ERROR_CLUSTER_NODE_EXISTS                        5040
00952 #define ERROR_CLUSTER_JOIN_IN_PROGRESS                   5041
00953 #define ERROR_CLUSTER_NODE_NOT_FOUND                     5042
00954 #define ERROR_CLUSTER_LOCAL_NODE_NOT_FOUND               5043
00955 #define ERROR_CLUSTER_NETWORK_EXISTS                     5044
00956 #define ERROR_CLUSTER_NETWORK_NOT_FOUND                  5045
00957 #define ERROR_CLUSTER_NETINTERFACE_EXISTS                5046
00958 #define ERROR_CLUSTER_NETINTERFACE_NOT_FOUND             5047
00959 #define ERROR_CLUSTER_INVALID_REQUEST                    5048
00960 #define ERROR_CLUSTER_INVALID_NETWORK_PROVIDER           5049
00961 #define ERROR_CLUSTER_NODE_DOWN                          5050
00962 #define ERROR_CLUSTER_NODE_UNREACHABLE                   5051
00963 #define ERROR_CLUSTER_NODE_NOT_MEMBER                    5052
00964 #define ERROR_CLUSTER_JOIN_NOT_IN_PROGRESS               5053
00965 #define ERROR_CLUSTER_INVALID_NETWORK                    5054
00966 #define ERROR_CLUSTER_NODE_UP                            5056
00967 #define ERROR_CLUSTER_IPADDR_IN_USE                      5057
00968 #define ERROR_CLUSTER_NODE_NOT_PAUSED                    5058
00969 #define ERROR_CLUSTER_NO_SECURITY_CONTEXT                5059
00970 #define ERROR_CLUSTER_NETWORK_NOT_INTERNAL               5060
00971 #define ERROR_CLUSTER_NODE_ALREADY_UP                    5061
00972 #define ERROR_CLUSTER_NODE_ALREADY_DOWN                  5062
00973 #define ERROR_CLUSTER_NETWORK_ALREADY_ONLINE             5063
00974 #define ERROR_CLUSTER_NETWORK_ALREADY_OFFLINE            5064
00975 #define ERROR_CLUSTER_NODE_ALREADY_MEMBER                5065
00976 #define ERROR_CLUSTER_LAST_INTERNAL_NETWORK              5066
00977 #define ERROR_CLUSTER_NETWORK_HAS_DEPENDENTS             5067
00978 #define ERROR_INVALID_OPERATION_ON_QUORUM                5068
00979 #define ERROR_DEPENDENCY_NOT_ALLOWED                     5069
00980 #define ERROR_CLUSTER_NODE_PAUSED                        5070
00981 #define ERROR_NODE_CANT_HOST_RESOURCE                    5071
00982 #define ERROR_CLUSTER_NODE_NOT_READY                     5072
00983 #define ERROR_CLUSTER_NODE_SHUTTING_DOWN                 5073
00984 #define ERROR_CLUSTER_JOIN_ABORTED                       5074
00985 #define ERROR_CLUSTER_INCOMPATIBLE_VERSIONS              5075
00986 #define ERROR_CLUSTER_MAXNUM_OF_RESOURCES_EXCEEDED       5076
00987 #define ERROR_CLUSTER_SYSTEM_CONFIG_CHANGED              5077
00988 #define ERROR_CLUSTER_RESOURCE_TYPE_NOT_FOUND            5078
00989 #define ERROR_CLUSTER_RESTYPE_NOT_SUPPORTED              5079
00990 #define ERROR_CLUSTER_RESNAME_NOT_FOUND                  5080
00991 #define ERROR_CLUSTER_NO_RPC_PACKAGES_REGISTERED         5081
00992 #define ERROR_CLUSTER_OWNER_NOT_IN_PREFLIST              5082
00993 #define ERROR_CLUSTER_DATABASE_SEQMISMATCH               5083
00994 #define ERROR_RESMON_INVALID_STATE                       5084
00995 #define ERROR_CLUSTER_GUM_NOT_LOCKER                     5085
00996 #define ERROR_QUORUM_DISK_NOT_FOUND                      5086
00997 #define ERROR_DATABASE_BACKUP_CORRUPT                    5087
00998 #define ERROR_CLUSTER_NODE_ALREADY_HAS_DFS_ROOT          5088
00999 #define ERROR_RESOURCE_PROPERTY_UNCHANGEABLE             5089
01000 #define ERROR_ENCRYPTION_FAILED                          6000
01001 #define ERROR_DECRYPTION_FAILED                          6001
01002 #define ERROR_FILE_ENCRYPTED                             6002
01003 #define ERROR_NO_RECOVERY_POLICY                         6003
01004 #define ERROR_NO_EFS                                     6004
01005 #define ERROR_WRONG_EFS                                  6005
01006 #define ERROR_NO_USER_KEYS                               6006
01007 #define ERROR_FILE_NOT_ENCRYPTED                         6007
01008 #define ERROR_NOT_EXPORT_FORMAT                          6008
01009 #define ERROR_FILE_READ_ONLY                             6009
01010 #define ERROR_DIR_EFS_DISALLOWED                         6010
01011 #define ERROR_EFS_SERVER_NOT_TRUSTED                     6011
01012 #define ERROR_NO_BROWSER_SERVERS_FOUND                   6118
01013 #define SCHED_E_SERVICE_NOT_LOCALSYSTEM                  6200
01014 #define ERROR_CTX_WINSTATION_NAME_INVALID                7001
01015 #define ERROR_CTX_INVALID_PD                             7002
01016 #define ERROR_CTX_PD_NOT_FOUND                           7003
01017 #define ERROR_CTX_WD_NOT_FOUND                           7004
01018 #define ERROR_CTX_CANNOT_MAKE_EVENTLOG_ENTRY             7005
01019 #define ERROR_CTX_SERVICE_NAME_COLLISION                 7006
01020 #define ERROR_CTX_CLOSE_PENDING                          7007
01021 #define ERROR_CTX_NO_OUTBUF                              7008
01022 #define ERROR_CTX_MODEM_INF_NOT_FOUND                    7009
01023 #define ERROR_CTX_INVALID_MODEMNAME                      7010
01024 #define ERROR_CTX_MODEM_RESPONSE_ERROR                   7011
01025 #define ERROR_CTX_MODEM_RESPONSE_TIMEOUT                 7012
01026 #define ERROR_CTX_MODEM_RESPONSE_NO_CARRIER              7013
01027 #define ERROR_CTX_MODEM_RESPONSE_NO_DIALTONE             7014
01028 #define ERROR_CTX_MODEM_RESPONSE_BUSY                    7015
01029 #define ERROR_CTX_MODEM_RESPONSE_VOICE                   7016
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01030 #define ERROR_CTX_TD_ERROR                          7017
01031 #define ERROR_CTX_WINSTATION_NOT_FOUND              7022
01032 #define ERROR_CTX_WINSTATION_ALREADY_EXISTS         7023
01033 #define ERROR_CTX_WINSTATION_BUSY                   7024
01034 #define ERROR_CTX_BAD_VIDEO_MODE                    7025
01035 #define ERROR_CTX_GRAPHICS_INVALID                  7035
01036 #define ERROR_CTX_LOGON_DISABLED                    7037
01037 #define ERROR_CTX_NOT_CONSOLE                       7038
01038 #define ERROR_CTX_CLIENT_QUERY_TIMEOUT              7040
01039 #define ERROR_CTX_CONSOLE_DISCONNECT                7041
01040 #define ERROR_CTX_CONSOLE_CONNECT                   7042
01041 #define ERROR_CTX_SHADOW_DENIED                     7044
01042 #define ERROR_CTX_WINSTATION_ACCESS_DENIED          7045
01043 #define ERROR_CTX_INVALID_WD                        7049
01044 #define ERROR_CTX_SHADOW_INVALID                    7050
01045 #define ERROR_CTX_SHADOW_DISABLED                   7051
01046 #define ERROR_CTX_CLIENT_LICENSE_IN_USE             7052
01047 #define ERROR_CTX_CLIENT_LICENSE_NOT_SET            7053
01048 #define ERROR_CTX_LICENSE_NOT_AVAILABLE             7054
01049 #define ERROR_CTX_LICENSE_CLIENT_INVALID            7055
01050 #define ERROR_CTX_LICENSE_EXPIRED                   7056
01051 #define FRS_ERR_INVALID_API_SEQUENCE                8001
01052 #define FRS_ERR_STARTING_SERVICE                    8002
01053 #define FRS_ERR_STOPPING_SERVICE                    8003
01054 #define FRS_ERR_INTERNAL_API                        8004
01055 #define FRS_ERR_INTERNAL                            8005
01056 #define FRS_ERR_SERVICE_COMM                        8006
01057 #define FRS_ERR_INSUFFICIENT_PRIV                   8007
01058 #define FRS_ERR_AUTHENTICATION                      8008
01059 #define FRS_ERR_PARENT_INSUFFICIENT_PRIV            8009
01060 #define FRS_ERR_PARENT_AUTHENTICATION               8010
01061 #define FRS_ERR_CHILD_TO_PARENT_COMM                8011
01062 #define FRS_ERR_PARENT_TO_CHILD_COMM                8012
01063 #define FRS_ERR_SYSVOL_POPULATE                     8013
01064 #define FRS_ERR_SYSVOL_POPULATE_TIMEOUT             8014
01065 #define FRS_ERR_SYSVOL_IS_BUSY                      8015
01066 #define FRS_ERR_SYSVOL_DEMOTE                       8016
01067 #define FRS_ERR_INVALID_SERVICE_PARAMETER           8017
01068 #define ERROR_DS_NOT_INSTALLED                      8200
01069 #define ERROR_DS_MEMBERSHIP_EVALUATED_LOCALLY       8201
01070 #define ERROR_DS_NO_ATTRIBUTE_OR_VALUE              8202
01071 #define ERROR_DS_INVALID_ATTRIBUTE_SYNTAX           8203
01072 #define ERROR_DS_ATTRIBUTE_TYPE_UNDEFINED           8204
01073 #define ERROR_DS_ATTRIBUTE_OR_VALUE_EXISTS          8205
01074 #define ERROR_DS_BUSY                               8206
01075 #define ERROR_DS_UNAVAILABLE                        8207
01076 #define ERROR_DS_NO_RIDS_ALLOCATED                  8208
01077 #define ERROR_DS_NO_MORE_RIDS                       8209
01078 #define ERROR_DS_INCORRECT_ROLE_OWNER               8210
01079 #define ERROR_DS_RIDMGR_INIT_ERROR                  8211
01080 #define ERROR_DS_OBJ_CLASS_VIOLATION                8212
01081 #define ERROR_DS_CANT_ON_NON_LEAF                   8213
01082 #define ERROR_DS_CANT_ON_RDN                        8214
01083 #define ERROR_DS_CANT_MOD_OBJ_CLASS                 8215
01084 #define ERROR_DS_CROSS_DOM_MOVE_ERROR               8216
01085 #define ERROR_DS_GC_NOT_AVAILABLE                   8217
01086 #define ERROR_SHARED_POLICY                         8218
01087 #define ERROR_POLICY_OBJECT_NOT_FOUND               8219
01088 #define ERROR_POLICY_ONLY_IN_DS                     8220
01089 #define ERROR_PROMOTION_ACTIVE                      8221
01090 #define ERROR_NO_PROMOTION_ACTIVE                   8222
01091 #define ERROR_DS_OPERATIONS_ERROR                   8224
01092 #define ERROR_DS_PROTOCOL_ERROR                     8225
01093 #define ERROR_DS_TIMELIMIT_EXCEEDED                 8226
01094 #define ERROR_DS_SIZELIMIT_EXCEEDED                 8227
01095 #define ERROR_DS_ADMIN_LIMIT_EXCEEDED               8228
01096 #define ERROR_DS_COMPARE_FALSE                      8229
01097 #define ERROR_DS_COMPARE_TRUE                       8230
01098 #define ERROR_DS_AUTH_METHOD_NOT_SUPPORTED          8231
01099 #define ERROR_DS_STRONG_AUTH_REQUIRED               8232
01100 #define ERROR_DS_INAPPROPRIATE_AUTH                 8233
01101 #define ERROR_DS_AUTH_UNKNOWN                       8234
01102 #define ERROR_DS_REFERRAL                           8235
01103 #define ERROR_DS_UNAVAILABLE_CRIT_EXTENSION         8236
01104 #define ERROR_DS_CONFIDENTIALITY_REQUIRED           8237
01105 #define ERROR_DS_INAPPROPRIATE_MATCHING             8238
01106 #define ERROR_DS_CONSTRAINT_VIOLATION               8239
01107 #define ERROR_DS_NO_SUCH_OBJECT                     8240
01108 #define ERROR_DS_ALIAS_PROBLEM                      8241
01109 #define ERROR_DS_INVALID_DN_SYNTAX                  8242
01110 #define ERROR_DS_IS_LEAF                            8243
01111 #define ERROR_DS_ALIAS_DEREF_PROBLEM                8244
01112 #define ERROR_DS_UNWILLING_TO_PERFORM               8245
01113 #define ERROR_DS_LOOP_DETECT                        8246
01114 #define ERROR_DS_NAMING_VIOLATION                   8247
01115 #define ERROR_DS_OBJECT_RESULTS_TOO_LARGE           8248
01116 #define ERROR_DS_AFFECTS_MULTIPLE_DSAS              8249
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01117 #define ERROR_DS_SERVER_DOWN                                8250
01118 #define ERROR_DS_LOCAL_ERROR                                8251
01119 #define ERROR_DS_ENCODING_ERROR                             8252
01120 #define ERROR_DS_DECODING_ERROR                             8253
01121 #define ERROR_DS_FILTER_UNKNOWN                             8254
01122 #define ERROR_DS_PARAM_ERROR                                8255
01123 #define ERROR_DS_NOT_SUPPORTED                              8256
01124 #define ERROR_DS_NO_RESULTS_RETURNED                        8257
01125 #define ERROR_DS_CONTROL_NOT_FOUND                          8258
01126 #define ERROR_DS_CLIENT_LOOP                                8259
01127 #define ERROR_DS_REFERRAL_LIMIT_EXCEEDED                    8260
01128 #define ERROR_DS_ROOT_MUST_BE_NC                            8301
01129 #define ERROR_DS_ADD_REPLICA_INHIBITED                      8302
01130 #define ERROR_DS_ATT_NOT_DEF_IN_SCHEMA                      8303
01131 #define ERROR_DS_MAX_OBJ_SIZE_EXCEEDED                      8304
01132 #define ERROR_DS_OBJ_STRING_NAME_EXISTS                     8305
01133 #define ERROR_DS_NO_RDN_DEFINED_IN_SCHEMA                   8306
01134 #define ERROR_DS_RDN_DOESNT_MATCH_SCHEMA                    8307
01135 #define ERROR_DS_NO_REQUESTED_ATTS_FOUND                    8308
01136 #define ERROR_DS_USER_BUFFER_TO_SMALL                       8309
01137 #define ERROR_DS_ATT_IS_NOT_ON_OBJ                          8310
01138 #define ERROR_DS_ILLEGAL_MOD_OPERATION                      8311
01139 #define ERROR_DS_OBJ_TOO_LARGE                              8312
01140 #define ERROR_DS_BAD_INSTANCE_TYPE                          8313
01141 #define ERROR_DS_MASTERDSA_REQUIRED                         8314
01142 #define ERROR_DS_OBJECT_CLASS_REQUIRED                      8315
01143 #define ERROR_DS_MISSING_REQUIRED_ATT                       8316
01144 #define ERROR_DS_ATT_NOT_DEF_FOR_CLASS                      8317
01145 #define ERROR_DS_ATT_ALREADY_EXISTS                         8318
01146 #define ERROR_DS_CANT_ADD_ATT_VALUES                        8320
01147 #define ERROR_DS_SINGLE_VALUE_CONSTRAINT                    8321
01148 #define ERROR_DS_RANGE_CONSTRAINT                           8322
01149 #define ERROR_DS_ATT_VAL_ALREADY_EXISTS                     8323
01150 #define ERROR_DS_CANT_REM_MISSING_ATT                       8324
01151 #define ERROR_DS_CANT_REM_MISSING_ATT_VAL                   8325
01152 #define ERROR_DS_ROOT_CANT_BE_SUBREF                        8326
01153 #define ERROR_DS_NO_CHAINING                                8327
01154 #define ERROR_DS_NO_CHAINED_EVAL                            8328
01155 #define ERROR_DS_NO_PARENT_OBJECT                           8329
01156 #define ERROR_DS_PARENT_IS_AN_ALIAS                         8330
01157 #define ERROR_DS_CANT_MIX_MASTER_AND_REPS                   8331
01158 #define ERROR_DS_CHILDREN_EXIST                             8332
01159 #define ERROR_DS_OBJ_NOT_FOUND                              8333
01160 #define ERROR_DS_ALIASED_OBJ_MISSING                        8334
01161 #define ERROR_DS_BAD_NAME_SYNTAX                            8335
01162 #define ERROR_DS_ALIAS_POINTS_TO_ALIAS                      8336
01163 #define ERROR_DS_CANT_DEREF_ALIAS                           8337
01164 #define ERROR_DS_OUT_OF_SCOPE                               8338
01165 #define ERROR_DS_CANT_DELETE_DSA_OBJ                        8340
01166 #define ERROR_DS_GENERIC_ERROR                              8341
01167 #define ERROR_DS_DSA_MUST_BE_INT_MASTER                     8342
01168 #define ERROR_DS_CLASS_NOT_DSA                              8343
01169 #define ERROR_DS_INSUFF_ACCESS_RIGHTS                       8344
01170 #define ERROR_DS_ILLEGAL_SUPERIOR                           8345
01171 #define ERROR_DS_ATTRIBUTE_OWNED_BY_SAM                     8346
01172 #define ERROR_DS_NAME_TOO_MANY_PARTS                        8347
01173 #define ERROR_DS_NAME_TOO_LONG                              8348
01174 #define ERROR_DS_NAME_VALUE_TOO_LONG                        8349
01175 #define ERROR_DS_NAME_UNPARSEABLE                           8350
01176 #define ERROR_DS_NAME_TYPE_UNKNOWN                          8351
01177 #define ERROR_DS_NOT_AN_OBJECT                              8352
01178 #define ERROR_DS_SEC_DESC_TOO_SHORT                         8353
01179 #define ERROR_DS_SEC_DESC_INVALID                           8354
01180 #define ERROR_DS_NO_DELETED_NAME                            8355
01181 #define ERROR_DS_SUBREF_MUST_HAVE_PARENT                    8356
01182 #define ERROR_DS_NCNAME_MUST_BE_NC                          8357
01183 #define ERROR_DS_CANT_ADD_SYSTEM_ONLY                       8358
01184 #define ERROR_DS_CLASS_MUST_BE_CONCRETE                     8359
01185 #define ERROR_DS_INVALID_DMD                                8360
01186 #define ERROR_DS_OBJ_GUID_EXISTS                            8361
01187 #define ERROR_DS_NOT_ON_BACKLINK                            8362
01188 #define ERROR_DS_NO_CROSSREF_FOR_NC                         8363
01189 #define ERROR_DS_SHUTTING_DOWN                              8364
01190 #define ERROR_DS_UNKNOWN_OPERATION                          8365
01191 #define ERROR_DS_INVALID_ROLE_OWNER                         8366
01192 #define ERROR_DS_COULDNT_CONTACT_FSMO                       8367
01193 #define ERROR_DS_CROSS_NC_DN_RENAME                         8368
01194 #define ERROR_DS_CANT_MOD_SYSTEM_ONLY                       8369
01195 #define ERROR_DS_REPLICATOR_ONLY                            8370
01196 #define ERROR_DS_OBJ_CLASS_NOT_DEFINED                      8371
01197 #define ERROR_DS_OBJ_CLASS_NOT_SUBCLASS                     8372
01198 #define ERROR_DS_NAME_REFERENCE_INVALID                     8373
01199 #define ERROR_DS_CROSS_REF_EXISTS                           8374
01200 #define ERROR_DS_CANT_DEL_MASTER_CROSSREF                   8375
01201 #define ERROR_DS_SUBTREE_NOTIFY_NOT_NC_HEAD                 8376
01202 #define ERROR_DS_NOTIFY_FILTER_TOO_COMPLEX                  8377
01203 #define ERROR_DS_DUP_RDN                                    8378
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01204 #define ERROR_DS_DUP_OID                                8379
01205 #define ERROR_DS_DUP_MAPI_ID                            8380
01206 #define ERROR_DS_DUP_SCHEMA_ID_GUID                     8381
01207 #define ERROR_DS_DUP_LDAP_DISPLAY_NAME                  8382
01208 #define ERROR_DS_SEMANTIC_ATT_TEST                      8383
01209 #define ERROR_DS_SYNTAX_MISMATCH                        8384
01210 #define ERROR_DS_EXISTS_IN_MUST_HAVE                    8385
01211 #define ERROR_DS_EXISTS_IN_MAY_HAVE                     8386
01212 #define ERROR_DS_NONEXISTENT_MAY_HAVE                   8387
01213 #define ERROR_DS_NONEXISTENT_MUST_HAVE                  8388
01214 #define ERROR_DS_AUX_CLS_TEST_FAIL                      8389
01215 #define ERROR_DS_NONEXISTENT_POSS_SUP                   8390
01216 #define ERROR_DS_SUB_CLS_TEST_FAIL                      8391
01217 #define ERROR_DS_BAD_RDN_ATT_ID_SYNTAX                  8392
01218 #define ERROR_DS_EXISTS_IN_AUX_CLS                      8393
01219 #define ERROR_DS_EXISTS_IN_SUB_CLS                      8394
01220 #define ERROR_DS_EXISTS_IN_POSS_SUP                     8395
01221 #define ERROR_DS_RECALCSCHEMA_FAILED                    8396
01222 #define ERROR_DS_TREE_DELETE_NOT_FINISHED               8397
01223 #define ERROR_DS_CANT_DELETE                            8398
01224 #define ERROR_DS_ATT_SCHEMA_REQ_ID                      8399
01225 #define ERROR_DS_BAD_ATT_SCHEMA_SYNTAX                  8400
01226 #define ERROR_DS_CANT_CACHE_ATT                         8401
01227 #define ERROR_DS_CANT_CACHE_CLASS                       8402
01228 #define ERROR_DS_CANT_REMOVE_ATT_CACHE                  8403
01229 #define ERROR_DS_CANT_REMOVE_CLASS_CACHE                8404
01230 #define ERROR_DS_CANT_RETRIEVE_DN                       8405
01231 #define ERROR_DS_MISSING_SUPREF                         8406
01232 #define ERROR_DS_CANT_RETRIEVE_INSTANCE                 8407
01233 #define ERROR_DS_CODE_INCONSISTENCY                     8408
01234 #define ERROR_DS_DATABASE_ERROR                         8409
01235 #define ERROR_DS_GOVERNSID_MISSING                      8410
01236 #define ERROR_DS_MISSING_EXPECTED_ATT                   8411
01237 #define ERROR_DS_NCNAME_MISSING_CR_REF                  8412
01238 #define ERROR_DS_SECURITY_CHECKING_ERROR                8413
01239 #define ERROR_DS_SCHEMA_NOT_LOADED                      8414
01240 #define ERROR_DS_SCHEMA_ALLOC_FAILED                    8415
01241 #define ERROR_DS_ATT_SCHEMA_REQ_SYNTAX                  8416
01242 #define ERROR_DS_GCVERIFY_ERROR                         8417
01243 #define ERROR_DS_DRA_SCHEMA_MISMATCH                    8418
01244 #define ERROR_DS_CANT_FIND_DSA_OBJ                      8419
01245 #define ERROR_DS_CANT_FIND_EXPECTED_NC                  8420
01246 #define ERROR_DS_CANT_FIND_NC_IN_CACHE                  8421
01247 #define ERROR_DS_CANT_RETRIEVE_CHILD                    8422
01248 #define ERROR_DS_SECURITY_ILLEGAL_MODIFY                8423
01249 #define ERROR_DS_CANT_REPLACE_HIDDEN_REC                8424
01250 #define ERROR_DS_BAD_HIERARCHY_FILE                     8425
01251 #define ERROR_DS_BUILD_HIERARCHY_TABLE_FAILED           8426
01252 #define ERROR_DS_CONFIG_PARAM_MISSING                   8427
01253 #define ERROR_DS_COUNTING_AB_INDICES_FAILED             8428
01254 #define ERROR_DS_HIERARCHY_TABLE_MALLOC_FAILED          8429
01255 #define ERROR_DS_INTERNAL_FAILURE                       8430
01256 #define ERROR_DS_UNKNOWN_ERROR                          8431
01257 #define ERROR_DS_ROOT_REQUIRES_CLASS_TOP                8432
01258 #define ERROR_DS_REFUSING_FSMO_ROLES                    8433
01259 #define ERROR_DS_MISSING_FSMO_SETTINGS                  8434
01260 #define ERROR_DS_UNABLE_TO_SURRENDER_ROLES              8435
01261 #define ERROR_DS_DRA_GENERIC                            8436
01262 #define ERROR_DS_DRA_INVALID_PARAMETER                  8437
01263 #define ERROR_DS_DRA_BUSY                               8438
01264 #define ERROR_DS_DRA_BAD_DN                             8439
01265 #define ERROR_DS_DRA_BAD_NC                             8440
01266 #define ERROR_DS_DRA_DN_EXISTS                          8441
01267 #define ERROR_DS_DRA_INTERNAL_ERROR                     8442
01268 #define ERROR_DS_DRA_INCONSISTENT_DIT                   8443
01269 #define ERROR_DS_DRA_CONNECTION_FAILED                  8444
01270 #define ERROR_DS_DRA_BAD_INSTANCE_TYPE                  8445
01271 #define ERROR_DS_DRA_OUT_OF_MEM                         8446
01272 #define ERROR_DS_DRA_MAIL_PROBLEM                       8447
01273 #define ERROR_DS_DRA_REF_ALREADY_EXISTS                 8448
01274 #define ERROR_DS_DRA_REF_NOT_FOUND                      8449
01275 #define ERROR_DS_DRA_OBJ_IS_REP_SOURCE                  8450
01276 #define ERROR_DS_DRA_DB_ERROR                           8451
01277 #define ERROR_DS_DRA_NO_REPLICA                         8452
01278 #define ERROR_DS_DRA_ACCESS_DENIED                      8453
01279 #define ERROR_DS_DRA_NOT_SUPPORTED                      8454
01280 #define ERROR_DS_DRA_RPC_CANCELLED                      8455
01281 #define ERROR_DS_DRA_SOURCE_DISABLED                    8456
01282 #define ERROR_DS_DRA_SINK_DISABLED                      8457
01283 #define ERROR_DS_DRA_NAME_COLLISION                     8458
01284 #define ERROR_DS_DRA_SOURCE_REINSTALLED                 8459
01285 #define ERROR_DS_DRA_MISSING_PARENT                     8460
01286 #define ERROR_DS_DRA_PREEMPTED                          8461
01287 #define ERROR_DS_DRA_ABANDON_SYNC                       8462
01288 #define ERROR_DS_DRA_SHUTDOWN                           8463
01289 #define ERROR_DS_DRA_INCOMPATIBLE_PARTIAL_SET           8464
01290 #define ERROR_DS_DRA_SOURCE_IS_PARTIAL_REPLICA          8465
```

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01291 #define ERROR_DS_DRA_EXTN_CONNECTION_FAILED               8466
01292 #define ERROR_DS_INSTALL_SCHEMA_MISMATCH                  8467
01293 #define ERROR_DS_DUP_LINK_ID                              8468
01294 #define ERROR_DS_NAME_ERROR_RESOLVING                     8469
01295 #define ERROR_DS_NAME_ERROR_NOT_FOUND                     8470
01296 #define ERROR_DS_NAME_ERROR_NOT_UNIQUE                    8471
01297 #define ERROR_DS_NAME_ERROR_NO_MAPPING                    8472
01298 #define ERROR_DS_NAME_ERROR_DOMAIN_ONLY                   8473
01299 #define ERROR_DS_NAME_ERROR_NO_SYNTACTICAL_MAPPING        8474
01300 #define ERROR_DS_CONSTRUCTED_ATT_MOD                      8475
01301 #define ERROR_DS_WRONG_OM_OBJ_CLASS                       8476
01302 #define ERROR_DS_DRA_REPL_PENDING                         8477
01303 #define ERROR_DS_DS_REQUIRED                              8478
01304 #define ERROR_DS_INVALID_LDAP_DISPLAY_NAME                8479
01305 #define ERROR_DS_NON_BASE_SEARCH                          8480
01306 #define ERROR_DS_CANT_RETRIEVE_ATTS                       8481
01307 #define ERROR_DS_BACKLINK_WITHOUT_LINK                    8482
01308 #define ERROR_DS_EPOCH_MISMATCH                           8483
01309 #define ERROR_DS_SRC_NAME_MISMATCH                        8484
01310 #define ERROR_DS_SRC_AND_DST_NC_IDENTICAL                 8485
01311 #define ERROR_DS_DST_NC_MISMATCH                          8486
01312 #define ERROR_DS_NOT_AUTHORITIVE_FOR_DST_NC               8487
01313 #define ERROR_DS_SRC_GUID_MISMATCH                        8488
01314 #define ERROR_DS_CANT_MOVE_DELETED_OBJECT                 8489
01315 #define ERROR_DS_PDC_OPERATION_IN_PROGRESS                8490
01316 #define ERROR_DS_CROSS_DOMAIN_CLEANUP_REQD                8491
01317 #define ERROR_DS_ILLEGAL_XDOM_MOVE_OPERATION              8492
01318 #define ERROR_DS_CANT_WITH_ACCT_GROUP_MEMBERSHPS          8493
01319 #define ERROR_DS_NC_MUST_HAVE_NC_PARENT                   8494
01320 #define ERROR_DS_CR_IMPOSSIBLE_TO_VALIDATE                8495
01321 #define ERROR_DS_DST_DOMAIN_NOT_NATIVE                    8496
01322 #define ERROR_DS_MISSING_INFRASTRUCTURE_CONTAINER         8497
01323 #define ERROR_DS_CANT_MOVE_ACCOUNT_GROUP                  8498
01324 #define ERROR_DS_CANT_MOVE_RESOURCE_GROUP                 8499
01325 #define ERROR_DS_INVALID_SEARCH_FLAG                      8500
01326 #define ERROR_DS_NO_TREE_DELETE_ABOVE_NC                  8501
01327 #define ERROR_DS_COULDNT_LOCK_TREE_FOR_DELETE             8502
01328 #define ERROR_DS_COULDNT_IDENTIFY_OBJECTS_FOR_TREE_DELETE 8503
01329 #define ERROR_DS_SAM_INIT_FAILURE                         8504
01330 #define ERROR_DS_SENSITIVE_GROUP_VIOLATION                8505
01331 #define ERROR_DS_CANT_MOD_PRIMARYGROUPID                  8506
01332 #define ERROR_DS_ILLEGAL_BASE_SCHEMA_MOD                  8507
01333 #define ERROR_DS_NONSAFE_SCHEMA_CHANGE                    8508
01334 #define ERROR_DS_SCHEMA_UPDATE_DISALLOWED                 8509
01335 #define ERROR_DS_CANT_CREATE_UNDER_SCHEMA                 8510
01336 #define ERROR_DS_INSTALL_NO_SRC_SCH_VERSION               8511
01337 #define ERROR_DS_INSTALL_NO_SCH_VERSION_IN_INIFILE        8512
01338 #define ERROR_DS_INVALID_GROUP_TYPE                       8513
01339 #define ERROR_DS_NO_NEST_GLOBALGROUP_IN_MIXEDDOMAIN       8514
01340 #define ERROR_DS_NO_NEST_LOCALGROUP_IN_MIXEDDOMAIN        8515
01341 #define ERROR_DS_GLOBAL_CANT_HAVE_LOCAL_MEMBER            8516
01342 #define ERROR_DS_GLOBAL_CANT_HAVE_UNIVERSAL_MEMBER        8517
01343 #define ERROR_DS_UNIVERSAL_CANT_HAVE_LOCAL_MEMBER         8518
01344 #define ERROR_DS_GLOBAL_CANT_HAVE_CROSSDOMAIN_MEMBER      8519
01345 #define ERROR_DS_LOCAL_CANT_HAVE_CROSSDOMAIN_LOCAL_MEMBER 8520
01346 #define ERROR_DS_HAVE_PRIMARY_MEMBERS                     8521
01347 #define ERROR_DS_STRING_SD_CONVERSION_FAILED              8522
01348 #define ERROR_DS_NAMING_MASTER_GC                         8523
01349 #define ERROR_DS_LOOKUP_FAILURE                           8524
01350 #define ERROR_DS_COULDNT_UPDATE_SPNS                      8525
01351 #define ERROR_DS_CANT_RETRIEVE_SD                         8526
01352 #define ERROR_DS_KEY_NOT_UNIQUE                           8527
01353 #define ERROR_DS_WRONG_LINKED_ATT_SYNTAX                  8528
01354 #define ERROR_DS_SAM_NEED_BOOTKEY_PASSWORD                8529
01355 #define ERROR_DS_SAM_NEED_BOOTKEY_FLOPPY                  8530
01356 #define ERROR_DS_CANT_START                               8531
01357 #define ERROR_DS_INIT_FAILURE                             8532
01358 #define ERROR_DS_NO_PKT_PRIVACY_ON_CONNECTION             8533
01359 #define ERROR_DS_SOURCE_DOMAIN_IN_FOREST                  8534
01360 #define ERROR_DS_DESTINATION_DOMAIN_NOT_IN_FOREST         8535
01361 #define ERROR_DS_DESTINATION_AUDITING_NOT_ENABLED         8536
01362 #define ERROR_DS_CANT_FIND_DC_FOR_SRC_DOMAIN              8537
01363 #define ERROR_DS_SRC_OBJ_NOT_GROUP_OR_USER                8538
01364 #define ERROR_DS_SRC_SID_EXISTS_IN_FOREST                 8539
01365 #define ERROR_DS_SRC_AND_DST_OBJECT_CLASS_MISMATCH        8540
01366 #define ERROR_SAM_INIT_FAILURE                            8541
01367 #define ERROR_DS_DRA_SCHEMA_INFO_SHIP                     8542
01368 #define ERROR_DS_DRA_SCHEMA_CONFLICT                      8543
01369 #define ERROR_DS_DRA_EARLIER_SCHEMA_CONLICT               8544
01370 #define ERROR_DS_DRA_OBJ_NC_MISMATCH                      8545
01371 #define ERROR_DS_NC_STILL_HAS_DSAS                        8546
01372 #define ERROR_DS_GC_REQUIRED                              8547
01373 #define ERROR_DS_LOCAL_MEMBER_OF_LOCAL_ONLY               8548
01374 #define ERROR_DS_NO_FPO_IN_UNIVERSAL_GROUPS               8549
01375 #define ERROR_DS_CANT_ADD_TO_GC                           8550
01376 #define ERROR_DS_NO_CHECKPOINT_WITH_PDC                   8551
01377 #define ERROR_DS_SOURCE_AUDITING_NOT_ENABLED              8552
```

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01378 #define ERROR_DS_CANT_CREATE_IN_NONDOMAIN_NC               8553
01379 #define ERROR_DS_INVALID_NAME_FOR_SPN                      8554
01380 #define ERROR_DS_FILTER_USES_CONTRUCTED_ATTRS              8555
01381 #define ERROR_DS_UNICODEPWD_NOT_IN_QUOTES                  8556
01382 #define ERROR_DS_MACHINE_ACCOUNT_QUOTA_EXCEEDED            8557
01383 #define ERROR_DS_MUST_BE_RUN_ON_DST_DC                     8558
01384 #define ERROR_DS_SRC_DC_MUST_BE_SP4_OR_GREATER             8559
01385 #define ERROR_DS_CANT_TREE_DELETE_CRITICAL_OBJ             8560
01386 #define DNS_ERROR_RCODE_FORMAT_ERROR                       9001
01387 #define DNS_ERROR_RCODE_SERVER_FAILURE                     9002
01388 #define DNS_ERROR_RCODE_NAME_ERROR                         9003
01389 #define DNS_ERROR_RCODE_NOT_IMPLEMENTED                    9004
01390 #define DNS_ERROR_RCODE_REFUSED                            9005
01391 #define DNS_ERROR_RCODE_YXDOMAIN                           9006
01392 #define DNS_ERROR_RCODE_YXRRSET                            9007
01393 #define DNS_ERROR_RCODE_NXRRSET                            9008
01394 #define DNS_ERROR_RCODE_NOTAUTH                            9009
01395 #define DNS_ERROR_RCODE_NOTZONE                            9010
01396 #define DNS_ERROR_RCODE_BADSIG                             9016
01397 #define DNS_ERROR_RCODE_BADKEY                             9017
01398 #define DNS_ERROR_RCODE_BADTIME                            9018
01399 #define DNS_INFO_NO_RECORDS                                9501
01400 #define DNS_ERROR_BAD_PACKET                               9502
01401 #define DNS_ERROR_NO_PACKET                                9503
01402 #define DNS_ERROR_RCODE                                    9504
01403 #define DNS_ERROR_UNSECURE_PACKET                          9505
01404 #define DNS_ERROR_INVALID_TYPE                             9551
01405 #define DNS_ERROR_INVALID_IP_ADDRESS                       9552
01406 #define DNS_ERROR_INVALID_PROPERTY                         9553
01407 #define DNS_ERROR_TRY_AGAIN_LATER                          9554
01408 #define DNS_ERROR_NOT_UNIQUE                               9555
01409 #define DNS_ERROR_NON_RFC_NAME                             9556
01410 #define DNS_STATUS_FQDN                                    9557
01411 #define DNS_STATUS_DOTTED_NAME                             9558
01412 #define DNS_STATUS_SINGLE_PART_NAME                        9559
01413 #define DNS_ERROR_INVALID_NAME_CHAR                        9560
01414 #define DNS_ERROR_NUMERIC_NAME                             9561
01415 #define DNS_ERROR_ZONE_DOES_NOT_EXIST                      9601
01416 #define DNS_ERROR_NO_ZONE_INFO                             9602
01417 #define DNS_ERROR_INVALID_ZONE_OPERATION                   9603
01418 #define DNS_ERROR_ZONE_CONFIGURATION_ERROR                 9604
01419 #define DNS_ERROR_ZONE_HAS_NO_SOA_RECORD                   9605
01420 #define DNS_ERROR_ZONE_HAS_NO_NS_RECORDS                   9606
01421 #define DNS_ERROR_ZONE_LOCKED                              9607
01422 #define DNS_ERROR_ZONE_CREATION_FAILED                     9608
01423 #define DNS_ERROR_ZONE_ALREADY_EXISTS                      9609
01424 #define DNS_ERROR_AUTOZONE_ALREADY_EXISTS                  9610
01425 #define DNS_ERROR_INVALID_ZONE_TYPE                        9611
01426 #define DNS_ERROR_SECONDARY_REQUIRES_MASTER_IP             9612
01427 #define DNS_ERROR_ZONE_NOT_SECONDARY                       9613
01428 #define DNS_ERROR_NEED_SECONDARY_ADDRESSES                 9614
01429 #define DNS_ERROR_WINS_INIT_FAILED                         9615
01430 #define DNS_ERROR_NEED_WINS_SERVERS                        9616
01431 #define DNS_ERROR_NBSTAT_INIT_FAILED                       9617
01432 #define DNS_ERROR_SOA_DELETE_INVALID                       9618
01433 #define DNS_ERROR_PRIMARY_REQUIRES_DATAFILE                9651
01434 #define DNS_ERROR_INVALID_DATAFILE_NAME                    9652
01435 #define DNS_ERROR_DATAFILE_OPEN_FAILURE                    9653
01436 #define DNS_ERROR_FILE_WRITEBACK_FAILED                    9654
01437 #define DNS_ERROR_DATAFILE_PARSING                         9655
01438 #define DNS_ERROR_RECORD_DOES_NOT_EXIST                    9701
01439 #define DNS_ERROR_RECORD_FORMAT                            9702
01440 #define DNS_ERROR_NODE_CREATION_FAILED                     9703
01441 #define DNS_ERROR_UNKNOWN_RECORD_TYPE                      9704
01442 #define DNS_ERROR_RECORD_TIMED_OUT                         9705
01443 #define DNS_ERROR_NAME_NOT_IN_ZONE                         9706
01444 #define DNS_ERROR_CNAME_LOOP                               9707
01445 #define DNS_ERROR_NODE_IS_CNAME                            9708
01446 #define DNS_ERROR_CNAME_COLLISION                          9709
01447 #define DNS_ERROR_RECORD_ONLY_AT_ZONE_ROOT                 9710
01448 #define DNS_ERROR_RECORD_ALREADY_EXISTS                    9711
01449 #define DNS_ERROR_SECONDARY_DATA                           9712
01450 #define DNS_ERROR_NO_CREATE_CACHE_DATA                     9713
01451 #define DNS_ERROR_NAME_DOES_NOT_EXIST                      9714
01452 #define DNS_WARNING_PTR_CREATE_FAILED                      9715
01453 #define DNS_WARNING_DOMAIN_UNDELETED                       9716
01454 #define DNS_ERROR_DS_UNAVAILABLE                           9717
01455 #define DNS_ERROR_DS_ZONE_ALREADY_EXISTS                   9718
01456 #define DNS_ERROR_NO_BOOTFILE_IF_DS_ZONE                   9719
01457 #define DNS_INFO_AXFR_COMPLETE                             9751
01458 #define DNS_ERROR_AXFR                                     9752
01459 #define DNS_INFO_ADDED_LOCAL_WINS                          9753
01460 #define DNS_STATUS_CONTINUE_NEEDED                         9801
01461 #define DNS_ERROR_NO_TCPIP                                 9851
01462 #define DNS_ERROR_NO_DNS_SERVERS                           9852
01463
01464 /* HRESULT values for OLE, SHELL and other Interface stuff */
```

```
01465 /* the codes 4000-40ff are reserved for OLE */
01466 #define NOERROR                                         0L
01467 #define S_OK                                            ((HRESULT)0L)
01468 #define S_FALSE                                         ((HRESULT)1L)
01469
01470 #define E_PENDING                                       0x8000000AL
01471
01472
01473 #define E_NOTIMPL                                       0x80004001L
01474 #define E_NOINTERFACE                                   0x80004002L
01475 #define E_POINTER                                       0x80004003L
01476 #define E_ABORT                                         0x80004004L
01477 #define E_FAIL                                          0x80004005L
01478 /* FIXME: E_UNSPEC is not a standard value but it is used by
01479  * FileMoniker, IOleLink and DoDragDrop as a return value.
01480  */
01481 #define E_UNSPEC                                        E_FAIL
01482
01483
01484 #define CO_E_INIT_TLS                                   0x80004006L
01485 #define CO_E_INIT_SHARED_ALLOCATOR                      0x80004007L
01486 #define CO_E_INIT_MEMORY_ALLOCATOR                      0x80004008L
01487 #define CO_E_INIT_CLASS_CACHE                           0x80004009L
01488 #define CO_E_INIT_RPC_CHANNEL                           0x8000400AL
01489 #define CO_E_INIT_TLS_SET_CHANNEL_CONTROL               0x8000400BL
01490 #define CO_E_INIT_TLS_CHANNEL_CONTROL                   0x8000400CL
01491 #define CO_E_INIT_UNACCEPTED_USER_ALLOCATOR             0x8000400DL
01492 #define CO_E_INIT_SCM_MUTEX_EXISTS                      0x8000400EL
01493 #define CO_E_INIT_SCM_FILE_MAPPING_EXISTS               0x8000400FL
01494 #define CO_E_INIT_SCM_MAP_VIEW_OF_FILE                  0x80004010L
01495 #define CO_E_INIT_SCM_EXEC_FAILURE                      0x80004011L
01496 #define CO_E_INIT_ONLY_SINGLE_THREADED                  0x80004012L
01497
01498 #define E_UNEXPECTED                                    0x8000FFFFL
01499
01500 #define RPC_E_CALL_REJECTED                             0x80010001L
01501 #define RPC_E_CALL_CANCELED                             0x80010002L
01502 #define RPC_E_CANTPOST_INSENDCALL                       0x80010003L
01503 #define RPC_E_CANTCALLOUT_INASYNCCALL                   0x80010004L
01504 #define RPC_E_CANTCALLOUT_INEXTERNALCALL                0x80010005L
01505 #define RPC_E_CONNECTION_TERMINATED                     0x80010006L
01506 #define RPC_E_SERVER_DIED                               0x80010007L
01507 #define RPC_E_CLIENT_DIED                               0x80010008L
01508 #define RPC_E_INVALID_DATAPACKET                        0x80010009L
01509 #define RPC_E_CANTTRANSMIT_CALL                         0x8001000AL
01510 #define RPC_E_CLIENT_CANTMARSHAL_DATA                   0x8001000BL
01511 #define RPC_E_CLIENT_CANTUNMARSHAL_DATA                 0x8001000CL
01512 #define RPC_E_SERVER_CANTMARSHAL_DATA                   0x8001000DL
01513 #define RPC_E_SERVER_CANTUNMARSHAL_DATA                 0x8001000EL
01514 #define RPC_E_INVALID_DATA                              0x8001000FL
01515 #define RPC_E_INVALID_PARAMETER                         0x80010010L
01516 #define RPC_E_CANTCALLOUT_AGAIN                         0x80010011L
01517 #define RPC_E_SERVER_DIED_DNE                           0x80010012L
01518 #define RPC_E_SYS_CALL_FAILED                           0x80010100L
01519 #define RPC_E_OUT_OF_RESOURCES                          0x80010101L
01520 #define RPC_E_ATTEMPTED_MULTITHREAD                     0x80010102L
01521 #define RPC_E_NOT_REGISTERED                            0x80010103L
01522 #define RPC_E_FAULT                                     0x80010104L
01523 #define RPC_E_SERVERFAULT                               0x80010105L
01524 #define RPC_E_CHANGED_MODE                              0x80010106L
01525 #define RPC_E_INVALIDMETHOD                             0x80010107L
01526 #define RPC_E_DISCONNECTED                              0x80010108L
01527 #define RPC_E_RETRY                                     0x80010109L
01528 #define RPC_E_SERVERCALL_RETRYLATER                     0x8001010AL
01529 #define RPC_E_SERVERCALL_REJECTED                       0x8001010BL
01530 #define RPC_E_INVALID_CALLDATA                          0x8001010CL
01531 #define RPC_E_CANTCALLOUT_ININPUTSYNCCALL               0x8001010DL
01532 #define RPC_E_WRONG_THREAD                              0x8001010EL
01533 #define RPC_E_THREAD_NOT_INIT                           0x8001010FL
01534 #define RPC_E_VERSION_MISMATCH                          0x80010110L
01535 #define RPC_E_INVALID_HEADER                            0x80010111L
01536 #define RPC_E_INVALID_EXTENSION                         0x80010112L
01537 #define RPC_E_INVALID_IPID                              0x80010113L
01538 #define RPC_E_INVALID_OBJECT                            0x80010114L
01539 #define RPC_S_CALLPENDING                               0x80010115L
01540 #define RPC_S_WAITONTIMER                               0x80010116L
01541 #define RPC_E_CALL_COMPLETE                             0x80010117L
01542 #define RPC_E_UNSECURE_CALL                             0x80010118L
01543 #define RPC_E_TOO_LATE                                  0x80010119L
01544 #define RPC_E_NO_GOOD_SECURITY_PACKAGES                 0x8001011AL
01545 #define RPC_E_ACCESS_DENIED                             0x8001011BL
01546 #define RPC_E_REMOTE_DISABLED                           0x8001011CL
01547 #define RPC_E_INVALID_OBJREF                            0x8001011DL
01548 #define RPC_E_NO_CONTEXT                                0x8001011EL
01549 #define RPC_E_TIMEOUT                                   0x8001011FL
01550 #define RPC_E_NO_SYNC                                   0x80010120L
01551 #define RPC_E_UNEXPECTED                                0x8001FFFFL
```

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01552
01553 #define DISP_E_UNKNOWNINTERFACE                 0x80020001L
01554 #define DISP_E_MEMBERNOTFOUND                   0x80020003L
01555 #define DISP_E_PARAMNOTFOUND                    0x80020004L
01556 #define DISP_E_TYPEMISMATCH                     0x80020005L
01557 #define DISP_E_UNKNOWNNAME                      0x80020006L
01558 #define DISP_E_NONAMEDARGS                      0x80020007L
01559 #define DISP_E_BADVARTYPE                       0x80020008L
01560 #define DISP_E_EXCEPTION                        0x80020009L
01561 #define DISP_E_OVERFLOW                         0x8002000AL
01562 #define DISP_E_BADINDEX                         0x8002000BL
01563 #define DISP_E_UNKNOWNLCID                      0x8002000CL
01564 #define DISP_E_ARRAYISLOCKED                    0x8002000DL
01565 #define DISP_E_BADPARAMCOUNT                    0x8002000EL
01566 #define DISP_E_PARAMNOTOPTIONAL                 0x8002000FL
01567 #define DISP_E_BADCALLEE                        0x80020010L
01568 #define DISP_E_NOTACOLLECTION                   0x80020011L
01569 #define DISP_E_DIVBYZERO                        0x80020012L
01570
01571 #define TYPE_E_BUFFERTOOSMALL                   0x80028016L
01572 #define TYPE_E_FIELDNOTFOUND                    0x80028017L
01573 #define TYPE_E_INVDATAREAD                      0x80028018L
01574 #define TYPE_E_UNSUPFORMAT                      0x80028019L
01575 #define TYPE_E_REGISTRYACCESS                   0x8002801CL
01576 #define TYPE_E_LIBNOTREGISTERED                 0x8002801DL
01577 #define TYPE_E_UNDEFINEDTYPE                    0x80028027L
01578 #define TYPE_E_QUALIFIEDNAMEDISALLOWED          0x80028028L
01579 #define TYPE_E_INVALIDSTATE                     0x80028029L
01580 #define TYPE_E_WRONGTYPEKIND                    0x8002802AL
01581 #define TYPE_E_ELEMENTNOTFOUND                  0x8002802BL
01582 #define TYPE_E_AMBIGUOUSNAME                    0x8002802CL
01583 #define TYPE_E_NAMECONFLICT                     0x8002802DL
01584 #define TYPE_E_UNKNOWNLCID                      0x8002802EL
01585 #define TYPE_E_DLLFUNCTIONNOTFOUND              0x8002802FL
01586 #define TYPE_E_BADMODULEKIND                    0x800288BDL
01587 #define TYPE_E_SIZETOOBIG                       0x800288C5L
01588 #define TYPE_E_DUPLICATEID                      0x800288C6L
01589 #define TYPE_E_INVALIDID                        0x800288CFL
01590 #define TYPE_E_TYPEMISMATCH                     0x80028CA0L
01591 #define TYPE_E_OUTOFBOUNDS                      0x80028CA1L
01592 #define TYPE_E_IOERROR                          0x80028CA2L
01593 #define TYPE_E_CANTCREATETMPFILE                0x80028CA3L
01594 #define TYPE_E_CANTLOADLIBRARY                  0x80029C4AL
01595 #define TYPE_E_INCONSISTENTPROPFUNCS            0x80029C83L
01596 #define TYPE_E_CIRCULARTYPE                     0x80029C84L
01597
01598 #define STG_S_CONVERTED                         0x00030200L
01599 #define STG_S_BLOCK                             0x00030201L
01600 #define STG_S_RETRYNOW                          0x00030202L
01601 #define STG_S_MONITORING                        0x00030203L
01602 #define STG_S_MULTIPLEOPENS                     0x00030204L
01603 #define STG_S_CONSOLIDATIONFAILED               0x00030205L
01604 #define STG_S_CANNOTCONSOLIDATE                 0x00030206L
01605
01606 #define STG_E_INVALIDFUNCTION                   0x80030001L
01607 #define STG_E_FILENOTFOUND                      0x80030002L
01608 #define STG_E_PATHNOTFOUND                      0x80030003L
01609 #define STG_E_TOOMANYOPENFILES                  0x80030004L
01610 #define STG_E_ACCESSDENIED                      0x80030005L
01611 #define STG_E_INVALIDHANDLE                     0x80030006L
01612 #define STG_E_INSUFFICIENTMEMORY                0x80030008L
01613 #define STG_E_INVALIDPOINTER                    0x80030009L
01614 #define STG_E_NOMOREFILES                       0x80030012L
01615 #define STG_E_DISKISWRITEPROTECTED              0x80030013L
01616 #define STG_E_SEEKERROR                         0x80030019L
01617 #define STG_E_WRITEFAULT                        0x8003001DL
01618 #define STG_E_READFAULT                         0x8003001EL
01619 #define STG_E_SHAREVIOLATION                    0x80030020L
01620 #define STG_E_LOCKVIOLATION                     0x80030021L
01621 #define STG_E_FILEALREADYEXISTS                 0x80030050L
01622 #define STG_E_INVALIDPARAMETER                  0x80030057L
01623 #define STG_E_MEDIUMFULL                        0x80030070L
01624 #define STG_E_ABNORMALAPIEXIT                   0x800300FAL
01625 #define STG_E_INVALIDHEADER                     0x800300FBL
01626 #define STG_E_INVALIDNAME                       0x800300FCL
01627 #define STG_E_UNKNOWN                           0x800300FDL
01628 #define STG_E_UNIMPLEMENTEDFUNCTION             0x800300FEL
01629 #define STG_E_INVALIDFLAG                       0x800300FFL
01630 #define STG_E_INUSE                             0x80030100L
01631 #define STG_E_NOTCURRENT                        0x80030101L
01632 #define STG_E_REVERTED                          0x80030102L
01633 #define STG_E_CANTSAVE                          0x80030103L
01634 #define STG_E_OLDFORMAT                         0x80030104L
01635 #define STG_E_OLDDLL                            0x80030105L
01636 #define STG_E_SHAREREQUIRED                     0x80030106L
01637 #define STG_E_NOTFILEBASEDSTORAGE               0x80030107L
01638 #define STG_E_EXTANTMARSHALLINGS                0x80030108L
```

```
01639
01640 #define OLE_S_FIRST                                0x00040000L
01641 #define OLE_S_USEREG                               0x00040000L
01642 #define OLE_S_STATIC                               0x00040001L
01643 #define OLE_S_MAC_CLIPFORMAT                       0x00040002L
01644 #define OLE_S_LAST                                 0x000400FFL
01645
01646 #define OLE_E_FIRST                                0x80040000L
01647 #define OLE_E_OLEVERB                              0x80040000L
01648 #define OLE_E_ADVF                                 0x80040001L
01649 #define OLE_E_ENUM_NOMORE                          0x80040002L
01650 #define OLE_E_ADVISENOTSUPPORTED                   0x80040003L
01651 #define OLE_E_NOCONNECTION                         0x80040004L
01652 #define OLE_E_NOTRUNNING                           0x80040005L
01653 #define OLE_E_NOCACHE                              0x80040006L
01654 #define OLE_E_BLANK                                0x80040007L
01655 #define OLE_E_CLASSDIFF                            0x80040008L
01656 #define OLE_E_CANT_GETMONIKER                      0x80040009L
01657 #define OLE_E_CANT_BINDTOSOURCE                    0x8004000AL
01658 #define OLE_E_STATIC                               0x8004000BL
01659 #define OLE_E_PROMPTSAVECANCELLED                  0x8004000CL
01660 #define OLE_E_INVALIDRECT                          0x8004000DL
01661 #define OLE_E_WRONGCOMPOBJ                         0x8004000EL
01662 #define OLE_E_INVALIDHWND                          0x8004000FL
01663 #define OLE_E_NOT_INPLACEACTIVE                    0x80040010L
01664 #define OLE_E_CANTCONVERT                          0x80040011L
01665 #define OLE_E_NOSTORAGE                            0x80040012L
01666 #define DV_E_FORMATETC                             0x80040064L
01667 #define DV_E_DVTARGETDEVICE                        0x80040065L
01668 #define DV_E_STGMEDIUM                             0x80040066L
01669 #define DV_E_STATDATA                              0x80040067L
01670 #define DV_E_LINDEX                                0x80040068L
01671 #define DV_E_TYMED                                 0x80040069L
01672 #define DV_E_CLIPFORMAT                            0x8004006AL
01673 #define DV_E_DVASPECT                              0x8004006BL
01674 #define DV_E_DVTARGETDEVICE_SIZE                   0x8004006CL
01675 #define DV_E_NOIVIEWOBJECT                         0x8004006DL
01676 #define OLE_E_LAST                                 0x800400FFL
01677
01678 #define DRAGDROP_S_FIRST                           0x00040100L
01679 #define DRAGDROP_S_DROP                            0x00040100L
01680 #define DRAGDROP_S_CANCEL                          0x00040101L
01681 #define DRAGDROP_S_USEDEFAULTCURSORS               0x00040102L
01682 #define DRAGDROP_S_LAST                            0x0004010FL
01683
01684 #define DRAGDROP_E_FIRST                           0x80040100L
01685 #define DRAGDROP_E_NOTREGISTERED                   0x80040100L
01686 #define DRAGDROP_E_ALREADYREGISTERED               0x80040101L
01687 #define DRAGDROP_E_INVALIDHWND                     0x80040102L
01688 #define DRAGDROP_E_LAST                            0x8004010FL
01689
01690
01691 #define CLASSFACTORY_S_FIRST                       0x00040110L
01692 #define CLASSFACTORY_S_LAST                        0x0004011FL
01693
01694 #define CLASSFACTORY_E_FIRST                       0x80040110L
01695 #define CLASS_E_NOAGGREGATION                      0x80040110L
01696 #define CLASS_E_CLASSNOTAVAILABLE                  0x80040111L
01697 #define CLASS_E_NOTLICENSED                        0x80040112L
01698 #define CLASSFACTORY_E_LAST                        0x8004011FL
01699
01700 #define MARSHAL_S_FIRST                            0x00040120L
01701 #define MARSHAL_S_LAST                             0x0004012FL
01702
01703 #define MARSHAL_E_FIRST                            0x80040120L
01704 #define MARSHAL_E_LAST                             0x8004012FL
01705
01706 #define DATA_S_FIRST                               0x00040130L
01707 #define DATA_S_SAMEFORMATETC                       0x00040130L
01708 #define DATA_S_LAST                                0x0004013FL
01709
01710 #define DATA_E_FIRST                               0x80040130L
01711 #define DATA_E_LAST                                0x8004013FL
01712
01713 #define VIEW_S_FIRST                               0x00040140L
01714 #define VIEW_S_ALREADY_FROZEN                      0x00040140L
01715 #define VIEW_S_LAST                                0x0004014FL
01716
01717 #define VIEW_E_FIRST                               0x80040140L
01718 #define VIEW_E_DRAW                                0x80040140L
01719 #define VIEW_E_LAST                                0x8004014FL
01720
01721 #define REGDB_S_FIRST                              0x00040150L
01722 #define REGDB_S_LAST                               0x0004015FL
01723
01724 #define REGDB_E_FIRST                              0x80040150L
01725 #define REGDB_E_READREGDB                          0x80040150L
```

```
01726 #define REGDB_E_WRITEREGDB                      0x80040151L
01727 #define REGDB_E_KEYMISSING                      0x80040152L
01728 #define REGDB_E_INVALIDVALUE                    0x80040153L
01729 #define REGDB_E_CLASSNOTREG                     0x80040154L
01730 #define REGDB_E_IIDNOTREG                       0x80040155L
01731 #define REGDB_E_LAST                            0x8004015FL
01732
01733 #define CACHE_S_FIRST                           0x00040170L
01734 #define CACHE_S_FORMATETC_NOTSUPPORTED          0x00040170L
01735 #define CACHE_S_SAMECACHE                       0x00040171L
01736 #define CACHE_S_SOMECACHES_NOTUPDATED           0x00040172L
01737 #define CACHE_S_LAST                            0x0004017FL
01738
01739 #define CACHE_E_FIRST                           0x80040170L
01740 #define CACHE_E_NOCACHE_UPDATED                 0x80040170L
01741 #define CACHE_E_LAST                            0x8004017FL
01742
01743 #define OLEOBJ_S_FIRST                          0x00040180L
01744 #define OLEOBJ_S_INVALIDVERB                    0x00040180L
01745 #define OLEOBJ_S_CANNOT_DOVERB_NOW              0x00040181L
01746 #define OLEOBJ_S_INVALIDHWND                    0x00040182L
01747 #define OLEOBJ_S_LAST                           0x0004018FL
01748
01749 #define OLEOBJ_E_FIRST                          0x80040180L
01750 #define OLEOBJ_E_NOVERBS                        0x80040180L
01751 #define OLEOBJ_E_INVALIDVERB                    0x80040181L
01752 #define OLEOBJ_E_LAST                           0x8004018FL
01753
01754 #define CLIENTSITE_S_FIRST                      0x00040190L
01755 #define CLIENTSITE_S_LAST                       0x0004019FL
01756
01757 #define CLIENTSITE_E_FIRST                      0x80040190L
01758 #define CLIENTSITE_E_LAST                       0x8004019FL
01759
01760 #define INPLACE_S_FIRST                         0x000401A0L
01761 #define INPLACE_S_TRUNCATED                     0x000401A0L
01762 #define INPLACE_S_LAST                          0x000401AFL
01763
01764 #define INPLACE_E_FIRST                         0x800401A0L
01765 #define INPLACE_E_NOTUNDOABLE                   0x800401A0L
01766 #define INPLACE_E_NOTOOLSPACE                   0x800401A1L
01767 #define INPLACE_E_LAST                          0x800401AFL
01768
01769 #define ENUM_S_FIRST                            0x000401B0L
01770 #define ENUM_S_LAST                             0x000401BFL
01771
01772 #define ENUM_E_FIRST                            0x800401B0L
01773 #define ENUM_E_LAST                             0x800401BFL
01774
01775 #define CONVERT10_S_FIRST                       0x000401C0L
01776 #define CONVERT10_S_NO_PRESENTATION             0x000401C0L
01777 #define CONVERT10_S_LAST                        0x000401CFL
01778
01779 #define CONVERT10_E_FIRST                       0x800401C0L
01780 #define CONVERT10_E_OLESTREAM_GET               0x800401C0L
01781 #define CONVERT10_E_OLESTREAM_PUT               0x800401C1L
01782 #define CONVERT10_E_OLESTREAM_FMT               0x800401C2L
01783 #define CONVERT10_E_OLESTREAM_BITMAP_TO_DIB     0x800401C3L
01784 #define CONVERT10_E_STG_FMT                     0x800401C4L
01785 #define CONVERT10_E_STG_NO_STD_STREAM           0x800401C5L
01786 #define CONVERT10_E_STG_DIB_TO_BITMAP           0x800401C6L
01787 #define CONVERT10_E_LAST                        0x800401CFL
01788
01789 #define CLIPBRD_S_FIRST                         0x000401D0L
01790 #define CLIPBRD_S_LAST                          0x000401DFL
01791
01792 #define CLIPBRD_E_FIRST                         0x800401D0L
01793 #define CLIPBRD_E_LAST                          0x800401DFL
01794 #define CLIPBRD_E_CANT_OPEN                     0x800401D0L
01795 #define CLIPBRD_E_CANT_EMPTY                    0x800401D1L
01796 #define CLIPBRD_E_CANT_SET                      0x800401D2L
01797 #define CLIPBRD_E_BAD_DATA                      0x800401D3L
01798 #define CLIPBRD_E_CANT_CLOSE                    0x800401D4L
01799
01800 #define MK_S_FIRST                              0x000401E0L
01801 #define MK_S_REDUCED_TO_SELF                    0x000401E2L
01802 #define MK_S_ME                                 0x000401E4L
01803 #define MK_S_HIM                                0x000401E5L
01804 #define MK_S_US                                 0x000401E6L
01805 #define MK_S_MONIKERALREADYREGISTERED           0x000401E7L
01806 #define MK_S_LAST                               0x000401EFL
01807
01808 #define MK_E_FIRST                              0x800401E0L
01809 #define MK_E_CONNECTMANUALLY                    0x800401E0L
01810 #define MK_E_EXCEEDEDDEADLINE                   0x800401E1L
01811 #define MK_E_NEEDGENERIC                        0x800401E2L
01812 #define MK_E_UNAVAILABLE                        0x800401E3L
```

```
01813 #define MK_E_SYNTAX                                     0x800401E4L
01814 #define MK_E_NOOBJECT                                   0x800401E5L
01815 #define MK_E_INVALIDEXTENSION                           0x800401E6L
01816 #define MK_E_INTERMEDIATEINTERFACENOTSUPPORTED           0x800401E7L
01817 #define MK_E_NOTBINDABLE                                0x800401E8L
01818 #define MK_E_NOTBOUND                                   0x800401E9L
01819 #define MK_E_CANTOPENFILE                               0x800401EAL
01820 #define MK_E_MUSTBOTHERUSER                             0x800401EBL
01821 #define MK_E_NOINVERSE                                  0x800401ECL
01822 #define MK_E_NOSTORAGE                                  0x800401EDL
01823 #define MK_E_NOPREFIX                                   0x800401EEL
01824 #define MK_E_ENUMERATION_FAILED                         0x800401EFL
01825 #define MK_E_LAST                                       0x800401EFL
01826
01827 #define CO_S_FIRST                                      0x000401F0L
01828 #define CO_S_LAST                                       0x000401FFL
01829
01830 #define CO_E_FIRST                                      0x800401F0L
01831 #define CO_E_NOTINITIALIZED                             0x800401F0L
01832 #define CO_E_ALREADYINITIALIZED                         0x800401F1L
01833 #define CO_E_CANTDETERMINECLASS                         0x800401F2L
01834 #define CO_E_CLASSSTRING                                0x800401F3L
01835 #define CO_E_IIDSTRING                                  0x800401F4L
01836 #define CO_E_APPNOTFOUND                                0x800401F5L
01837 #define CO_E_APPSINGLEUSE                               0x800401F6L
01838 #define CO_E_ERRORINAPP                                 0x800401F7L
01839 #define CO_E_DLLNOTFOUND                                0x800401F8L
01840 #define CO_E_ERRORINDLL                                 0x800401F9L
01841 #define CO_E_WRONGOSFORAPP                              0x800401FAL
01842 #define CO_E_OBJNOTREG                                  0x800401FBL
01843 #define CO_E_OBJISREG                                   0x800401FCL
01844 #define CO_E_OBJNOTCONNECTED                            0x800401FDL
01845 #define CO_E_APPDIDNTREG                                0x800401FEL
01846 #define CO_E_RELEASED                                   0x800401FFL
01847 #define CO_E_LAST                                       0x800401FFL
01848 #define CO_E_FAILEDTOIMPERSONATE                        0x80040200L
01849 #define CO_E_FAILEDTOGETSECCTX                          0x80040201L
01850 #define CO_E_FAILEDTOOPENTHREADTOKEN                    0x80040202L
01851 #define CO_E_FAILEDTOGETTOKENINFO                       0x80040203L
01852 #define CO_E_TRUSTEEDOESNTMATCHCLIENT                   0x80040204L
01853 #define CO_E_FAILEDTOQUERYCLIENTBLANKET                 0x80040205L
01854 #define CO_E_FAILEDTOSETDACL                            0x80040206L
01855 #define CO_E_ACCESSCHECKFAILED                          0x80040207L
01856 #define CO_E_NETACCESSAPIFAILED                         0x80040208L
01857 #define CO_E_WRONGTRUSTEENAMESYNTAX                     0x80040209L
01858 #define CO_E_INVALIDSID                                 0x8004020AL
01859 #define CO_E_CONVERSIONFAILED                           0x8004020BL
01860 #define CO_E_NOMATCHINGSIDFOUND                         0x8004020CL
01861 #define CO_E_LOOKUPACCSIDFAILED                         0x8004020DL
01862 #define CO_E_NOMATCHINGNAMEFOUND                        0x8004020EL
01863 #define CO_E_LOOKUPACCNAMEFAILED                        0x8004020FL
01864 #define CO_E_SETSERLHNDLFAILED                          0x80040210L
01865 #define CO_E_FAILEDTOGETWINDIR                          0x80040211L
01866 #define CO_E_PATHTOOLONG                                0x80040212L
01867 #define CO_E_FAILEDTOGENUUID                            0x80040213L
01868 #define CO_E_FAILEDTOCREATEFILE                         0x80040214L
01869 #define CO_E_FAILEDTOCLOSEHANDLE                        0x80040215L
01870 #define CO_E_EXCEEDSYSACLLIMIT                          0x80040216L
01871 #define CO_E_ACESINWRONGORDER                           0x80040217L
01872 #define CO_E_INCOMPATIBLESTREAMVERSION                  0x80040218L
01873 #define CO_E_FAILEDTOOPENPROCESSTOKEN                   0x80040219L
01874 #define CO_E_DECODEFAILED                               0x8004021AL
01875 #define CO_E_ACNOTINITIALIZED                           0x8004021BL
01876
01877 #define E_ACCESSDENIED                                  0x80070005L
01878 #define E_HANDLE                                        0x80070006L
01879 #define E_OUTOFMEMORY                                   0x8007000EL
01880 #define E_INVALIDARG                                    0x80070057L
01881
01882 /* For IKsPropertySets */
01883 #define E_PROP_ID_UNSUPPORTED                 0x80070490L
01884 #define E_PROP_SET_UNSUPPORTED                0x80070492L
01885
01886 #define CO_S_NOTALLINTERFACES                           0x00080012L
01887
01888 #define CO_E_CLASS_CREATE_FAILED                        0x80080001L
01889 #define CO_E_SCM_ERROR                                  0x80080002L
01890 #define CO_E_SCM_RPC_FAILURE                            0x80080003L
01891 #define CO_E_BAD_PATH                                   0x80080004L
01892 #define CO_E_SERVER_EXEC_FAILURE                        0x80080005L
01893 #define CO_E_OBJSRV_RPC_FAILURE                         0x80080006L
01894 #define MK_E_NO_NORMALIZED                              0x80080007L
01895 #define CO_E_SERVER_STOPPING                            0x80080008L
01896 #define MEM_E_INVALID_ROOT                              0x80080009L
01897 #define MEM_E_INVALID_LINK                              0x80080010L
01898 #define MEM_E_INVALID_SIZE                              0x80080011L
01899
```

```
01900
01901 #endif  /* __WINE_WINERROR_H */
```

5.11 wingdi.h

```
00001 #ifndef _WINGDI_
00002 #define _WINGDI_
00003 #ifndef NOGDI
00004
00005 #ifdef __cplusplus
00006 extern "C" {
00007 #endif
00008
00009 typedef struct _ABCFLOAT {
00010     FLOAT   abcfA;
00011     FLOAT   abcfB;
00012     FLOAT   abcfC;
00013 } ABCFLOAT, *PABCFLOAT, *LPABCFLOAT;
00014
00015 #define FONTMAPPER_MAX 10
00016
00017 typedef struct
00018 {
00019     WORD   wFirst;
00020     WORD   wSecond;
00021     INT  iKernAmount;
00022 } KERNINGPAIR, *LPKERNINGPAIR;
00023
00024 typedef struct tagPIXELFORMATDESCRIPTOR {
00025     WORD  nSize;
00026     WORD  nVersion;
00027     DWORD dwFlags;
00028     BYTE  iPixelType;
00029     BYTE  cColorBits;
00030     BYTE  cRedBits;
00031     BYTE  cRedShift;
00032     BYTE  cGreenBits;
00033     BYTE  cGreenShift;
00034     BYTE  cBlueBits;
00035     BYTE  cBlueShift;
00036     BYTE  cAlphaBits;
00037     BYTE  cAlphaShift;
00038     BYTE  cAccumBits;
00039     BYTE  cAccumRedBits;
00040     BYTE  cAccumGreenBits;
00041     BYTE  cAccumBlueBits;
00042     BYTE  cAccumAlphaBits;
00043     BYTE  cDepthBits;
00044     BYTE  cStencilBits;
00045     BYTE  cAuxBuffers;
00046     BYTE  iLayerType;
00047     BYTE  bReserved;
00048     DWORD dwLayerMask;
00049     DWORD dwVisibleMask;
00050     DWORD dwDamageMask;
00051 } PIXELFORMATDESCRIPTOR, *PPIXELFORMATDESCRIPTOR, *LPPIXELFORMATDESCRIPTOR;
00052
00053 #define PFD_TYPE_RGBA        0
00054 #define PFD_TYPE_COLORINDEX  1
00055
00056 #define PFD_MAIN_PLANE       0
00057 #define PFD_OVERLAY_PLANE    1
00058 #define PFD_UNDERLAY_PLANE   (-1)
00059
00060 #define PFD_DOUBLEBUFFER          0x00000001
00061 #define PFD_STEREO                0x00000002
00062 #define PFD_DRAW_TO_WINDOW        0x00000004
00063 #define PFD_DRAW_TO_BITMAP        0x00000008
00064 #define PFD_SUPPORT_GDI           0x00000010
00065 #define PFD_SUPPORT_OPENGL        0x00000020
00066 #define PFD_GENERIC_FORMAT        0x00000040
00067 #define PFD_NEED_PALETTE          0x00000080
00068 #define PFD_NEED_SYSTEM_PALETTE   0x00000100
00069 #define PFD_SWAP_EXCHANGE         0x00000200
00070 #define PFD_SWAP_COPY             0x00000400
00071 #define PFD_SWAP_LAYER_BUFFERS    0x00000800
00072 #define PFD_GENERIC_ACCELERATED   0x00001000
00073
00074 #define PFD_DEPTH_DONTCARE        0x20000000
00075 #define PFD_DOUBLEBUFFER_DONTCARE 0x40000000
00076 #define PFD_STEREO_DONTCARE       0x80000000
00077
00078 typedef struct tagCOLORADJUSTMENT
00079 {
```

```
00080     WORD   caSize;
00081     WORD   caFlags;
00082     WORD   caIlluminantIndex;
00083     WORD   caRedGamma;
00084     WORD   caGreenGamma;
00085     WORD   caBlueGamma;
00086     WORD   caReferenceBlack;
00087     WORD   caReferenceWhite;
00088     SHORT  caContrast;
00089     SHORT  caBrightness;
00090     SHORT  caColorfulness;
00091     SHORT  caRedGreenTint;
00092 } COLORADJUSTMENT, *PCOLORADJUSTMENT, *LPCOLORADJUSTMENT;
00093
00094 #define CA_NEGATIVE          0x0001
00095 #define CA_LOG_FILTER        0x0002
00096
00097 #define ILLUMINANT_DEVICE_DEFAULT   0
00098 #define ILLUMINANT_A                1
00099 #define ILLUMINANT_B                2
00100 #define ILLUMINANT_C                3
00101 #define ILLUMINANT_D50              4
00102 #define ILLUMINANT_D55              5
00103 #define ILLUMINANT_D65              6
00104 #define ILLUMINANT_D75              7
00105 #define ILLUMINANT_F2               8
00106 #define ILLUMINANT_MAX_INDEX        ILLUMINANT_F2
00107
00108 #define ILLUMINANT_TUNGSTEN         ILLUMINANT_A
00109 #define ILLUMINANT_DAYLIGHT         ILLUMINANT_C
00110 #define ILLUMINANT_FLUORESCENT      ILLUMINANT_F2
00111 #define ILLUMINANT_NTSC             ILLUMINANT_C
00112
00113 #define RGB_GAMMA_MIN               (WORD)02500
00114 #define RGB_GAMMA_MAX               (WORD)65000
00115
00116 #define REFERENCE_WHITE_MIN         (WORD)6000
00117 #define REFERENCE_WHITE_MAX         (WORD)10000
00118 #define REFERENCE_BLACK_MIN         (WORD)0
00119 #define REFERENCE_BLACK_MAX         (WORD)4000
00120
00121 #define COLOR_ADJ_MIN               ((SHORT)-100)
00122 #define COLOR_ADJ_MAX               (SHORT) 100
00123
00124 typedef LONG FXPT16DOT16, *LPFXPT16DOT16;
00125 typedef LONG FXPT2DOT30, *LPFXPT2DOT30;
00126 typedef LONG LCSCSTYPE;
00127 typedef LONG LCSGAMUTMATCH;
00128
00129 #define LCS_CALIBRATED_RGB    0x00000000L
00130 #define LCS_DEVICE_RGB        0x00000001L
00131 #define LCS_DEVICE_CMYK       0x00000002L
00132
00133 #define LCS_GM_BUSINESS       0x00000001L
00134 #define LCS_GM_GRAPHICS       0x00000002L
00135 #define LCS_GM_IMAGES         0x00000004L
00136
00137 #define CM_OUT_OF_GAMUT       255
00138 #define CM_IN_GAMUT           0
00139
00140 typedef struct tagCIEXYZ
00141 {
00142   FXPT2DOT30 ciexyzX;
00143   FXPT2DOT30 ciexyzY;
00144   FXPT2DOT30 ciexyzZ;
00145 } CIEXYZ, *LPCIEXYZ;
00146
00147 typedef struct tagCIEXYZTRIPLE
00148 {
00149   CIEXYZ ciexyzRed;
00150   CIEXYZ ciexyzGreen;
00151   CIEXYZ ciexyzBlue;
00152 } CIEXYZTRIPLE, *LPCIEXYZTRIPLE;
00153
00154 typedef struct tagLOGCOLORSPACEA
00155 {
00156   DWORD lcsSignature;
00157   DWORD lcsVersion;
00158   DWORD lcsSize;
00159   LCSCSTYPE lcsCSType;
00160   LCSGAMUTMATCH lcsIntent;
00161   CIEXYZTRIPLE lcsEndpoints;
00162   DWORD lcsGammaRed;
00163   DWORD lcsGammaGreen;
00164   DWORD lcsGammaBlue;
00165   CHAR lcsFilename[MAX_PATH];
00166 } LOGCOLORSPACEA, *LPLOGCOLORSPACEA;
```

```
00167
00168  typedef struct tagLOGCOLORSPACEW
00169 {
00170   DWORD lcsSignature;
00171   DWORD lcsVersion;
00172   DWORD lcsSize;
00173   LCSCSTYPE lcsCSType;
00174   LCSGAMUTMATCH lcsIntent;
00175   CIEXYZTRIPLE lcsEndpoints;
00176   DWORD lcsGammaRed;
00177   DWORD lcsGammaGreen;
00178   DWORD lcsGammaBlue;
00179   WCHAR lcsFilename[MAX_PATH];
00180 } LOGCOLORSPACEW, *LPLOGCOLORSPACEW;
00181
00182 DECL_WINELIB_TYPE_AW(LPLOGCOLORSPACE)
00183 DECL_WINELIB_TYPE_AW(LOGCOLORSPACE)
00184
00185 #define DC_FIELDS       1
00186 #define DC_PAPERS       2
00187 #define DC_PAPERSIZE        3
00188 #define DC_MINEXTENT        4
00189 #define DC_MAXEXTENT        5
00190 #define DC_BINS         6
00191 #define DC_DUPLEX       7
00192 #define DC_SIZE         8
00193 #define DC_EXTRA        9
00194 #define DC_VERSION      10
00195 #define DC_DRIVER       11
00196 #define DC_BINNAMES     12
00197 #define DC_ENUMRESOLUTIONS  13
00198 #define DC_FILEDEPENDENCIES 14
00199 #define DC_TRUETYPE     15
00200 #define DC_PAPERNAMES       16
00201 #define DC_ORIENTATION      17
00202 #define DC_COPIES       18
00203 #define DC_BINADJUST            19
00204 #define DC_EMF_COMPLIANT        20
00205 #define DC_DATATYPE_PRODUCED    21
00206 #define DC_COLLATE              22
00207 #define DC_MANUFACTURER         23
00208 #define DC_MODEL                24
00209 #define DC_PERSONALITY          25
00210 #define DC_PRINTRATE            26
00211 #define DC_PRINTRATEUNIT        27
00212 #define DC_PRINTERMEM           28
00213 #define DC_MEDIAREADY           29
00214 #define DC_STAPLE               30
00215 #define DC_PRINTRATEPPM         31
00216 #define DC_COLORDEVICE          32
00217 #define DC_NUP                  33
00218
00219 #define DCTT_BITMAP             0x00000001L
00220 #define DCTT_DOWNLOAD           0x00000002L
00221 #define DCTT_SUBDEV             0x00000004L
00222 #define DCTT_DOWNLOAD_OUTLINE   0x00000008L
00223
00224 #define DCBA_FACEUPNONE         0x0000
00225 #define DCBA_FACEUPCENTER       0x0001
00226 #define DCBA_FACEUPLEFT         0x0002
00227 #define DCBA_FACEUPRIGHT        0x0003
00228 #define DCBA_FACEDOWNNONE       0x0100
00229 #define DCBA_FACEDOWNCENTER     0x0101
00230 #define DCBA_FACEDOWNLEFT       0x0102
00231 #define DCBA_FACEDOWNRIGHT      0x0103
00232
00233 #define PRINTRATEUNIT_PPM       1
00234 #define PRINTRATEUNIT_CPS       2
00235 #define PRINTRATEUNIT_LPM       3
00236 #define PRINTRATEUNIT_IPM       4
00237
00238 /* Flag returned from Escape QUERYDIBSUPPORT */
00239 #define QDI_SETDIBITS       1
00240 #define QDI_GETDIBITS       2
00241 #define QDI_DIBTOSCREEN     4
00242 #define QDI_STRETCHDIB      8
00243
00244
00245 /* GDI Escape commands */
00246 #define NEWFRAME        1
00247 #define ABORTDOC        2
00248 #define NEXTBAND        3
00249 #define SETCOLORTABLE       4
00250 #define GETCOLORTABLE       5
00251 #define FLUSHOUTPUT     6
00252 #define DRAFTMODE       7
00253 #define QUERYESCSUPPORT     8
```

```
00254 #define SETABORTPROC        9
00255 #define STARTDOC        10
00256 #define ENDDOC          11
00257 #define GETPHYSPAGESIZE     12
00258 #define GETPRINTINGOFFSET   13
00259 #define GETSCALINGFACTOR    14
00260 #define MFCOMMENT       15
00261 #define GETPENWIDTH     16
00262 #define SETCOPYCOUNT        17
00263 #define SELECTPAPERSOURCE   18
00264 #define DEVICEDATA      19
00265 #define PASSTHROUGH     19
00266 #define GETTECHNOLGY        20
00267 #define GETTECHNOLOGY       20 /* yes, both of them */
00268 #define SETLINECAP      21
00269 #define SETLINEJOIN     22
00270 #define SETMITERLIMIT       23
00271 #define BANDINFO        24
00272 #define DRAWPATTERNRECT     25
00273 #define GETVECTORPENSIZE    26
00274 #define GETVECTORBRUSHSIZE  27
00275 #define ENABLEDUPLEX        28
00276 #define GETSETPAPERBINS     29
00277 #define GETSETPRINTORIENT   30
00278 #define ENUMPAPERBINS       31
00279 #define SETDIBSCALING       32
00280 #define EPSPRINTING     33
00281 #define ENUMPAPERMETRICS    34
00282 #define GETSETPAPERMETRICS  35
00283 #define POSTSCRIPT_DATA     37
00284 #define POSTSCRIPT_IGNORE   38
00285 #define MOUSETRAILS     39
00286 #define GETDEVICEUNITS      42
00287
00288 #define DESKTOPVERTRES          117
00289 #define DESKTOPHORZRES          118
00290
00291 #define GETEXTENDEDTEXTMETRICS  256
00292 #define GETEXTENTTABLE      257
00293 #define GETPAIRKERNTABLE    258
00294 #define GETTRACKKERNTABLE   259
00295 #define EXTTEXTOUT      512
00296 #define GETFACENAME     513
00297 #define DOWNLOADFACE        514
00298 #define ENABLERELATIVEWIDTHS    768
00299 #define ENABLEPAIRKERNING   769
00300 #define SETKERNTRACK        770
00301 #define SETALLJUSTVALUES    771
00302 #define SETCHARSET      772
00303
00304 #define STRETCHBLT      2048
00305 #define GETSETSCREENPARAMS  3072
00306 #define QUERYDIBSUPPORT     3073
00307 #define BEGIN_PATH      4096
00308 #define CLIP_TO_PATH        4097
00309 #define END_PATH        4098
00310 #define EXT_DEVICE_CAPS     4099
00311 #define RESTORE_CTM     4100
00312 #define SAVE_CTM        4101
00313 #define SET_ARC_DIRECTION   4102
00314 #define SET_BACKGROUND_COLOR    4103
00315 #define SET_POLY_MODE       4104
00316 #define SET_SCREEN_ANGLE    4105
00317 #define SET_SPREAD      4106
00318 #define TRANSFORM_CTM       4107
00319 #define SET_CLIP_BOX        4108
00320 #define SET_BOUNDS      4109
00321 #define SET_MIRROR_MODE     4110
00322 #define OPENCHANNEL     4110
00323 #define DOWNLOADHEADER      4111
00324 #define CLOSECHANNEL        4112
00325 #define POSTSCRIPT_PASSTHROUGH  4115
00326 #define ENCAPSULATED_POSTSCRIPT 4116
00327 #define POSTSCRIPT_IDENTIFY 4117
00328 #define POSTSCRIPT_INJECTION    4118
00329
00330 /* for POSTSCRIPT_IDENTIFY */
00331 #define PSIDENT_GDICENTRIC  0
00332 #define PSIDENT_PSCENTRIC   1
00333
00334
00335 #define QDI_SETDIBITS           1
00336 #define QDI_GETDIBITS           2
00337 #define QDI_DIBTOSCREEN         4
00338 #define QDI_STRETCHDIB          8
00339
00340 /* Spooler Error Codes */
```

```
00341 #define SP_NOTREPORTED  0x4000
00342 #define SP_ERROR    (-1)
00343 #define SP_APPABORT (-2)
00344 #define SP_USERABORT    (-3)
00345 #define SP_OUTOFDISK    (-4)
00346 #define SP_OUTOFMEMORY  (-5)
00347
00348 #define PR_JOBSTATUS     0
00349
00350   /* Raster operations */
00351
00352 #define R2_BLACK         1
00353 #define R2_NOTMERGEPEN   2
00354 #define R2_MASKNOTPEN    3
00355 #define R2_NOTCOPYPEN    4
00356 #define R2_MASKPENNOT    5
00357 #define R2_NOT           6
00358 #define R2_XORPEN        7
00359 #define R2_NOTMASKPEN    8
00360 #define R2_MASKPEN       9
00361 #define R2_NOTXORPEN    10
00362 #define R2_NOP          11
00363 #define R2_MERGENOTPEN  12
00364 #define R2_COPYPEN      13
00365 #define R2_MERGEPENNOT  14
00366 #define R2_MERGEPEN     15
00367 #define R2_WHITE        16
00368
00369 #define SRCCOPY         0xcc0020
00370 #define SRCPAINT        0xee0086
00371 #define SRCAND          0x8800c6
00372 #define SRCINVERT       0x660046
00373 #define SRCERASE        0x440328
00374 #define NOTSRCCOPY      0x330008
00375 #define NOTSRCERASE     0x1100a6
00376 #define MERGECOPY       0xc000ca
00377 #define MERGEPAINT      0xbb0226
00378 #define PATCOPY         0xf00021
00379 #define PATPAINT        0xfb0a09
00380 #define PATINVERT       0x5a0049
00381 #define DSTINVERT       0x550009
00382 #define BLACKNESS       0x000042
00383 #define WHITENESS       0xff0062
00384
00385   /* StretchBlt() modes */
00386 #define BLACKONWHITE         1
00387 #define WHITEONBLACK         2
00388 #define COLORONCOLOR         3
00389 #define HALFTONE             4
00390 #define MAXSTRETCHBLTMODE    4
00391
00392 #define STRETCH_ANDSCANS     BLACKONWHITE
00393 #define STRETCH_ORSCANS      WHITEONBLACK
00394 #define STRETCH_DELETESCANS  COLORONCOLOR
00395 #define STRETCH_HALFTONE     HALFTONE
00396
00397   /* Colors */
00398
00399 #define RGB(r,g,b)          ((COLORREF)((r) | ((g) « 8) | ((b) « 16)))
00400 #define PALETTERGB(r,g,b)   (0x02000000 | RGB(r,g,b))
00401 #define PALETTEINDEX(i)     ((COLORREF)(0x01000000 | (WORD)(i)))
00402
00403 #define GetRValue(rgb)      ((rgb) & 0xff)
00404 #define GetGValue(rgb)      (((rgb) » 8) & 0xff)
00405 #define GetBValue(rgb)      (((rgb) » 16) & 0xff)
00406
00407 #define GetKValue(cmyk)     ((BYTE)  (cmyk) )
00408 #define GetYValue(cmyk)     ((BYTE) ((cymk) » 8))
00409 #define GetMValue(cmyk)     ((BYTE) ((cymk) » 16))
00410 #define GetCValue(cmyk)     ((BYTE) ((cymk) » 24))
00411
00412 #define CMYK(c,m,y,k)
      ((COLOREF)((((BYTE)(k)|((WORD)((BYTE)(y))«8))|(((DWORD)(BYTE)(m))«16))|(((DWORD)(BYTE)(c))«24)))
00413
00414
00415 #define ICM_OFF   1
00416 #define ICM_ON    2
00417 #define ICM_QUERY 3
00418
00419   /* Bounds Accumulation APIs */
00420 #define DCB_RESET       0x0001
00421 #define DCB_ACCUMULATE  0x0002
00422 #define DCB_DIRTY       DCB_ACCUMULATE
00423 #define DCB_SET         (DCB_RESET | DCB_ACCUMULATE)
00424 #define DCB_ENABLE      0x0004
00425 #define DCB_DISABLE     0x0008
00426
```

```
00427 typedef struct
00428 {
00429     LONG paXCount;
00430     LONG paYCount;
00431     LONG paXExt;
00432     LONG paYExt;
00433     BYTE paRGBs;
00434 } PELARRAY, *PPELARRAY, *LPPELARRAY;
00435
00436   /* Bitmaps */
00437
00438 typedef struct
00439 {
00440     INT  bmType;
00441     INT  bmWidth;
00442     INT  bmHeight;
00443     INT  bmWidthBytes;
00444     WORD   bmPlanes;
00445     WORD   bmBitsPixel;
00446     LPVOID bmBits;
00447 } BITMAP, *PBITMAP, *LPBITMAP;
00448
00449
00450   /* Brushes */
00451
00452 typedef struct
00453 {
00454     UINT     lbStyle;
00455     COLORREF   lbColor;
00456     INT      lbHatch;
00457 } LOGBRUSH, *PLOGBRUSH, *LPLOGBRUSH;
00458
00459 typedef LOGBRUSH PATTERN, *PPATTERN, *LPPATTERN;
00460
00461
00462   /* Brush styles */
00463 #define BS_SOLID        0
00464 #define BS_NULL         1
00465 #define BS_HOLLOW       1
00466 #define BS_HATCHED      2
00467 #define BS_PATTERN      3
00468 #define BS_INDEXED      4
00469 #define BS_DIBPATTERN       5
00470 #define BS_DIBPATTERNPT     6
00471 #define BS_PATTERN8X8       7
00472 #define BS_DIBPATTERN8X8    8
00473 #define BS_MONOPATTERN      9
00474
00475   /* Hatch styles */
00476 #define HS_HORIZONTAL       0
00477 #define HS_VERTICAL         1
00478 #define HS_FDIAGONAL        2
00479 #define HS_BDIAGONAL        3
00480 #define HS_CROSS            4
00481 #define HS_DIAGCROSS        5
00482
00483   /* Fonts */
00484
00485 #define LF_FACESIZE     32
00486 #define LF_FULLFACESIZE 64
00487
00488 #define RASTER_FONTTYPE     0x0001
00489 #define DEVICE_FONTTYPE     0x0002
00490 #define TRUETYPE_FONTTYPE   0x0004
00491
00492 typedef struct
00493 {
00494     LONG   lfHeight;
00495     LONG   lfWidth;
00496     LONG   lfEscapement;
00497     LONG   lfOrientation;
00498     LONG   lfWeight;
00499     BYTE   lfItalic;
00500     BYTE   lfUnderline;
00501     BYTE   lfStrikeOut;
00502     BYTE   lfCharSet;
00503     BYTE   lfOutPrecision;
00504     BYTE   lfClipPrecision;
00505     BYTE   lfQuality;
00506     BYTE   lfPitchAndFamily;
00507     CHAR   lfFaceName[LF_FACESIZE];
00508 } LOGFONTA, *PLOGFONTA, *LPLOGFONTA;
00509
00510 typedef struct
00511 {
00512     LONG   lfHeight;
00513     LONG   lfWidth;
```

```
00514     LONG   lfEscapement;
00515     LONG   lfOrientation;
00516     LONG   lfWeight;
00517     BYTE   lfItalic;
00518     BYTE   lfUnderline;
00519     BYTE   lfStrikeOut;
00520     BYTE   lfCharSet;
00521     BYTE   lfOutPrecision;
00522     BYTE   lfClipPrecision;
00523     BYTE   lfQuality;
00524     BYTE   lfPitchAndFamily;
00525     WCHAR  lfFaceName[LF_FACESIZE];
00526 } LOGFONTW, *PLOGFONTW, *LPLOGFONTW;
00527
00528 DECL_WINELIB_TYPE_AW(LOGFONT)
00529 DECL_WINELIB_TYPE_AW(PLOGFONT)
00530 DECL_WINELIB_TYPE_AW(LPLOGFONT)
00531
00532 typedef struct
00533 {
00534   LOGFONTA elfLogFont;
00535   BYTE       elfFullName[LF_FULLFACESIZE];
00536   BYTE       elfStyle[LF_FACESIZE];
00537 } ENUMLOGFONTA, *LPENUMLOGFONTA;
00538
00539 typedef struct
00540 {
00541   LOGFONTW elfLogFont;
00542   WCHAR      elfFullName[LF_FULLFACESIZE];
00543   WCHAR      elfStyle[LF_FACESIZE];
00544 } ENUMLOGFONTW, *LPENUMLOGFONTW;
00545
00546 DECL_WINELIB_TYPE_AW(ENUMLOGFONT)
00547 DECL_WINELIB_TYPE_AW(LPENUMLOGFONT)
00548
00549 typedef struct
00550 {
00551   LOGFONTA elfLogFont;
00552   BYTE       elfFullName[LF_FULLFACESIZE];
00553   BYTE       elfStyle[LF_FACESIZE];
00554   BYTE       elfScript[LF_FACESIZE];
00555 } ENUMLOGFONTEXA,*LPENUMLOGFONTEXA;
00556
00557 typedef struct
00558 {
00559   LOGFONTW elfLogFont;
00560   WCHAR      elfFullName[LF_FULLFACESIZE];
00561   WCHAR      elfStyle[LF_FACESIZE];
00562   WCHAR      elfScript[LF_FACESIZE];
00563 } ENUMLOGFONTEXW,*LPENUMLOGFONTEXW;
00564
00565 DECL_WINELIB_TYPE_AW(ENUMLOGFONTEX)
00566 DECL_WINELIB_TYPE_AW(LPENUMLOGFONTEX)
00567
00568 /*
00569  * The FONTSIGNATURE tells which Unicode ranges and which code pages
00570  * have glyphs in a font.
00571  *
00572  * fsUsb  128-bit bitmap. The most significant bits are 10 (magic number).
00573  *        The remaining 126 bits map the Unicode ISO 10646 subranges
00574  *        for which the font provides glyphs.
00575  *
00576  * fsCsb  64-bit bitmap. The low 32 bits map the Windows codepages for
00577  *        which the font provides glyphs. The high 32 bits are for
00578  *        non Windows codepages.
00579  */
00580 typedef struct
00581 {
00582   DWORD fsUsb[4];
00583   DWORD fsCsb[2];
00584 } FONTSIGNATURE, *PFONTSIGNATURE, *LPFONTSIGNATURE;
00585
00586 typedef struct
00587 {
00588   UINT  ciCharset; /* character set */
00589   UINT  ciACP; /* ANSI code page */
00590   FONTSIGNATURE fs;
00591 } CHARSETINFO, *PCHARSETINFO, *LPCHARSETINFO;
00592
00593 /* Flags for TranslateCharsetInfo */
00594 #define TCI_SRCCHARSET    1
00595 #define TCI_SRCCODEPAGE   2
00596 #define TCI_SRCFONTSIG    3
00597
00598 typedef struct
00599 {
00600     DWORD lsUsb[4];
```

```
00601     DWORD lsCsbDefault[2];
00602     DWORD lsCsbSupported[2];
00603 } LOCALESIGNATURE, *PLOCALESIGNATUR, *LPLOCALESIGNATUREE;
00604
00605
00606 /* Flags for ModifyWorldTransform */
00607 #define MWT_IDENTITY      1
00608 #define MWT_LEFTMULTIPLY  2
00609 #define MWT_RIGHTMULTIPLY 3
00610 #define MWT_MIN           MWT_IDENTITY
00611 #define MWT_MAX           MWT_RIGHTMULTIPLY
00612
00613 /* Object Definitions for EnumObjects() */
00614 #define OBJ_PEN             1
00615 #define OBJ_BRUSH           2
00616 #define OBJ_DC              3
00617 #define OBJ_METADC          4
00618 #define OBJ_PAL             5
00619 #define OBJ_FONT            6
00620 #define OBJ_BITMAP          7
00621 #define OBJ_REGION          8
00622 #define OBJ_METAFILE        9
00623 #define OBJ_MEMDC           10
00624 #define OBJ_EXTPEN          11
00625 #define OBJ_ENHMETADC       12
00626 #define OBJ_ENHMETAFILE     13
00627
00628 typedef struct
00629 {
00630     FLOAT  eM11;
00631     FLOAT  eM12;
00632     FLOAT  eM21;
00633     FLOAT  eM22;
00634     FLOAT  eDx;
00635     FLOAT  eDy;
00636 } XFORM, *PXFORM, *LPXFORM;
00637
00638   /* lfWeight values */
00639 #define FW_DONTCARE     0
00640 #define FW_THIN         100
00641 #define FW_EXTRALIGHT       200
00642 #define FW_ULTRALIGHT       200
00643 #define FW_LIGHT        300
00644 #define FW_NORMAL       400
00645 #define FW_REGULAR      400
00646 #define FW_MEDIUM       500
00647 #define FW_SEMIBOLD     600
00648 #define FW_DEMIBOLD     600
00649 #define FW_BOLD         700
00650 #define FW_EXTRABOLD        800
00651 #define FW_ULTRABOLD        800
00652 #define FW_HEAVY        900
00653 #define FW_BLACK        900
00654
00655   /* lfCharSet values */
00656 #define ANSI_CHARSET          (BYTE)0   /* CP1252, ansi-0, iso8859-{1,15} */
00657 #define DEFAULT_CHARSET       (BYTE)1
00658 #define SYMBOL_CHARSET        (BYTE)2
00659 #define SHIFTJIS_CHARSET      (BYTE)128 /* CP932 */
00660 #define HANGEUL_CHARSET       (BYTE)129 /* CP949, ksc5601.1987-0 */
00661 #define HANGUL_CHARSET        HANGEUL_CHARSET
00662 #define GB2312_CHARSET        (BYTE)134 /* CP936, gb2312.1980-0 */
00663 #define CHINESEBIG5_CHARSET   (BYTE)136 /* CP950, big5.et-0 */
00664 #define GREEK_CHARSET         (BYTE)161 /* CP1253 */
00665 #define TURKISH_CHARSET       (BYTE)162 /* CP1254, -iso8859-9 */
00666 #define HEBREW_CHARSET        (BYTE)177 /* CP1255, -iso8859-8 */
00667 #define ARABIC_CHARSET        (BYTE)178 /* CP1256, -iso8859-6 */
00668 #define BALTIC_CHARSET        (BYTE)186 /* CP1257, -iso8859-13 */
00669 #define RUSSIAN_CHARSET       (BYTE)204 /* CP1251, -iso8859-5 */
00670 #define EE_CHARSET        (BYTE)238 /* CP1250, -iso8859-2 */
00671 #define EASTEUROPE_CHARSET    EE_CHARSET
00672 #define THAI_CHARSET          (BYTE)222 /* CP874, iso8859-11, tis620 */
00673 #define JOHAB_CHARSET         (BYTE)130 /* korean (johab) CP1361 */
00674 #define MAC_CHARSET           (BYTE)77
00675 #define OEM_CHARSET       (BYTE)255
00676 /* I don't know if the values of *_CHARSET macros are defined in Windows
00677  * or if we can choose them as we want. -- srtxg
00678  */
00679 #define VISCII_CHARSET        (BYTE)240 /* viscii1.1-1 */
00680 #define TCVN_CHARSET          (BYTE)241 /* tcvn-0 */
00681 #define KOI8_CHARSET          (BYTE)242 /* koi8-{r,u,ru} */
00682 #define ISO3_CHARSET          (BYTE)243 /* iso8859-3 */
00683 #define ISO4_CHARSET          (BYTE)244 /* iso8859-4 */
00684 #define ISO10_CHARSET         (BYTE)245 /* iso8859-10 */
00685 #define CELTIC_CHARSET        (BYTE)246 /* iso8859-14 */
00686
00687 #define FS_LATIN1              0x00000001L
```

```
00688 #define FS_LATIN2              0x00000002L
00689 #define FS_CYRILLIC            0x00000004L
00690 #define FS_GREEK               0x00000008L
00691 #define FS_TURKISH             0x00000010L
00692 #define FS_HEBREW              0x00000020L
00693 #define FS_ARABIC              0x00000040L
00694 #define FS_BALTIC              0x00000080L
00695 #define FS_VIETNAMESE          0x00000100L
00696 #define FS_THAI                0x00010000L
00697 #define FS_JISJAPAN            0x00020000L
00698 #define FS_CHINESESIMP         0x00040000L
00699 #define FS_WANSUNG             0x00080000L
00700 #define FS_CHINESETRAD         0x00100000L
00701 #define FS_JOHAB               0x00200000L
00702 #define FS_SYMBOL              0x80000000L
00703
00704   /* lfOutPrecision values */
00705 #define OUT_DEFAULT_PRECIS  0
00706 #define OUT_STRING_PRECIS   1
00707 #define OUT_CHARACTER_PRECIS    2
00708 #define OUT_STROKE_PRECIS   3
00709 #define OUT_TT_PRECIS       4
00710 #define OUT_DEVICE_PRECIS   5
00711 #define OUT_RASTER_PRECIS   6
00712 #define OUT_TT_ONLY_PRECIS  7
00713 #define OUT_OUTLINE_PRECIS      8
00714
00715   /* lfClipPrecision values */
00716 #define CLIP_DEFAULT_PRECIS     0x00
00717 #define CLIP_CHARACTER_PRECIS   0x01
00718 #define CLIP_STROKE_PRECIS      0x02
00719 #define CLIP_MASK       0x0F
00720 #define CLIP_LH_ANGLES      0x10
00721 #define CLIP_TT_ALWAYS      0x20
00722 #define CLIP_EMBEDDED       0x80
00723
00724   /* lfQuality values */
00725 #define DEFAULT_QUALITY        0
00726 #define DRAFT_QUALITY          1
00727 #define PROOF_QUALITY          2
00728 #define NONANTIALIASED_QUALITY 3
00729 #define ANTIALIASED_QUALITY    4
00730
00731   /* lfPitchAndFamily pitch values */
00732 #define DEFAULT_PITCH       0x00
00733 #define FIXED_PITCH         0x01
00734 #define VARIABLE_PITCH      0x02
00735 #define MONO_FONT           0x08
00736
00737 #define FF_DONTCARE         0x00
00738 #define FF_ROMAN            0x10
00739 #define FF_SWISS            0x20
00740 #define FF_MODERN           0x30
00741 #define FF_SCRIPT           0x40
00742 #define FF_DECORATIVE       0x50
00743
00744 typedef struct
00745 {
00746     LONG      tmHeight;
00747     LONG      tmAscent;
00748     LONG      tmDescent;
00749     LONG      tmInternalLeading;
00750     LONG      tmExternalLeading;
00751     LONG      tmAveCharWidth;
00752     LONG      tmMaxCharWidth;
00753     LONG      tmWeight;
00754     LONG      tmOverhang;
00755     LONG      tmDigitizedAspectX;
00756     LONG      tmDigitizedAspectY;
00757     BYTE      tmFirstChar;
00758     BYTE      tmLastChar;
00759     BYTE      tmDefaultChar;
00760     BYTE      tmBreakChar;
00761     BYTE      tmItalic;
00762     BYTE      tmUnderlined;
00763     BYTE      tmStruckOut;
00764     BYTE      tmPitchAndFamily;
00765     BYTE      tmCharSet;
00766 } TEXTMETRICA, *LPTEXTMETRICA, *PTEXTMETRICA;
00767
00768 typedef struct
00769 {
00770     LONG      tmHeight;
00771     LONG      tmAscent;
00772     LONG      tmDescent;
00773     LONG      tmInternalLeading;
00774     LONG      tmExternalLeading;
```

```
00775     LONG      tmAveCharWidth;
00776     LONG      tmMaxCharWidth;
00777     LONG      tmWeight;
00778     LONG      tmOverhang;
00779     LONG      tmDigitizedAspectX;
00780     LONG      tmDigitizedAspectY;
00781     WCHAR     tmFirstChar;
00782     WCHAR     tmLastChar;
00783     WCHAR     tmDefaultChar;
00784     WCHAR     tmBreakChar;
00785     BYTE      tmItalic;
00786     BYTE      tmUnderlined;
00787     BYTE      tmStruckOut;
00788     BYTE      tmPitchAndFamily;
00789     BYTE      tmCharSet;
00790 } TEXTMETRICW, *LPTEXTMETRICW, *PTEXTMETRICW;
00791
00792 DECL_WINELIB_TYPE_AW(TEXTMETRIC)
00793 DECL_WINELIB_TYPE_AW(PTEXTMETRIC)
00794 DECL_WINELIB_TYPE_AW(LPTEXTMETRIC)
00795
00796
00797 typedef struct tagPANOSE
00798 {
00799     BYTE bFamilyType;
00800     BYTE bSerifStyle;
00801     BYTE bWeight;
00802     BYTE bProportion;
00803     BYTE bContrast;
00804     BYTE bStrokeVariation;
00805     BYTE bArmStyle;
00806     BYTE bLetterform;
00807     BYTE bMidline;
00808     BYTE bXHeight;
00809 } PANOSE, *LPPANOSE;
00810
00811 #define PANOSE_COUNT                    10
00812
00813 #define PANOSE_FAMILYTYPE_INDEX         0
00814 #define PAN_SERIFSTYLE_INDEX            1
00815 #define PAN_WEIGTH_INDEX                2
00816 #define PAN_PROPORTION_INDEX            3
00817 #define PAN_CONTRAST_INDEX              4
00818 #define PAN_STROKEVARIATION_INDEX       5
00819 #define PAN_ARMSTYLE_INDEX              6
00820 #define PAN_LETTERFORM_INDEX            7
00821 #define PAN_MIDLINE_INDEX               8
00822 #define PAN_XHEIGHT_INDEX               9
00823
00824 #define PAN_CULTURE_LATIN               0
00825
00826 #define PAN_ANY                         0
00827 #define PAN_NO_FIT                      1
00828
00829 #define PAN_FAMILY_TEXT_DISPLAY         2
00830 #define PAN_FAMILY_SCRIPT               3
00831 #define PAN_FAMILY_DECORATIVE           4
00832 #define PAN_FAMILY_PICTORIAL            5
00833
00834 #define PAN_SERIF_COVE                  2
00835 #define PAN_SERIF_OBTUSE_COVE           3
00836 #define PAN_SERIF_SQUARE_COVE           4
00837 #define PAN_SERIF_OBTUSE_SQUARE_COVE    5
00838 #define PAN_SERIF_SQUARE                6
00839 #define PAN_SERIF_THIN                  7
00840 #define PAN_SERIF_BONE                  8
00841 #define PAN_SERIF_EXAGGERATED           9
00842 #define PAN_SERIF_TRIANGLE              10
00843 #define PAN_SERIF_NORMAL_SANS           11
00844 #define PAN_SERIF_OBTUSE_SANS           12
00845 #define PAN_SERIF_PERP_SANS             13
00846 #define PAN_SERIF_FLARED                14
00847 #define PAN_SERIF_ROUNDED               15
00848
00849 #define PAN_WEIGHT_VERY_LIGHT           2
00850 #define PAN_WEIGHT_LIGHT                3
00851 #define PAN_WEIGHT_THIN                 4
00852 #define PAN_WEIGHT_BOOK                 5
00853 #define PAN_WEIGHT_MEDIUM               6
00854 #define PAN_WEIGHT_DEMI                 7
00855 #define PAN_WEIGHT_BOLD                 8
00856 #define PAN_WEIGHT_HEAVY                9
00857 #define PAN_WEIGHT_BLACK                10
00858 #define PAN_WEIGHT_NORD                 11
00859
00860 #define PAN_PROP_OLD_STYLE              2
00861 #define PAN_PROP_MODERN                 3
```

```
00862 #define PAN_PROP_EVEN_WIDTH            4
00863 #define PAN_PROP_EXPANDED              5
00864 #define PAN_PROP_CONDENSED             6
00865 #define PAN_PROP_VERY_EXPANDED         7
00866 #define PAN_PROP_VERY_CONDENSED        8
00867 #define PAN_PROP_MONOSPACED            9
00868
00869 #define PAN_CONTRAST_NONE              2
00870 #define PAN_CONTRAST_VERY_LOW          3
00871 #define PAN_CONTRAST_LOW               4
00872 #define PAN_CONTRAST_MEDIUM_LOW        5
00873 #define PAN_CONTRAST_MEDIUM            6
00874 #define PAN_CONTRAST_MEDIUM_HIGH       7
00875 #define PAN_CONTRAST_HIGH              8
00876 #define PAN_CONTRAST_VERY_HIGH         9
00877
00878 #define PAN_STROKE_GRADUAL_DIAG        2
00879 #define PAN_STROKE_GRADUAL_TRAN        3
00880 #define PAN_STROKE_GRADUAL_VERT        4
00881 #define PAN_STROKE_GRADUAL_HORZ        5
00882 #define PAN_STROKE_RAPID_VERT          6
00883 #define PAN_STROKE_RAPID_HORZ          7
00884 #define PAN_STROKE_INSTANT_VERT        8
00885
00886 #define PAN_STRAIGHT_ARMS_HORZ         2
00887 #define PAN_STRAIGHT_ARMS_WEDGE        3
00888 #define PAN_STRAIGHT_ARMS_VERT         4
00889 #define PAN_STRAIGHT_ARMS_SINGLE_SERIF 5
00890 #define PAN_STRAIGHT_ARMS_DOUBLE_SERIF 6
00891 #define PAN_BENT_ARMS_HORZ             7
00892 #define PAN_BENT_ARMS_WEDGE            8
00893 #define PAN_BENT_ARMS_VERT             9
00894 #define PAN_BENT_ARMS_SINGLE_SERIF     10
00895 #define PAN_BENT_ARMS_DOUBLE_SERIF     11
00896
00897 #define PAN_LETT_NORMAL_COMPACT        2
00898 #define PAN_LETT_NORMAL_WEIGHTED       3
00899 #define PAN_LETT_NORMAL_BOXED          4
00900 #define PAN_LETT_NORMAL_FLATTENED      5
00901 #define PAN_LETT_NORMAL_ROUNDED        6
00902 #define PAN_LETT_NORMAL_OFF_CENTER     7
00903 #define PAN_LETT_NORMAL_SQUARE         8
00904 #define PAN_LETT_OBLIQUE_COMPACT       9
00905 #define PAN_LETT_OBLIQUE_WEIGHTED      10
00906 #define PAN_LETT_OBLIQUE_BOXED         11
00907 #define PAN_LETT_OBLIQUE_FLATTENED     12
00908 #define PAN_LETT_OBLIQUE_ROUNDED       13
00909 #define PAN_LETT_OBLIQUE_OFF_CENTER    14
00910 #define PAN_LETT_OBLIQUE_SQUARE        15
00911
00912 #define PAN_MIDLINE_STANDARD_TRIMMED   2
00913 #define PAN_MIDLINE_STANDARD_POINTED   3
00914 #define PAN_MIDLINE_STANDARD_SERIFED   4
00915 #define PAN_MIDLINE_HIGH_TRIMMED       5
00916 #define PAN_MIDLINE_HIGH_POINTED       6
00917 #define PAN_MIDLINE_HIGH_SERIFED       7
00918 #define PAN_MIDLINE_CONSTANT_TRIMMED   8
00919 #define PAN_MIDLINE_CONSTANT_POINTED   9
00920 #define PAN_MIDLINE_CONSTANT_SERIFED   10
00921 #define PAN_MIDLINE_LOW_TRIMMED        11
00922 #define PAN_MIDLINE_LOW_POINTED        12
00923 #define PAN_MIDLINE_LOW_SERIFED        13
00924
00925 #define PAN_XHEIGHT_CONSTANT_SMALL     2
00926 #define PAN_XHEIGHT_CONSTANT_STANDARD  3
00927 #define PAN_XHEIGHT_CONSTANT_LARGE     4
00928 #define PAN_XHEIGHT_DUCKING_SMALL      5
00929 #define PAN_XHEIGHT_DUCKING_STANDARD   6
00930 #define PAN_XHEIGHT_DUCKING_LARGE      7
00931
00932 #define ELF_VENDOR_SIZE 4
00933 typedef struct
00934 {
00935   LOGFONTA    elfLogFont;
00936   BYTE        elfFullName[LF_FULLFACESIZE];
00937   BYTE        elfStyle[LF_FACESIZE];
00938   DWORD       elfVersion;
00939   DWORD       elfStyleSize;
00940   DWORD       elfMatch;
00941   DWORD       elfReserved;
00942   BYTE        elfVendorId[ELF_VENDOR_SIZE];
00943   DWORD       elfCulture;
00944   PANOSE      elfPanose;
00945 } EXTLOGFONTA, *PEXTLOGFONTA, *LPEXTLOGFONTA;
00946
00947 typedef struct
00948 {
```

```
00949   LOGFONTW    elfLogFont;
00950   WCHAR       elfFullName[LF_FULLFACESIZE];
00951   WCHAR       elfStyle[LF_FACESIZE];
00952   DWORD       elfVersion;
00953   DWORD       elfStyleSize;
00954   DWORD       elfMatch;
00955   DWORD       elfReserved;
00956   BYTE        elfVendorId[ELF_VENDOR_SIZE];
00957   DWORD       elfCulture;
00958   PANOSE      elfPanose;
00959 } EXTLOGFONTW, *PEXTLOGFONTW, *LPEXTLOGFONTW;
00960
00961 DECL_WINELIB_TYPE_AW(EXTLOGFONT)
00962 DECL_WINELIB_TYPE_AW(PEXTLOGFONT)
00963 DECL_WINELIB_TYPE_AW(LPEXTLOGFONT)
00964
00965 #define ELF_VERSION         0
00966 #define ELF_CULTURE_LATIN   0
00967
00968 typedef struct _OUTLINETEXTMETRICA
00969 {
00970     UINT          otmSize;
00971     TEXTMETRICA   otmTextMetrics;
00972     BYTE            otmFiller;
00973     PANOSE          otmPanoseNumber;
00974     UINT          otmfsSelection;
00975     UINT          otmfsType;
00976     INT           otmsCharSlopeRise;
00977     INT           otmsCharSlopeRun;
00978     INT           otmItalicAngle;
00979     UINT          otmEMSquare;
00980     INT           otmAscent;
00981     INT           otmDescent;
00982     UINT          otmLineGap;
00983     UINT          otmsCapEmHeight;
00984     UINT          otmsXHeight;
00985     RECT          otmrcFontBox;
00986     INT           otmMacAscent;
00987     INT           otmMacDescent;
00988     UINT          otmMacLineGap;
00989     UINT          otmusMinimumPPEM;
00990     POINT         otmptSubscriptSize;
00991     POINT         otmptSubscriptOffset;
00992     POINT         otmptSuperscriptSize;
00993     POINT         otmptSuperscriptOffset;
00994     UINT          otmsStrikeoutSize;
00995     INT           otmsStrikeoutPosition;
00996     INT           otmsUnderscoreSize;
00997     INT           otmsUnderscorePosition;
00998     LPSTR           otmpFamilyName;
00999     LPSTR           otmpFaceName;
01000     LPSTR           otmpStyleName;
01001     LPSTR           otmpFullName;
01002 } OUTLINETEXTMETRICA, *POUTLINETEXTMETRICA, *LPOUTLINETEXTMETRICA;
01003
01004 typedef struct _OUTLINETEXTMETRICW
01005 {
01006     UINT          otmSize;
01007     TEXTMETRICW   otmTextMetrics;
01008     BYTE            otmFiller;
01009     PANOSE          otmPanoseNumber;
01010     UINT          otmfsSelection;
01011     UINT          otmfsType;
01012     INT           otmsCharSlopeRise;
01013     INT           otmsCharSlopeRun;
01014     INT           otmItalicAngle;
01015     UINT          otmEMSquare;
01016     INT           otmAscent;
01017     INT           otmDescent;
01018     UINT          otmLineGap;
01019     UINT          otmsCapEmHeight;
01020     UINT          otmsXHeight;
01021     RECT          otmrcFontBox;
01022     INT           otmMacAscent;
01023     INT           otmMacDescent;
01024     UINT          otmMacLineGap;
01025     UINT          otmusMinimumPPEM;
01026     POINT         otmptSubscriptSize;
01027     POINT         otmptSubscriptOffset;
01028     POINT         otmptSuperscriptSize;
01029     POINT         otmptSuperscriptOffset;
01030     UINT          otmsStrikeoutSize;
01031     INT           otmsStrikeoutPosition;
01032     INT           otmsUnderscoreSize;
01033     INT           otmsUnderscorePosition;
01034     LPSTR           otmpFamilyName;
01035     LPSTR           otmpFaceName;
```

```
01036     LPSTR           otmpStyleName;
01037     LPSTR           otmpFullName;
01038 } OUTLINETEXTMETRICW, *POUTLINETEXTMETRICW, *LPOUTLINETEXTMETRICW;
01039
01040 DECL_WINELIB_TYPE_AW(OUTLINETEXTMETRIC)
01041 DECL_WINELIB_TYPE_AW(POUTLINETEXTMETRIC)
01042 DECL_WINELIB_TYPE_AW(LPOUTLINETEXTMETRIC)
01043
01044 typedef struct
01045 {
01046     INT       x;
01047     INT       y;
01048     UINT      n;
01049     LPCSTR    lpstr;
01050     UINT      uiFlags;
01051     RECT      rcl;
01052     INT       *pdx;
01053 } POLYTEXTA, *PPOLYTEXTA, *LPPOLYTEXTA;
01054
01055 typedef struct
01056 {
01057     INT       x;
01058     INT       y;
01059     UINT      n;
01060     LPCWSTR   lpstr;
01061     UINT      uiFlags;
01062     RECT      rcl;
01063     INT       *pdx;
01064 } POLYTEXTW, *PPOLYTEXTW, *LPPOLYTEXTW;
01065
01066 DECL_WINELIB_TYPE_AW(POLYTEXT)
01067 DECL_WINELIB_TYPE_AW(PPOLYTEXT)
01068 DECL_WINELIB_TYPE_AW(LPPOLYTEXT)
01069
01070
01071 /* ntmFlags field flags */
01072 #define NTM_REGULAR     0x00000040L
01073 #define NTM_BOLD        0x00000020L
01074 #define NTM_ITALIC      0x00000001L
01075
01076 typedef struct
01077 {
01078     LONG      tmHeight;
01079     LONG      tmAscent;
01080     LONG      tmDescent;
01081     LONG      tmInternalLeading;
01082     LONG      tmExternalLeading;
01083     LONG      tmAveCharWidth;
01084     LONG      tmMaxCharWidth;
01085     LONG      tmWeight;
01086     LONG      tmOverhang;
01087     LONG      tmDigitizedAspectX;
01088     LONG      tmDigitizedAspectY;
01089     BYTE      tmFirstChar;
01090     BYTE      tmLastChar;
01091     BYTE      tmDefaultChar;
01092     BYTE      tmBreakChar;
01093     BYTE      tmItalic;
01094     BYTE      tmUnderlined;
01095     BYTE      tmStruckOut;
01096     BYTE      tmPitchAndFamily;
01097     BYTE      tmCharSet;
01098     DWORD     ntmFlags;
01099     UINT    ntmSizeEM;
01100     UINT    ntmCellHeight;
01101     UINT    ntmAvgWidth;
01102 } NEWTEXTMETRICA, *PNEWTEXTMETRICA, *LPNEWTEXTMETRICA;
01103
01104 typedef struct
01105 {
01106     LONG      tmHeight;
01107     LONG      tmAscent;
01108     LONG      tmDescent;
01109     LONG      tmInternalLeading;
01110     LONG      tmExternalLeading;
01111     LONG      tmAveCharWidth;
01112     LONG      tmMaxCharWidth;
01113     LONG      tmWeight;
01114     LONG      tmOverhang;
01115     LONG      tmDigitizedAspectX;
01116     LONG      tmDigitizedAspectY;
01117     WCHAR     tmFirstChar;
01118     WCHAR     tmLastChar;
01119     WCHAR     tmDefaultChar;
01120     WCHAR     tmBreakChar;
01121     BYTE      tmItalic;
01122     BYTE      tmUnderlined;
```

```
01123     BYTE      tmStruckOut;
01124     BYTE      tmPitchAndFamily;
01125     BYTE      tmCharSet;
01126     DWORD     ntmFlags;
01127     UINT      ntmSizeEM;
01128     UINT      ntmCellHeight;
01129     UINT      ntmAvgWidth;
01130 } NEWTEXTMETRICW, *PNEWTEXTMETRICW, *LPNEWTEXTMETRICW;
01131
01132 DECL_WINELIB_TYPE_AW(NEWTEXTMETRIC)
01133 DECL_WINELIB_TYPE_AW(PNEWTEXTMETRIC)
01134 DECL_WINELIB_TYPE_AW(LPNEWTEXTMETRIC)
01135
01136 typedef struct
01137 {
01138     NEWTEXTMETRICA  ntmTm;
01139     FONTSIGNATURE       ntmFontSig;
01140 } NEWTEXTMETRICEXA,*LPNEWTEXTMETRICEXA;
01141
01142 typedef struct
01143 {
01144     NEWTEXTMETRICW  ntmTm;
01145     FONTSIGNATURE       ntmFontSig;
01146 } NEWTEXTMETRICEXW,*LPNEWTEXTMETRICEXW;
01147
01148 DECL_WINELIB_TYPE_AW(NEWTEXTMETRICEX)
01149 DECL_WINELIB_TYPE_AW(LPNEWTEXTMETRICEX)
01150
01151 typedef int CALLBACK (*OLDFONTENUMPROCA)(const LOGFONTA*,const TEXTMETRICA*,
01152                                          DWORD,LPARAM);
01153 typedef int CALLBACK (*OLDFONTENUMPROCW)(const LOGFONTW*,const TEXTMETRICW*,
01154                                          DWORD,LPARAM);
01155 DECL_WINELIB_TYPE_AW(OLDFONTENUMPROC)
01156
01157 typedef OLDFONTENUMPROCA FONTENUMPROCA;
01158 typedef OLDFONTENUMPROCW FONTENUMPROCW;
01159 DECL_WINELIB_TYPE_AW(FONTENUMPROC)
01160
01161 typedef int CALLBACK (*FONTENUMPROCEXA)(LPENUMLOGFONTEXA,LPNEWTEXTMETRICEXA,DWORD,LPARAM);
01162 typedef int CALLBACK (*FONTENUMPROCEXW)(LPENUMLOGFONTEXW,LPNEWTEXTMETRICEXW,DWORD,LPARAM);
01163 DECL_WINELIB_TYPE_AW(FONTENUMPROCEX)
01164
01165 typedef INT     CALLBACK (*GOBJENUMPROC)(LPVOID,LPARAM);
01166 typedef VOID    CALLBACK (*LINEDDAPROC)(INT,INT,LPARAM);
01167
01168   /* tmPitchAndFamily bits */
01169 #define TMPF_FIXED_PITCH    1       /* means variable pitch */
01170 #define TMPF_VECTOR     2
01171 #define TMPF_TRUETYPE       4
01172 #define TMPF_DEVICE     8
01173
01174   /* Text alignment */
01175 #define TA_NOUPDATECP       0x00
01176 #define TA_UPDATECP         0x01
01177 #define TA_LEFT             0x00
01178 #define TA_RIGHT            0x02
01179 #define TA_CENTER           0x06
01180 #define TA_TOP              0x00
01181 #define TA_BOTTOM           0x08
01182 #define TA_BASELINE         0x18
01183 #define TA_RTLREADING        0x100
01184 #define TA_MASK             TA_BASELINE+TA_CENTER+TA_UPDATECP+TA_RTLREADING
01185
01186 #define VTA_BASELINE        TA_BASELINE
01187 #define VTA_LEFT            TA_BOTTOM
01188 #define VTA_RIGHT           TA_TOP
01189 #define VTA_CENTER          TA_CENTER
01190 #define VTA_BOTTOM          TA_RIGHT
01191 #define VTA_TOP             TA_LEFT
01192
01193
01194   /* ExtTextOut() parameters */
01195 #define ETO_GRAYED          0x0001
01196 #define ETO_OPAQUE          0x0002
01197 #define ETO_CLIPPED         0x0004
01198 #define ETO_GLYPH_INDEX     0x0010
01199 #define ETO_RTLREADING      0x0080
01200 #define ETO_IGNORELANGUAGE  0x1000
01201
01202 #define ASPECT_FILTERING    0x0001
01203
01204 typedef struct
01205 {
01206     UINT    gmBlackBoxX;
01207     UINT    gmBlackBoxY;
01208     POINT   gmptGlyphOrigin;
01209     SHORT   gmCellIncX;
```

```
01210     SHORT   gmCellIncY;
01211 } GLYPHMETRICS, *LPGLYPHMETRICS;
01212
01213
01214 #define GGO_METRICS         0
01215 #define GGO_BITMAP          1
01216 #define GGO_NATIVE          2
01217 #define GGO_GRAY2_BITMAP    4
01218 #define GGO_GRAY4_BITMAP    5
01219 #define GGO_GRAY8_BITMAP    6
01220 #define GGO_GLYPH_INDEX     0x80
01221
01222 typedef struct
01223 {
01224     WORD    fract;
01225     SHORT   value;
01226 } FIXED;
01227
01228 typedef struct tagPOINTFX
01229 {
01230     FIXED x;
01231     FIXED y;
01232 } POINTFX, *LPPOINTFX;
01233
01234 typedef struct tagTTPOLYCURVE
01235 {
01236     WORD wType;
01237     WORD cpfx;
01238     POINTFX apfx[1];
01239 } TTPOLYCURVE, *LPTTPOLYCURVE;
01240
01241 typedef struct tagTTPOLYGONHEADER
01242 {
01243     DWORD cb;
01244     DWORD dwType;
01245     POINTFX pfxStart;
01246 } TTPOLYGONHEADER, *LPTTPOLYGONHEADER;
01247
01248 typedef struct
01249 {
01250      FIXED  eM11;
01251      FIXED  eM12;
01252      FIXED  eM21;
01253      FIXED  eM22;
01254 } MAT2, *LPMAT2;
01255
01256   /* for GetCharABCWidths() */
01257 typedef struct
01258 {
01259     INT   abcA;
01260     UINT  abcB;
01261     INT   abcC;
01262 } ABC, *PABC, *LPABC;
01263
01264
01265   /* for GetCharacterPlacement () */
01266
01267 #define GCP_DBCS           0x0001
01268 #define GCP_REORDER        0x0002
01269 #define GCP_USEKERNING     0x0008
01270 #define GCP_GLYPHSHAPE     0x0010
01271 #define GCP_LIGATE         0x0020
01272 #define GCP_DIACRITIC      0x0100
01273 #define GCP_KASHIDA        0x0200
01274 #define GCP_ERROR          0x8000
01275 #define FLI_MASK           0x103b
01276 #define GCP_JUSTIFY          0x00010000L
01277 #define FLI_GLYPHS           0x00040000L
01278 #define GCP_CLASSIN          0x00080000L
01279 #define GCP_MAXEXTENT        0x00100000L
01280 #define GCP_JUSTIFYIN        0x00200000L
01281 #define GCP_DISPLAYZWG       0x00400000L
01282 #define GCP_SYMSWAPOFF       0x00800000L
01283 #define GCP_NUMERICOVERRIDE 0x01000000L
01284 #define GCP_NEUTRALOVERRIDE 0x02000000L
01285 #define GCP_NUMERICSLATIN   0x04000000L
01286 #define GCP_NUMERICSLOCAL   0x08000000L
01287
01288 #define GCPCLASS_LATIN                     1
01289 #define GCPCLASS_HEBREW                    2
01290 #define GCPCLASS_ARABIC                    3
01291 #define GCPCLASS_NEUTRAL                   4
01292 #define GCPCLASS_LOCALNUMBER               5
01293 #define GCPCLASS_LATINNUMBER               6
01294 #define GCPCLASS_LATINNUMERICTERMINATOR    7
01295 #define GCPCLASS_LATINNUMERICSEPARATOR     8
01296 #define GCPCLASS_NUMERICSEPARATOR          9
```

```
01297 #define GCPCLASS_PREBOUNDLTR               0x80
01298 #define GCPCLASS_PREBOUNDRLT               0x40
01299 #define GCPCLASS_POSTBOUNDLTR              0x20
01300 #define GCPCLASS_POSTBOUNDRTL              0x10
01301
01302 #define GCPGLYPH_LINKBEFORE                0x8000
01303 #define GCPGLYPH_LINKAFTER                 0x4000
01304
01305
01306 typedef struct tagGCP_RESULTSA{
01307     DWORD  lStructSize;
01308     LPSTR  lpOutString;
01309     UINT   *lpOrder;
01310     INT    *lpDx;
01311     INT    *lpCaretPos;
01312     LPSTR  lpClass;
01313     LPWSTR lpGlyphs;
01314     UINT   nGlyphs;
01315     UINT   nMaxFit;
01316 } GCP_RESULTSA, *LPGCP_RESULTSA;
01317
01318 typedef struct tagGCP_RESULTSW
01319 {
01320     DWORD  lStructSize;
01321     LPWSTR lpOutString;
01322     UINT   *lpOrder;
01323     INT    *lpDx;
01324     INT    *lpCaretPos;
01325     LPWSTR lpClass;
01326     LPWSTR lpGlyphs;
01327     UINT   nGlyphs;
01328     UINT   nMaxFit;
01329 } GCP_RESULTSW, *LPGCP_RESULTSW;
01330
01331 DECL_WINELIB_TYPE_AW(GCP_RESULTS)
01332 DECL_WINELIB_TYPE_AW(LPGCP_RESULTS)
01333
01334   /* Rasterizer status */
01335 typedef struct
01336 {
01337     SHORT nSize;
01338     SHORT wFlags;
01339     SHORT nLanguageID;
01340 } RASTERIZER_STATUS, *LPRASTERIZER_STATUS;
01341
01342 #define TT_AVAILABLE        0x0001
01343 #define TT_ENABLED          0x0002
01344
01345 #define TT_PRIM_LINE    1
01346 #define TT_PRIM_QSPLINE 2
01347 #define TT_POLYGON_TYPE 24
01348
01349 /* Get/SetSystemPaletteUse() values */
01350 #define SYSPAL_ERROR    0
01351 #define SYSPAL_STATIC   1
01352 #define SYSPAL_NOSTATIC 2
01353
01354 typedef struct tagPALETTEENTRY
01355 {
01356     BYTE peRed, peGreen, peBlue, peFlags;
01357 } PALETTEENTRY, *PPALETTEENTRY, *LPPALETTEENTRY;
01358
01359 /* Logical palette entry flags */
01360 #define PC_RESERVED     0x01
01361 #define PC_EXPLICIT     0x02
01362 #define PC_NOCOLLAPSE   0x04
01363
01364 typedef struct tagLOGPALETTE
01365 {
01366     WORD           palVersion;
01367     WORD           palNumEntries;
01368     PALETTEENTRY   palPalEntry[1];
01369 } LOGPALETTE, *PLOGPALETTE, *LPLOGPALETTE, *NPLOGPALETTE;
01370
01371   /* Pens */
01372
01373 typedef struct
01374 {
01375     UINT     lopnStyle;
01376     POINT    lopnWidth;
01377     COLORREF lopnColor;
01378 } LOGPEN, *LPLOGPEN;
01379
01380
01381 typedef struct tagEXTLOGPEN
01382 {
01383     DWORD    elpPenStyle;
```

```
01384     DWORD    elpWidth;
01385     UINT     elpBrushStyle;
01386     COLORREF elpColor;
01387     LONG     elpHatch;
01388     DWORD elpNumEntries;
01389     DWORD elpStyleEntry[1];
01390 } EXTLOGPEN, *PEXTLOGPEN, *NPEXTLOGPEN, *LPEXTLOGPEN;
01391
01392 #define PS_SOLID         0x00000000
01393 #define PS_DASH          0x00000001
01394 #define PS_DOT           0x00000002
01395 #define PS_DASHDOT       0x00000003
01396 #define PS_DASHDOTDOT    0x00000004
01397 #define PS_NULL          0x00000005
01398 #define PS_INSIDEFRAME   0x00000006
01399 #define PS_USERSTYLE     0x00000007
01400 #define PS_ALTERNATE     0x00000008
01401 #define PS_STYLE_MASK    0x0000000f
01402
01403 #define PS_ENDCAP_ROUND  0x00000000
01404 #define PS_ENDCAP_SQUARE 0x00000100
01405 #define PS_ENDCAP_FLAT   0x00000200
01406 #define PS_ENDCAP_MASK   0x00000f00
01407
01408 #define PS_JOIN_ROUND    0x00000000
01409 #define PS_JOIN_BEVEL    0x00001000
01410 #define PS_JOIN_MITER    0x00002000
01411 #define PS_JOIN_MASK     0x0000f000
01412
01413 #define PS_COSMETIC      0x00000000
01414 #define PS_GEOMETRIC     0x00010000
01415 #define PS_TYPE_MASK     0x000f0000
01416
01417   /* Regions */
01418
01419 #define ERROR             0
01420 #define NULLREGION        1
01421 #define SIMPLEREGION      2
01422 #define COMPLEXREGION     3
01423 #define RGN_ERROR         ERROR
01424
01425 #define RGN_AND           1
01426 #define RGN_OR            2
01427 #define RGN_XOR           3
01428 #define RGN_DIFF          4
01429 #define RGN_COPY          5
01430 #define RGN_MIN           RGN_AND
01431 #define RGN_MAX           RGN_COPY
01432   /* Device contexts */
01433
01434   /* Polygon modes */
01435 #define ALTERNATE         1
01436 #define WINDING           2
01437 #define POLYFILL_LAST     2
01438
01439 /* Background modes */
01440 /* Apparently some broken svr4 includes define TRANSPARENT */
01441 #undef TRANSPARENT
01442 #define TRANSPARENT       1
01443 #define OPAQUE            2
01444 #define BKMODE_LAST       2
01445
01446   /* Graphics Modes */
01447 #define GM_COMPATIBLE     1
01448 #define GM_ADVANCED       2
01449 #define GM_LAST           2
01450
01451   /* Arc direction modes */
01452 #define AD_COUNTERCLOCKWISE 1
01453 #define AD_CLOCKWISE        2
01454
01455   /* Map modes */
01456 #define MM_TEXT       1
01457 #define MM_LOMETRIC   2
01458 #define MM_HIMETRIC   3
01459 #define MM_LOENGLISH      4
01460 #define MM_HIENGLISH      5
01461 #define MM_TWIPS      6
01462 #define MM_ISOTROPIC      7
01463 #define MM_ANISOTROPIC    8
01464
01465 #define MM_MIN            MM_TEXT
01466 #define MM_MAX            MM_ANISOTROPIC
01467 #define MM_MAX_FIXEDSCALE MM_TWIPS
01468
01469   /* Coordinate modes */
01470 #define ABSOLUTE          1
```

```
01471 #define RELATIVE          2
01472
01473   /* Flood fill modes */
01474 #define FLOODFILLBORDER   0
01475 #define FLOODFILLSURFACE  1
01476
01477   /* Device parameters for GetDeviceCaps() */
01478 #define DRIVERVERSION     0
01479 #define TECHNOLOGY        2
01480 #define HORZSIZE          4
01481 #define VERTSIZE          6
01482 #define HORZRES           8
01483 #define VERTRES           10
01484 #define BITSPIXEL         12
01485 #define PLANES            14
01486 #define NUMBRUSHES        16
01487 #define NUMPENS           18
01488 #define NUMMARKERS        20
01489 #define NUMFONTS          22
01490 #define NUMCOLORS         24
01491 #define PDEVICESIZE       26
01492 #define CURVECAPS         28
01493 #define LINECAPS          30
01494 #define POLYGONALCAPS     32
01495 #define TEXTCAPS          34
01496 #define CLIPCAPS          36
01497 #define RASTERCAPS        38
01498 #define ASPECTX           40
01499 #define ASPECTY           42
01500 #define ASPECTXY          44
01501 #define LOGPIXELSX        88
01502 #define LOGPIXELSY        90
01503 #define CAPS1             94
01504 #define SIZEPALETTE       104
01505 #define NUMRESERVED       106
01506 #define COLORRES          108
01507
01508 #define PHYSICALWIDTH     110
01509 #define PHYSICALHEIGHT    111
01510 #define PHYSICALOFFSETX   112
01511 #define PHYSICALOFFSETY   113
01512 #define SCALINGFACTORX    114
01513 #define SCALINGFACTORY    115
01514 #define VREFRESH          116
01515 #define DESKTOPVERTRES    117
01516 #define DESKTOPHORZRES    118
01517 #define BTLALIGNMENT      119
01518
01519 /* TECHNOLOGY */
01520 #define DT_PLOTTER        0
01521 #define DT_RASDISPLAY     1
01522 #define DT_RASPRINTER     2
01523 #define DT_RASCAMERA      3
01524 #define DT_CHARSTREAM     4
01525 #define DT_METAFILE       5
01526 #define DT_DISPFILE       6
01527
01528 /* CURVECAPS */
01529 #define CC_NONE           0x0000
01530 #define CC_CIRCLES        0x0001
01531 #define CC_PIE            0x0002
01532 #define CC_CHORD          0x0004
01533 #define CC_ELLIPSES       0x0008
01534 #define CC_WIDE           0x0010
01535 #define CC_STYLED         0x0020
01536 #define CC_WIDESTYLED     0x0040
01537 #define CC_INTERIORS      0x0080
01538 #define CC_ROUNDRECT      0x0100
01539
01540 /* LINECAPS */
01541 #define LC_NONE           0x0000
01542 #define LC_POLYLINE       0x0002
01543 #define LC_MARKER         0x0004
01544 #define LC_POLYMARKER     0x0008
01545 #define LC_WIDE           0x0010
01546 #define LC_STYLED         0x0020
01547 #define LC_WIDESTYLED     0x0040
01548 #define LC_INTERIORS      0x0080
01549
01550 /* POLYGONALCAPS */
01551 #define PC_NONE           0x0000
01552 #define PC_POLYGON        0x0001
01553 #define PC_RECTANGLE      0x0002
01554 #define PC_WINDPOLYGON    0x0004
01555 #define PC_TRAPEZOID      0x0004
01556 #define PC_SCANLINE       0x0008
01557 #define PC_WIDE           0x0010
```

```
01558 #define PC_STYLED         0x0020
01559 #define PC_WIDESTYLED     0x0040
01560 #define PC_INTERIORS      0x0080
01561 #define PC_POLYPOLYGON    0x0100
01562 #define PC_PATHS          0x0200
01563
01564 /* TEXTCAPS */
01565 #define TC_OP_CHARACTER   0x0001
01566 #define TC_OP_STROKE      0x0002
01567 #define TC_CP_STROKE      0x0004
01568 #define TC_CR_90          0x0008
01569 #define TC_CR_ANY         0x0010
01570 #define TC_SF_X_YINDEP    0x0020
01571 #define TC_SA_DOUBLE      0x0040
01572 #define TC_SA_INTEGER     0x0080
01573 #define TC_SA_CONTIN      0x0100
01574 #define TC_EA_DOUBLE      0x0200
01575 #define TC_IA_ABLE        0x0400
01576 #define TC_UA_ABLE        0x0800
01577 #define TC_SO_ABLE        0x1000
01578 #define TC_RA_ABLE        0x2000
01579 #define TC_VA_ABLE        0x4000
01580 #define TC_RESERVED       0x8000
01581 #define TC_SCROLLBLT      0x00010000
01582
01583 /* CLIPCAPS */
01584 #define CP_NONE           0x0000
01585 #define CP_RECTANGLE      0x0001
01586 #define CP_REGION         0x0002
01587
01588 /* RASTERCAPS */
01589 #define RC_NONE           0x0000
01590 #define RC_BITBLT         0x0001
01591 #define RC_BANDING        0x0002
01592 #define RC_SCALING        0x0004
01593 #define RC_BITMAP64       0x0008
01594 #define RC_GDI20_OUTPUT   0x0010
01595 #define RC_GDI20_STATE    0x0020
01596 #define RC_SAVEBITMAP     0x0040
01597 #define RC_DI_BITMAP      0x0080
01598 #define RC_PALETTE        0x0100
01599 #define RC_DIBTODEV       0x0200
01600 #define RC_BIGFONT        0x0400
01601 #define RC_STRETCHBLT     0x0800
01602 #define RC_FLOODFILL      0x1000
01603 #define RC_STRETCHDIB     0x2000
01604 #define RC_OP_DX_OUTPUT   0x4000
01605 #define RC_DEVBITS        0x8000
01606
01607 /* CAPS1 */
01608
01609 #define C1_TRANSPARENT    0x0001
01610 #define TC_TT_ABLE        0x0002
01611 #define C1_TT_CR_ANY      0x0004
01612 #define C1_EMF_COMPLIANT  0x0008
01613 #define C1_DIBENGINE      0x0010
01614 #define C1_GAMMA_RAMP     0x0040
01615 #define C1_REINIT_ABLE    0x0080
01616 #define C1_GLYPH_INDEX    0x0100
01617 #define C1_BIT_PACKED     0x0200
01618 #define C1_BYTE_PACKED    0x0400
01619 #define C1_COLORCURSOR    0x0800
01620 #define C1_CMYK_ABLE      0x1000
01621 #define C1_SLOW_CARD      0x2000
01622
01623   /* Device-independent bitmaps */
01624
01625 typedef struct {
01626   BYTE rgbBlue;
01627   BYTE rgbGreen;
01628   BYTE rgbRed;
01629   BYTE rgbReserved;
01630 } RGBQUAD, *LPRGBQUAD;
01631
01632 typedef struct {
01633   BYTE rgbtBlue;
01634   BYTE rgbtGreen;
01635   BYTE rgbtRed;
01636 } RGBTRIPLE;
01637
01638 #include "pshpack2.h"
01639 typedef struct
01640 {
01641     WORD    bfType;
01642     DWORD   bfSize;
01643     WORD    bfReserved1;
01644     WORD    bfReserved2;
```

```
01645     DWORD   bfOffBits;
01646 } BITMAPFILEHEADER, *PBITMAPFILEHEADER, *LPBITMAPFILEHEADER;
01647 #include "poppack.h"
01648
01649 #define MAKEPOINTS(l)  (*((POINTS *)&(l)))
01650
01651 typedef struct
01652 {
01653     DWORD   biSize;
01654     LONG    biWidth;
01655     LONG    biHeight;
01656     WORD    biPlanes;
01657     WORD    biBitCount;
01658     DWORD   biCompression;
01659     DWORD   biSizeImage;
01660     LONG    biXPelsPerMeter;
01661     LONG    biYPelsPerMeter;
01662     DWORD   biClrUsed;
01663     DWORD   biClrImportant;
01664 } BITMAPINFOHEADER, *PBITMAPINFOHEADER, *LPBITMAPINFOHEADER;
01665
01666 typedef struct
01667 {
01668     DWORD        bV4Size;
01669     LONG         bV4Width;
01670     LONG         bV4Height;
01671     WORD         bV4Planes;
01672     WORD         bV4BitCount;
01673     DWORD        bV4Compression;
01674     DWORD        bV4SizeImage;
01675     LONG         bV4XPelsPerMeter;
01676     LONG         bV4YPelsPerMeter;
01677     DWORD        bV4ClrUsed;
01678     DWORD        bV4ClrImportant;
01679     DWORD        bV4RedMask;
01680     DWORD        bV4GreenMask;
01681     DWORD        bV4BlueMask;
01682     DWORD        bV4AlphaMask;
01683     DWORD        bV4CSType;
01684     CIEXYZTRIPLE bV4EndPoints;
01685     DWORD        bV4GammaRed;
01686     DWORD        bV4GammaGreen;
01687     DWORD        bV4GammaBlue;
01688 } BITMAPV4HEADER, *PBITMAPV4HEADER;
01689
01690 typedef struct {
01691     DWORD        bV5Size;
01692     LONG         bV5Width;
01693     LONG         bV5Height;
01694     WORD         bV5Planes;
01695     WORD         bV5BitCount;
01696     DWORD        bV5Compression;
01697     DWORD        bV5SizeImage;
01698     LONG         bV5XPelsPerMeter;
01699     LONG         bV5YPelsPerMeter;
01700     DWORD        bV5ClrUsed;
01701     DWORD        bV5ClrImportant;
01702     DWORD        bV5RedMask;
01703     DWORD        bV5GreenMask;
01704     DWORD        bV5BlueMask;
01705     DWORD        bV5AlphaMask;
01706     DWORD        bV5CSType;
01707     CIEXYZTRIPLE bV5Endpoints;
01708     DWORD        bV5GammaRed;
01709     DWORD        bV5GammaGreen;
01710     DWORD        bV5GammaBlue;
01711     DWORD        bV5Intent;
01712     DWORD        bV5ProfileData;
01713     DWORD        bV5ProfileSize;
01714     DWORD        bV5Reserved;
01715 } BITMAPV5HEADER, *LPBITMAPV5HEADER, *PBITMAPV5HEADER;
01716
01717 #define PROFILE_LINKED   'LINK'
01718 #define PROFILE_EMBEDDED 'MBED'
01719
01720
01721   /* biCompression */
01722 #define BI_RGB           0
01723 #define BI_RLE8          1
01724 #define BI_RLE4          2
01725 #define BI_BITFIELDS     3
01726
01727 typedef struct {
01728     BITMAPINFOHEADER bmiHeader;
01729     RGBQUAD bmiColors[1];
01730 } BITMAPINFO, *PBITMAPINFO, *LPBITMAPINFO;
01731
```

```
01732 typedef struct
01733 {
01734     DWORD   bcSize;
01735     WORD    bcWidth;
01736     WORD    bcHeight;
01737     WORD    bcPlanes;
01738     WORD    bcBitCount;
01739 } BITMAPCOREHEADER, *PBITMAPCOREHEADER, *LPBITMAPCOREHEADER;
01740
01741 typedef struct
01742 {
01743     BITMAPCOREHEADER bmciHeader;
01744     RGBTRIPLE        bmciColors[1];
01745 } BITMAPCOREINFO, *PBITMAPCOREINFO, *LPBITMAPCOREINFO;
01746
01747 #define DIB_RGB_COLORS   0
01748 #define DIB_PAL_COLORS   1
01749 #define CBM_INIT         4
01750
01751 typedef struct
01752 {
01753     BITMAP      dsBm;
01754     BITMAPINFOHEADER    dsBmih;
01755     DWORD           dsBitfields[3];
01756     HANDLE      dshSection;
01757     DWORD           dsOffset;
01758 } DIBSECTION, *PDIBSECTION, *LPDIBSECTION;
01759
01760   /* Stock GDI objects for GetStockObject() */
01761
01762 #define WHITE_BRUSH     0
01763 #define LTGRAY_BRUSH        1
01764 #define GRAY_BRUSH      2
01765 #define DKGRAY_BRUSH        3
01766 #define BLACK_BRUSH     4
01767 #define NULL_BRUSH      5
01768 #define HOLLOW_BRUSH        5
01769 #define WHITE_PEN       6
01770 #define BLACK_PEN       7
01771 #define NULL_PEN        8
01772 #define OEM_FIXED_FONT      10
01773 #define ANSI_FIXED_FONT     11
01774 #define ANSI_VAR_FONT       12
01775 #define SYSTEM_FONT     13
01776 #define DEVICE_DEFAULT_FONT 14
01777 #define DEFAULT_PALETTE     15
01778 #define SYSTEM_FIXED_FONT   16
01779 #define DEFAULT_GUI_FONT    17
01780
01781 #define STOCK_LAST          17
01782
01783 #define CLR_INVALID         0xffffffff
01784 /* Metafile header structure */
01785 #include "pshpack2.h"
01786 typedef struct
01787 {
01788     WORD       mtType;
01789     WORD       mtHeaderSize;
01790     WORD       mtVersion;
01791     DWORD      mtSize;
01792     WORD       mtNoObjects;
01793     DWORD      mtMaxRecord;
01794     WORD       mtNoParameters;
01795 } METAHEADER, *PMETAHEADER, *LPMETAHEADER;
01796 #include "poppack.h"
01797
01798 /* Metafile typical record structure */
01799 typedef struct
01800 {
01801     DWORD      rdSize;
01802     WORD       rdFunction;
01803     WORD       rdParm[1];
01804 } METARECORD, *PMETARECORD, *LPMETARECORD;
01805
01806 /* Handle table structure */
01807
01808 typedef struct
01809 {
01810     HGDIOBJ objectHandle[1];
01811 } HANDLETABLE, *PHANDLETABLE, *LPHANDLETABLE;
01812
01813
01814 /* Clipboard metafile picture structure */
01815 typedef struct
01816 {
01817     LONG       mm;
01818     LONG       xExt;
```

```
01819     LONG       yExt;
01820     HMETAFILE  hMF;
01821 } METAFILEPICT, *LPMETAFILEPICT;
01822
01823
01824 /* Metafile functions */
01825 #define META_SETBKCOLOR              0x0201
01826 #define META_SETBKMODE               0x0102
01827 #define META_SETMAPMODE              0x0103
01828 #define META_SETROP2                 0x0104
01829 #define META_SETRELABS               0x0105
01830 #define META_SETPOLYFILLMODE         0x0106
01831 #define META_SETSTRETCHBLTMODE       0x0107
01832 #define META_SETTEXTCHAREXTRA        0x0108
01833 #define META_SETTEXTCOLOR            0x0209
01834 #define META_SETTEXTJUSTIFICATION    0x020A
01835 #define META_SETWINDOWORG            0x020B
01836 #define META_SETWINDOWEXT            0x020C
01837 #define META_SETVIEWPORTORG          0x020D
01838 #define META_SETVIEWPORTEXT          0x020E
01839 #define META_OFFSETWINDOWORG         0x020F
01840 #define META_SCALEWINDOWEXT          0x0410
01841 #define META_OFFSETVIEWPORTORG       0x0211
01842 #define META_SCALEVIEWPORTEXT        0x0412
01843 #define META_LINETO                  0x0213
01844 #define META_MOVETO                  0x0214
01845 #define META_EXCLUDECLIPRECT         0x0415
01846 #define META_INTERSECTCLIPRECT       0x0416
01847 #define META_ARC                     0x0817
01848 #define META_ELLIPSE                 0x0418
01849 #define META_FLOODFILL               0x0419
01850 #define META_PIE                     0x081A
01851 #define META_RECTANGLE               0x041B
01852 #define META_ROUNDRECT               0x061C
01853 #define META_PATBLT                  0x061D
01854 #define META_SAVEDC                  0x001E
01855 #define META_SETPIXEL                0x041F
01856 #define META_OFFSETCLIPRGN           0x0220
01857 #define META_TEXTOUT                 0x0521
01858 #define META_BITBLT                  0x0922
01859 #define META_STRETCHBLT              0x0B23
01860 #define META_POLYGON                 0x0324
01861 #define META_POLYLINE                0x0325
01862 #define META_ESCAPE                  0x0626
01863 #define META_RESTOREDC               0x0127
01864 #define META_FILLREGION              0x0228
01865 #define META_FRAMEREGION             0x0429
01866 #define META_INVERTREGION            0x012A
01867 #define META_PAINTREGION             0x012B
01868 #define META_SELECTCLIPREGION        0x012C
01869 #define META_SELECTOBJECT            0x012D
01870 #define META_SETTEXTALIGN            0x012E
01871 #define META_DRAWTEXT                0x062F
01872 #define META_CHORD                   0x0830
01873 #define META_SETMAPPERFLAGS          0x0231
01874 #define META_EXTTEXTOUT              0x0A32
01875 #define META_SETDIBTODEV             0x0D33
01876 #define META_SELECTPALETTE           0x0234
01877 #define META_REALIZEPALETTE          0x0035
01878 #define META_ANIMATEPALETTE          0x0436
01879 #define META_SETPALENTRIES           0x0037
01880 #define META_POLYPOLYGON             0x0538
01881 #define META_RESIZEPALETTE           0x0139
01882 #define META_DIBBITBLT               0x0940
01883 #define META_DIBSTRETCHBLT           0x0B41
01884 #define META_DIBCREATEPATTERNBRUSH   0x0142
01885 #define META_STRETCHDIB              0x0F43
01886 #define META_EXTFLOODFILL            0x0548
01887 #define META_RESETDC                 0x014C
01888 #define META_STARTDOC                0x014D
01889 #define META_STARTPAGE               0x004F
01890 #define META_ENDPAGE                 0x0050
01891 #define META_ABORTDOC                0x0052
01892 #define META_ENDDOC                  0x005E
01893 #define META_DELETEOBJECT            0x01F0
01894 #define META_CREATEPALETTE           0x00F7
01895 #define META_CREATEBRUSH             0x00F8
01896 #define META_CREATEPATTERNBRUSH      0x01F9
01897 #define META_CREATEPENINDIRECT       0x02FA
01898 #define META_CREATEFONTINDIRECT      0x02FB
01899 #define META_CREATEBRUSHINDIRECT     0x02FC
01900 #define META_CREATEBITMAPINDIRECT    0x02FD
01901 #define META_CREATEBITMAP            0x06FE
01902 #define META_CREATEREGION            0x06FF
01903 #define META_UNKNOWN                 0x0529  /* FIXME: unknown meta magic */
01904
01905 typedef INT CALLBACK (*MFENUMPROC)(HDC,HANDLETABLE*,METARECORD*,
```

```
01906                                       INT,LPARAM);
01907
01908 /* enhanced metafile structures and functions */
01909
01910 /* note that ENHMETAHEADER is just a particular kind of ENHMETARECORD,
01911    ie. the header is just the first record in the metafile */
01912 typedef struct {
01913     DWORD iType;
01914     DWORD nSize;
01915     RECTL rclBounds;
01916     RECTL rclFrame;
01917     DWORD dSignature;
01918     DWORD nVersion;
01919     DWORD nBytes;
01920     DWORD nRecords;
01921     WORD  nHandles;
01922     WORD  sReserved;
01923     DWORD nDescription;
01924     DWORD offDescription;
01925     DWORD nPalEntries;
01926     SIZEL szlDevice;
01927     SIZEL szlMillimeters;
01928
01929     /* Fields for winver >= win95 */
01930     DWORD cbPixelFormat;
01931     DWORD offPixelFormat;
01932     DWORD bOpenGL;
01933 #if 1
01934     /* Fields for winver >= win98 */
01935     SIZEL szlMicrometers;
01936 #endif
01937 } ENHMETAHEADER, *PENHMETAHEADER, *LPENHMETAHEADER;
01938
01939 typedef struct {
01940     DWORD iType;
01941     DWORD nSize;
01942     DWORD dParm[1];
01943 } ENHMETARECORD, *LPENHMETARECORD;
01944
01945 typedef struct {
01946     DWORD iType;
01947     DWORD nSize;
01948 } EMR, *PEMR;
01949
01950 typedef struct {
01951     POINTL ptlReference;
01952     DWORD  nChars;
01953     DWORD  offString;
01954     DWORD  fOptions;
01955     RECTL  rcl;
01956     DWORD  offDx;
01957 } EMRTEXT, *PEMRTEXT;
01958
01959 typedef struct {
01960     EMR emr;
01961 } EMRABORTPATH,      *PEMRABORTPATH,
01962   EMRBEGINPATH,      *PEMRBEGINPATH,
01963   EMRENDPATH,        *PEMRENDPATH,
01964   EMRCLOSEFIGURE,    *PEMRCLOSEFIGURE,
01965   EMRFLATTENPATH,    *PEMRFLATTENPATH,
01966   EMRWIDENPATH,      *PEMRWIDENPATH,
01967   EMRSETMETARGN,     *PEMRSETMETARGN,
01968   EMRSAVEDC,         *PEMRSAVEDC,
01969   EMRREALIZEPALETTE, *PEMRREALIZEPALETTE;
01970
01971 typedef struct {
01972     EMR    emr;
01973     POINTL ptlCenter;
01974     DWORD  nRadius;
01975     FLOAT  eStartAngle;
01976     FLOAT  eSweepAngle;
01977 } EMRANGLEARC, *PEMRANGLEARC;
01978
01979 typedef struct {
01980     EMR    emr;
01981     RECTL  rclBox;
01982     POINTL ptlStart;
01983     POINTL ptlEnd;
01984 } EMRARC,   *PEMRARC,
01985   EMRARCTO, *PEMRARCTO,
01986   EMRCHORD, *PEMRCHORD,
01987   EMRPIE,   *PEMRPIE;
01988
01989 typedef struct {
01990     EMR      emr;
01991     RECTL    rclBounds;
01992     LONG     xDest;
```

```
01993     LONG     yDest;
01994     LONG     cxDest;
01995     LONG     cyDest;
01996     DWORD    dwRop;
01997     LONG     xSrc;
01998     LONG     ySrc;
01999     XFORM    xformSrc;
02000     COLORREF crBkColorSrc;
02001     DWORD    iUsageSrc;
02002     DWORD    offBmiSrc;
02003     DWORD    cbBmiSrc;
02004     DWORD    offBitsSrc;
02005     DWORD    cbBitsSrc;
02006 } EMRBITBLT, *PEMRBITBLT;
02007
02008 typedef struct {
02009     EMR      emr;
02010     DWORD    ihBrush;
02011     LOGBRUSH lb;
02012 } EMRCREATEBRUSHINDIRECT, *PEMRCREATEBRUSHINDIRECT;
02013
02014 typedef struct {
02015     EMR            emr;
02016     DWORD          ihCS;
02017     LOGCOLORSPACEA lcs;
02018 } EMRCREATECOLORSPACE, *PEMRCREATECOLORSPACE;
02019
02020 typedef struct {
02021   EMR            emr;
02022   DWORD          ihCS;
02023   LOGCOLORSPACEW lcs;
02024   DWORD          dwFlags;
02025   DWORD          cbData;
02026   BYTE           Data[1];
02027 } EMRCREATECOLORSPACEW, *PEMRCREATECOLORSPACEW;
02028
02029 typedef struct {
02030     EMR   emr;
02031     DWORD ihBrush;
02032     DWORD iUsage;
02033     DWORD offBmi;
02034     DWORD cbBmi;
02035     DWORD offBits;
02036     DWORD cbBits;
02037 } EMRCREATEDIBPATTERNBRUSHPT, *PEMRCREATEDIBPATTERNBRUSHPT;
02038
02039 typedef struct {
02040     EMR   emr;
02041     DWORD ihBrush;
02042     DWORD iUsage;
02043     DWORD offBmi;
02044     DWORD cbBmi;
02045     DWORD offBits;
02046     DWORD cbBits;
02047 } EMRCREATEMONOBRUSH, *PEMRCREATEMONOBRUSH;
02048
02049 typedef struct {
02050     EMR        emr;
02051     DWORD      ihPal;
02052     LOGPALETTE lgpl;
02053 } EMRCREATEPALETTE, *PEMRCREATEPALETTE;
02054
02055 typedef struct {
02056     EMR    emr;
02057     DWORD  ihPen;
02058     LOGPEN lopn;
02059 } EMRCREATEPEN, *PEMRCREATEPEN;
02060
02061 typedef struct {
02062     EMR           emr;
02063     DWORD         ihCS;
02064 } EMRDELETECOLORSPACE, *PEMRDELETECOLORSPACE,
02065   EMRSELECTCOLORSPACE, *PEMRSELECTCOLORSPACE,
02066   EMRSETCOLORSPACE,    *PEMRSETCOLORSPACE;
02067
02068 typedef struct {
02069     EMR   emr;
02070     DWORD ihObject;
02071 } EMRDELETEOBJECT, *PEMRDELETEOBJECT,
02072   EMRSELECTOBJECT, *PEMRSELECTOBJECT;
02073
02074 typedef struct {
02075     EMR   emr;
02076     RECTL rclBox;
02077 } EMRELLIPSE,   *PEMRELLIPSE,
02078   EMRRECTANGLE, *PEMRRECTANGLE;
02079
```

```
02080 typedef struct {
02081     EMR   emr;
02082     DWORD nPalEntries;
02083     DWORD offPalEntries;
02084     DWORD nSizeLast;
02085 } EMREOF, *PEMREOF;
02086
02087 typedef struct {
02088     EMR   emr;
02089     RECTL rclClip;
02090 } EMREXCLUDECLIPRECT,   *PEMREXCLUDECLIPRECT,
02091   EMRINTERSECTCLIPRECT, *PEMRINTERSECTCLIPRECT;
02092
02093 typedef struct {
02094     EMR         emr;
02095     DWORD       ihFont;
02096     EXTLOGFONTW elfw;
02097 } EMREXTCREATEFONTINDIRECTW, *PEMREXTCREATEFONTINDIRECTW;
02098
02099 typedef struct {
02100     EMR       emr;
02101     DWORD     ihPen;
02102     DWORD     offBmi;
02103     DWORD     cbBmi;
02104     DWORD     offBits;
02105     DWORD     cbBits;
02106     EXTLOGPEN elp;
02107 } EMREXTCREATEPEN, *PEMREXTCREATEPEN;
02108
02109 typedef struct {
02110     EMR      emr;
02111     POINTL   ptlStart;
02112     COLORREF crColor;
02113     DWORD    iMode;
02114 } EMREXTFLOODFILL, *PEMREXTFLOODFILL;
02115
02116 typedef struct {
02117     EMR   emr;
02118     DWORD cbRgnData;
02119     DWORD iMode;
02120     BYTE  RgnData[1];
02121 } EMREXTSELECTCLIPRGN, *PEMREXTSELECTCLIPRGN;
02122
02123 typedef struct {
02124     EMR     emr;
02125     RECTL   rclBounds;
02126     DWORD   iGraphicsMode;
02127     FLOAT   exScale;
02128     FLOAT   eyScale;
02129     EMRTEXT emrtext;
02130 } EMREXTTEXTOUTA, *PEMREXTTEXTOUTA,
02131   EMREXTTEXTOUTW, *PEMREXTTEXTOUTW;
02132
02133 typedef struct {
02134     EMR emr;
02135     RECTL rclBounds;
02136 } EMRFILLPATH,          *PEMRFILLPATH,
02137   EMRSTROKEANDFILLPATH, *PEMRSTROKEANDFILLPATH,
02138   EMRSTROKEPATH,        *PEMRSTROKEPATH;
02139
02140 typedef struct {
02141     EMR   emr;
02142     RECTL rclBounds;
02143     DWORD cbRgnData;
02144     DWORD ihBrush;
02145     BYTE  RgnData[1];
02146 } EMRFILLRGN, *PEMRFILLRGN;
02147
02148 typedef struct {
02149     DWORD signature;
02150     DWORD nVersion;
02151     DWORD cbData;
02152     DWORD offData;
02153 } EMRFORMAT, *PEMRFORMAT;
02154
02155 typedef struct {
02156     EMR   emr;
02157     RECTL rclBounds;
02158     DWORD cbRgnData;
02159     DWORD ihBrush;
02160     SIZEL szlStroke;
02161     BYTE  RgnData[1];
02162 } EMRFRAMERGN, *PEMRFRAMERGN;
02163
02164 typedef struct {
02165     EMR   emr;
02166     DWORD cbData;
```

```
02167     BYTE  Data[1];
02168 } EMRGDICOMMENT, *PEMRGDICOMMENT;
02169
02170 #if 0
02171 typedef struct {
02172     EMR       emr;
02173     RECTL     rclBounds;
02174     DWORD     nVer;
02175     DWORD     nTri;
02176     ULONG     ulMode;
02177     TRIVERTEX Ver[1];
02178 } EMRGRADIENTFILL, *PEMRGRADIENTFILL;
02179 #endif
02180
02181 typedef struct {
02182     EMR   emr;
02183     RECTL rclBounds;
02184     DWORD cbRgnData;
02185     BYTE  RgnData[1];
02186 } EMRINVERTRGN, *PEMRINVERTRGN,
02187   EMRPAINTRGN,  *PEMRPAINTRGN;
02188
02189 typedef struct {
02190     EMR    emr;
02191     POINTL ptl;
02192 } EMRLINETO,   *PEMRLINETO,
02193   EMRMOVETOEX, *PEMRMOVETOEX;
02194
02195 typedef struct {
02196     EMR      emr;
02197     RECTL    rclBounds;
02198     LONG     xDest;
02199     LONG     yDest;
02200     LONG     cxDest;
02201     LONG     cyDest;
02202     DWORD    dwRop;
02203     LONG     xSrc;
02204     LONG     ySrc;
02205     XFORM    xformSrc;
02206     COLORREF crBkColorSrc;
02207     DWORD    iUsageSrc;
02208     DWORD    offBmiSrc;
02209     DWORD    cbBmiSrc;
02210     DWORD    offBitsSrc;
02211     DWORD    cbBitsSrc;
02212     LONG     xMask;
02213     LONG     yMask;
02214     DWORD    iUsageMask;
02215     DWORD    offBmiMask;
02216     DWORD    cbBmiMask;
02217     DWORD    offBitsMask;
02218     DWORD    cbBitsMask;
02219 } EMRMASKBLT, *PEMRMASKBLT;
02220
02221 typedef struct {
02222     EMR   emr;
02223     XFORM xform;
02224     DWORD iMode;
02225 } EMRMODIFYWORLDTRANSFORM, *PEMRMODIFYWORLDTRANSFORM;
02226
02227 typedef struct {
02228     EMR    emr;
02229     POINTL ptlOffset;
02230 } EMROFFSETCLIPRGN, *PEMROFFSETCLIPRGN;
02231
02232 typedef struct {
02233     EMR      emr;
02234     RECTL    rclBounds;
02235     POINTL   aptlDst[3];
02236     LONG     xSrc;
02237     LONG     ySrc;
02238     LONG     cxSrc;
02239     LONG     cySrc;
02240     XFORM    xformSrc;
02241     COLORREF crBkColorSrc;
02242     DWORD    iUsageSrc;
02243     DWORD    offBmiSrc;
02244     DWORD    cbBmiSrc;
02245     DWORD    offBitsSrc;
02246     DWORD    cbBitsSrc;
02247     LONG     xMask;
02248     LONG     yMask;
02249     DWORD    iUsageMask;
02250     DWORD    offBmiMask;
02251     DWORD    cbBmiMask;
02252     DWORD    offBitsMask;
02253     DWORD    cbBitsMask;
```

```
02254 } EMRPLGBLT, *PEMRPLGBLT;
02255
02256 typedef struct {
02257     EMR    emr;
02258     RECTL  rclBounds;
02259     DWORD  cptl;
02260     POINTL aptl[1];
02261 } EMRPOLYLINE,     *PEMRPOLYLINE,
02262   EMRPOLYBEZIER,   *PEMRPOLYBEZIER,
02263   EMRPOLYGON,      *PEMRPOLYGON,
02264   EMRPOLYBEZIERTO, *PEMRPOLYBEZIERTO,
02265   EMRPOLYLINETO,   *PEMRPOLYLINETO;
02266
02267 typedef struct {
02268     EMR    emr;
02269     RECTL  rclBounds;
02270     DWORD  cptl;
02271     POINTL aptl[1];
02272     BYTE   abTypes[1];
02273 } EMRPOLYDRAW, *PEMRPOLYDRAW;
02274
02275 typedef struct {
02276     EMR     emr;
02277     RECTL   rclBounds;
02278     DWORD   nPolys;
02279     DWORD   cptl;
02280     DWORD   aPolyCounts[1];
02281     POINTL  aptl[1];
02282 } EMRPOLYPOLYLINE, *PEMRPOLYPOLYLINE,
02283   EMRPOLYPOLYGON,  *PEMRPOLYPOLYGON;
02284
02285 typedef struct {
02286     EMR     emr;
02287     RECTL   rclBounds;
02288     DWORD   iGraphicsMode;
02289     FLOAT   exScale;
02290     FLOAT   eyScale;
02291     LONG    cStrings;
02292     EMRTEXT aemrtext[1];
02293 } EMRPOLYTEXTOUTA, *PEMRPOLYTEXTOUTA,
02294   EMRPOLYTEXTOUTW, *PEMRPOLYTEXTOUTW;
02295
02296 typedef struct {
02297     EMR   emr;
02298     DWORD ihPal;
02299     DWORD cEntries;
02300 } EMRRESIZEPALETTE, *PEMRRESIZEPALETTE;
02301
02302 typedef struct {
02303     EMR  emr;
02304     LONG iRelative;
02305 } EMRRESTOREDC, *PEMRRESTOREDC;
02306
02307 typedef struct {
02308     EMR   emr;
02309     RECTL rclBox;
02310     SIZEL szlCorner;
02311 } EMRROUNDRECT, *PEMRROUNDRECT;
02312
02313 typedef struct {
02314     EMR  emr;
02315     LONG xNum;
02316     LONG xDenom;
02317     LONG yNum;
02318     LONG yDenom;
02319 } EMRSCALEVIEWPORTEXTEX, *PEMRSCALEVIEWPORTEXTEX,
02320   EMRSCALEWINDOWEXTEX,   *PEMRSCALEWINDOWEXTEX;
02321
02322 typedef struct {
02323     EMR   emr;
02324     DWORD iMode;
02325 } EMRSELECTCLIPPATH,    *PEMRSELECTCLIPPATH,
02326   EMRSETBKMODE,         *PEMRSETBKMODE,
02327   EMRSETMAPMODE,        *PEMRSETMAPMODE,
02328   EMRSETPOLYFILLMODE,   *PEMRSETPOLYFILLMODE,
02329   EMRSETROP2,           *PEMRSETROP2,
02330   EMRSETSTRETCHBLTMODE, *PEMRSETSTRETCHBLTMODE,
02331   EMRSETTEXTALIGN,      *PEMRSETTEXTALIGN,
02332   EMRSETICMMODE,        *PERMSETICMMODE,
02333   EMRSETLAYOUT,         *PEMRSETLAYOUT;
02334
02335 typedef struct {
02336     EMR   emr;
02337     DWORD ihPal;
02338 } EMRSELECTPALETTE, *PEMRSELECTPALETTE;
02339
02340 typedef struct {
```

```
02341     EMR   emr;
02342     DWORD iArcDirection;
02343 } EMRSETARCDIRECTION, *PEMRSETARCDIRECTION;
02344
02345 typedef struct {
02346     EMR      emr;
02347     COLORREF crColor;
02348 } EMRSETBKCOLOR,   *PEMRSETBKCOLOR,
02349   EMRSETTEXTCOLOR, *PEMRSETTEXTCOLOR;
02350
02351 typedef struct {
02352     EMR   emr;
02353     POINTL ptlOrigin;
02354 } EMRSETBRUSHORGEX,    *PEMRSETBRUSHORGEX,
02355   EMRSETVIEWPORTORGEX, *PEMRSETVIEWPORTORGEX,
02356   EMRSETWINDOWORGEX,   *PEMRSETWINDOWORGEX;
02357
02358 typedef struct {
02359     EMR  emr;
02360     COLORADJUSTMENT ColorAdjustment;
02361 } EMRSETCOLORADJUSTMENT, *PEMRSETCOLORADJUSTMENT;
02362
02363 typedef struct {
02364     EMR   emr;
02365     RECTL rclBounds;
02366     LONG  xDest;
02367     LONG  yDest;
02368     LONG  xSrc;
02369     LONG  ySrc;
02370     LONG  cxSrc;
02371     LONG  cySrc;
02372     DWORD offBmiSrc;
02373     DWORD cbBmiSrc;
02374     DWORD offBitsSrc;
02375     DWORD cbBitsSrc;
02376     DWORD iUsageSrc;
02377     DWORD iStartScan;
02378     DWORD cScans;
02379 } EMRSETDIBITSTODEIVCE, *PEMRSETDIBITSTODEVICE;
02380
02381 typedef struct {
02382     EMR   emr;
02383     DWORD dwFlags;
02384 } EMRSETMAPPERFLAGS, *PEMRSETMAPPERFLAGS;
02385
02386 typedef struct {
02387     EMR   emr;
02388     FLOAT eMiterLimit;
02389 } EMRSETMITERLIMIT, *PEMRSETMITERLIMIT;
02390
02391 typedef struct {
02392     EMR          emr;
02393     DWORD        ihPal;
02394     DWORD        iStart;
02395     DWORD        cEntries;
02396     PALETTEENTRY aPalEntries[1];
02397 } EMRSETPALETTEENTRIES, *PEMRSETPALETTEENTRIES;
02398
02399 typedef struct {
02400     EMR     emr;
02401     POINTL  ptlPixel;
02402     COLORREF crColor;
02403 } EMRSETPIXELV, *PEMRSETPIXELV;
02404
02405 typedef struct {
02406     EMR   emr;
02407     SIZEL szlExtent;
02408 } EMRSETVIEWPORTEXTEX, *PEMRSETVIEWPORTEXTEX,
02409   EMRSETWINDOWEXTEX,   *PEMRSETWINDOWEXTEX;
02410
02411 typedef struct {
02412     EMR   emr;
02413     XFORM xform;
02414 } EMRSETWORLDTRANSFORM, *PEMRSETWORLDTRANSFORM;
02415
02416 typedef struct {
02417     EMR      emr;
02418     RECTL    rclBounds;
02419     LONG     xDest;
02420     LONG     yDest;
02421     LONG     cxDest;
02422     LONG     cyDest;
02423     DWORD    dwRop;
02424     LONG     xSrc;
02425     LONG     ySrc;
02426     XFORM    xformSrc;
02427     COLORREF crBkColorSrc;
```

```
02428     DWORD    iUsageSrc;
02429     DWORD    offBmiSrc;
02430     DWORD    cbBmiSrc;
02431     DWORD    offBitsSrc;
02432     DWORD    cbBitsSrc;
02433     LONG     cxSrc;
02434     LONG     cySrc;
02435 } EMRSTRETCHBLT, *PEMRSTRETCHBLT;
02436
02437 typedef struct {
02438     EMR   emr;
02439     RECTL rclBounds;
02440     LONG  xDest;
02441     LONG  yDest;
02442     LONG  xSrc;
02443     LONG  ySrc;
02444     LONG  cxSrc;
02445     LONG  cySrc;
02446     DWORD offBmiSrc;
02447     DWORD cbBmiSrc;
02448     DWORD offBitsSrc;
02449     DWORD cbBitsSrc;
02450     DWORD iUsageSrc;
02451     DWORD dwRop;
02452     LONG  cxDest;
02453     LONG  cyDest;
02454 } EMRSTRETCHDIBITS, *PEMRSTRETCHDIBITS;
02455
02456 typedef struct {
02457     EMR                 emr;
02458     PIXELFORMATDESCRIPTOR pfd;
02459 } EMRPIXELFORMAT, *PEMRPIXELFORMAT;
02460
02461 typedef struct tagEMRGLSRECORD {
02462   EMR   emr;
02463   DWORD cbData;
02464   BYTE  Data[1];
02465 } EMRGLSRECORD, *PEMRGLSRECORD;
02466
02467 typedef struct {
02468   EMR   emr;
02469   RECTL rclBounds;
02470   DWORD cbData;
02471   BYTE  Data[1];
02472 } EMRGLSBOUNDEDRECORD, *PEMRGLSBOUNDEDRECORD;
02473
02474 typedef INT CALLBACK (*ENHMFENUMPROC)(HDC, LPHANDLETABLE,
02475                       LPENHMETARECORD, INT, LPVOID);
02476
02477 #define EMR_HEADER  1
02478 #define EMR_POLYBEZIER  2
02479 #define EMR_POLYGON 3
02480 #define EMR_POLYLINE    4
02481 #define EMR_POLYBEZIERTO    5
02482 #define EMR_POLYLINETO  6
02483 #define EMR_POLYPOLYLINE    7
02484 #define EMR_POLYPOLYGON 8
02485 #define EMR_SETWINDOWEXTEX  9
02486 #define EMR_SETWINDOWORGEX  10
02487 #define EMR_SETVIEWPORTEXTEX    11
02488 #define EMR_SETVIEWPORTORGEX    12
02489 #define EMR_SETBRUSHORGEX   13
02490 #define EMR_EOF 14
02491 #define EMR_SETPIXELV   15
02492 #define EMR_SETMAPPERFLAGS  16
02493 #define EMR_SETMAPMODE  17
02494 #define EMR_SETBKMODE   18
02495 #define EMR_SETPOLYFILLMODE 19
02496 #define EMR_SETROP2 20
02497 #define EMR_SETSTRETCHBLTMODE   21
02498 #define EMR_SETTEXTALIGN    22
02499 #define EMR_SETCOLORADJUSTMENT  23
02500 #define EMR_SETTEXTCOLOR    24
02501 #define EMR_SETBKCOLOR  25
02502 #define EMR_OFFSETCLIPRGN   26
02503 #define EMR_MOVETOEX    27
02504 #define EMR_SETMETARGN  28
02505 #define EMR_EXCLUDECLIPRECT 29
02506 #define EMR_INTERSECTCLIPRECT   30
02507 #define EMR_SCALEVIEWPORTEXTEX  31
02508 #define EMR_SCALEWINDOWEXTEX    32
02509 #define EMR_SAVEDC  33
02510 #define EMR_RESTOREDC   34
02511 #define EMR_SETWORLDTRANSFORM   35
02512 #define EMR_MODIFYWORLDTRANSFORM    36
02513 #define EMR_SELECTOBJECT    37
02514 #define EMR_CREATEPEN   38
```

```
02515 #define EMR_CREATEBRUSHINDIRECT 39
02516 #define EMR_DELETEOBJECT    40
02517 #define EMR_ANGLEARC    41
02518 #define EMR_ELLIPSE 42
02519 #define EMR_RECTANGLE   43
02520 #define EMR_ROUNDRECT   44
02521 #define EMR_ARC 45
02522 #define EMR_CHORD   46
02523 #define EMR_PIE 47
02524 #define EMR_SELECTPALETTE   48
02525 #define EMR_CREATEPALETTE   49
02526 #define EMR_SETPALETTEENTRIES   50
02527 #define EMR_RESIZEPALETTE   51
02528 #define EMR_REALIZEPALETTE  52
02529 #define EMR_EXTFLOODFILL    53
02530 #define EMR_LINETO  54
02531 #define EMR_ARCTO   55
02532 #define EMR_POLYDRAW    56
02533 #define EMR_SETARCDIRECTION 57
02534 #define EMR_SETMITERLIMIT   58
02535 #define EMR_BEGINPATH   59
02536 #define EMR_ENDPATH 60
02537 #define EMR_CLOSEFIGURE 61
02538 #define EMR_FILLPATH    62
02539 #define EMR_STROKEANDFILLPATH   63
02540 #define EMR_STROKEPATH  64
02541 #define EMR_FLATTENPATH 65
02542 #define EMR_WIDENPATH   66
02543 #define EMR_SELECTCLIPPATH  67
02544 #define EMR_ABORTPATH   68
02545 #define EMR_GDICOMMENT  70
02546 #define EMR_FILLRGN 71
02547 #define EMR_FRAMERGN    72
02548 #define EMR_INVERTRGN   73
02549 #define EMR_PAINTRGN    74
02550 #define EMR_EXTSELECTCLIPRGN    75
02551 #define EMR_BITBLT  76
02552 #define EMR_STRETCHBLT  77
02553 #define EMR_MASKBLT 78
02554 #define EMR_PLGBLT  79
02555 #define EMR_SETDIBITSTODEVICE   80
02556 #define EMR_STRETCHDIBITS   81
02557 #define EMR_EXTCREATEFONTINDIRECTW  82
02558 #define EMR_EXTTEXTOUTA 83
02559 #define EMR_EXTTEXTOUTW 84
02560 #define EMR_POLYBEZIER16    85
02561 #define EMR_POLYGON16   86
02562 #define EMR_POLYLINE16  87
02563 #define EMR_POLYBEZIERTO16  88
02564 #define EMR_POLYLINETO16    89
02565 #define EMR_POLYPOLYLINE16  90
02566 #define EMR_POLYPOLYGON16   91
02567 #define EMR_POLYDRAW16  92
02568 #define EMR_CREATEMONOBRUSH 93
02569 #define EMR_CREATEDIBPATTERNBRUSHPT 94
02570 #define EMR_EXTCREATEPEN    95
02571 #define EMR_POLYTEXTOUTA    96
02572 #define EMR_POLYTEXTOUTW    97
02573 #define EMR_SETICMMODE  98
02574 #define EMR_CREATECOLORSPACE    99
02575 #define EMR_SETCOLORSPACE   100
02576 #define EMR_DELETECOLORSPACE    101
02577 #define EMR_GLSRECORD   102
02578 #define EMR_GLSBOUNDEDRECORD    103
02579 #define EMR_PIXELFORMAT 104
02580
02581 #define EMR_MIN 1
02582 #define EMR_MAX 104
02583
02584 #define ENHMETA_SIGNATURE   1179469088
02585 #define ENHMETA_STOCK_OBJECT    0x80000000
02586
02587 #define GDICPMMENT_INDENTIFIER        0x43494447
02588 #define GDICOMMENT_WINDOWS_METAFILE   0x80000000
02589 #define GDICOMMENT_BEGINGROUP         0x80000001
02590 #define GDICOMMENT_ENDGROUP           0x80000002
02591 #define GDICOMMENT_MULTIFORMATS       0x80000003
02592 #define EPS_SIGNATURE                 0x46535045
02593
02594 #define CCHDEVICENAME 32
02595 #define CCHFORMNAME   32
02596
02597 typedef struct
02598 {
02599     BYTE   dmDeviceName[CCHDEVICENAME];
02600     WORD   dmSpecVersion;
02601     WORD   dmDriverVersion;
```

```
02602     WORD   dmSize;
02603     WORD   dmDriverExtra;
02604     DWORD  dmFields;
02605     union u10 {
02606       struct snort {
02607     SHORT  dmOrientation;
02608     SHORT  dmPaperSize;
02609     SHORT  dmPaperLength;
02610     SHORT  dmPaperWidth;
02611       } DUMMYSTRUCTNAME1;
02612       POINTL dmPosition;
02613     } DUMMYUNIONNAME1;
02614     SHORT  dmScale;
02615     SHORT  dmCopies;
02616     SHORT  dmDefaultSource;
02617     SHORT  dmPrintQuality;
02618     SHORT  dmColor;
02619     SHORT  dmDuplex;
02620     SHORT  dmYResolution;
02621     SHORT  dmTTOption;
02622     SHORT  dmCollate;
02623     BYTE   dmFormName[CCHFORMNAME];
02624     WORD   dmLogPixels;
02625     DWORD  dmBitsPerPel;
02626     DWORD  dmPelsWidth;
02627     DWORD  dmPelsHeight;
02628     DWORD  dmDisplayFlags;
02629     DWORD  dmDisplayFrequency;
02630     DWORD  dmICMMethod;
02631     DWORD  dmICMIntent;
02632     DWORD  dmMediaType;
02633     DWORD  dmDitherType;
02634     DWORD  dmReserved1;
02635     DWORD  dmReserved2;
02636     DWORD  dmPanningWidth;
02637     DWORD  dmPanningHeight;
02638 } DEVMODEA, *PDEVMODEA, *LPDEVMODEA;
02639
02640 typedef struct
02641 {
02642     WCHAR  dmDeviceName[CCHDEVICENAME];
02643     WORD   dmSpecVersion;
02644     WORD   dmDriverVersion;
02645     WORD   dmSize;
02646     WORD   dmDriverExtra;
02647     DWORD  dmFields;
02648     union u20 {
02649       struct blorf {
02650     SHORT  dmOrientation;
02651     SHORT  dmPaperSize;
02652     SHORT  dmPaperLength;
02653     SHORT  dmPaperWidth;
02654       } DUMMYSTRUCTNAME1;
02655       POINTL dmPosition;
02656     } DUMMYUNIONNAME1;
02657     SHORT  dmScale;
02658     SHORT  dmCopies;
02659     SHORT  dmDefaultSource;
02660     SHORT  dmPrintQuality;
02661     SHORT  dmColor;
02662     SHORT  dmDuplex;
02663     SHORT  dmYResolution;
02664     SHORT  dmTTOption;
02665     SHORT  dmCollate;
02666     WCHAR  dmFormName[CCHFORMNAME];
02667     WORD   dmLogPixels;
02668     DWORD  dmBitsPerPel;
02669     DWORD  dmPelsWidth;
02670     DWORD  dmPelsHeight;
02671     DWORD  dmDisplayFlags;
02672     DWORD  dmDisplayFrequency;
02673     DWORD  dmICMMethod;
02674     DWORD  dmICMIntent;
02675     DWORD  dmMediaType;
02676     DWORD  dmDitherType;
02677     DWORD  dmReserved1;
02678     DWORD  dmReserved2;
02679     DWORD  dmPanningWidth;
02680     DWORD  dmPanningHeight;
02681 } DEVMODEW, *PDEVMODEW, *LPDEVMODEW;
02682
02683 DECL_WINELIB_TYPE_AW(DEVMODE)
02684 DECL_WINELIB_TYPE_AW(PDEVMODE)
02685 DECL_WINELIB_TYPE_AW(LPDEVMODE)
02686
02687 #define DM_SPECVERSION  0x401
02688 #define DM_UPDATE   1
```

```
02689 #define DM_COPY     2
02690 #define DM_PROMPT   4
02691 #define DM_MODIFY   8
02692
02693 #define DM_IN_BUFFER      DM_MODIFY
02694 #define DM_IN_PROMPT      DM_PROMPT
02695 #define DM_OUT_BUFFER     DM_COPY
02696 #define DM_OUT_DEFAULT    DM_UPDATE
02697
02698 #define DM_ORIENTATION      0x00000001L
02699 #define DM_PAPERSIZE        0x00000002L
02700 #define DM_PAPERLENGTH      0x00000004L
02701 #define DM_PAPERWIDTH       0x00000008L
02702 #define DM_SCALE         0x00000010L
02703 #define DM_POSITION             0x00000020L
02704 #define DM_COPIES        0x00000100L
02705 #define DM_DEFAULTSOURCE    0x00000200L
02706 #define DM_PRINTQUALITY     0x00000400L
02707 #define DM_COLOR         0x00000800L
02708 #define DM_DUPLEX        0x00001000L
02709 #define DM_YRESOLUTION      0x00002000L
02710 #define DM_TTOPTION     0x00004000L
02711 #define DM_COLLATE              0x00008000L
02712 #define DM_FORMNAME             0x00010000L
02713 #define DM_LOGPIXELS            0x00020000L
02714 #define DM_BITSPERPEL           0x00040000L
02715 #define DM_PELSWIDTH            0x00080000L
02716 #define DM_PELSHEIGHT           0x00100000L
02717 #define DM_DISPLAYFLAGS         0x00200000L
02718 #define DM_DISPLAYFREQUENCY     0x00400000L
02719 #define DM_ICMMETHOD            0x00800000L
02720 #define DM_ICMINTENT            0x01000000L
02721 #define DM_MEDIATYPE            0x02000000L
02722 #define DM_DITHERTYPE           0x04000000L
02723 #define DM_PANNINGWIDTH         0x08000000L
02724 #define DM_PANNINGHEIGHT        0x10000000L
02725
02726 #define DMORIENT_PORTRAIT   1
02727 #define DMORIENT_LANDSCAPE  2
02728
02729 #define DMPAPER_FIRST               DMPAPER_LETTER
02730 #define DMPAPER_LETTER          1
02731 #define DMPAPER_LETTERSMALL         2
02732 #define DMPAPER_TABLOID             3
02733 #define DMPAPER_LEDGER              4
02734 #define DMPAPER_LEGAL           5
02735 #define DMPAPER_STATEMENT           6
02736 #define DMPAPER_EXECUTIVE       7
02737 #define DMPAPER_A3          8
02738 #define DMPAPER_A4          9
02739 #define DMPAPER_A4SMALL             10
02740 #define DMPAPER_A5          11
02741 #define DMPAPER_B4                  12
02742 #define DMPAPER_B5                  13
02743 #define DMPAPER_FOLIO               14
02744 #define DMPAPER_QUARTO              15
02745 #define DMPAPER_10X14               16
02746 #define DMPAPER_11X17               17
02747 #define DMPAPER_NOTE                18
02748 #define DMPAPER_ENV_9               19
02749 #define DMPAPER_ENV_10          20
02750 #define DMPAPER_ENV_11              21
02751 #define DMPAPER_ENV_12              22
02752 #define DMPAPER_ENV_14              23
02753 #define DMPAPER_CSHEET              24
02754 #define DMPAPER_DSHEET              25
02755 #define DMPAPER_ESHEET              26
02756 #define DMPAPER_ENV_DL          27
02757 #define DMPAPER_ENV_C5          28
02758 #define DMPAPER_ENV_C3              29
02759 #define DMPAPER_ENV_C4              30
02760 #define DMPAPER_ENV_C6              31
02761 #define DMPAPER_ENV_C65             32
02762 #define DMPAPER_ENV_B4              33
02763 #define DMPAPER_ENV_B5          34
02764 #define DMPAPER_ENV_B6              35
02765 #define DMPAPER_ENV_ITALY           36
02766 #define DMPAPER_ENV_MONARCH     37
02767 #define DMPAPER_ENV_PERSONAL        38
02768 #define DMPAPER_FANFOLD_US          39
02769 #define DMPAPER_FANFOLD_STD_GERMAN 40
02770 #define DMPAPER_FANFOLD_LGL_GERMAN 41
02771 #define DMPAPER_ISO_B4              42
02772 #define DMPAPER_JAPANESE_POSTCARD   43
02773 #define DMPAPER_9X11                44
02774 #define DMPAPER_10X11               45
02775 #define DMPAPER_15X11               46
```

```
02776 #define DMPAPER_ENV_INVITE         47
02777 #define DMPAPER_RESERVED_48        48
02778 #define DMPAPER_RESERVED_49        49
02779 #define DMPAPER_LETTER_EXTRA       50
02780 #define DMPAPER_LEGAL_EXTRA        51
02781 #define DMPAPER_TABLOID_EXTRA      52
02782 #define DMPAPER_A4_EXTRA           53
02783 #define DMPAPER_LETTER_TRANSVERSE  54
02784 #define DMPAPER_A4_TRANSVERSE      55
02785 #define DMPAPER_LETTER_EXTRA_TRANSVERSE 56
02786 #define DMPAPER_A_PLUS             57
02787 #define DMPAPER_B_PLUS             58
02788 #define DMPAPER_LETTER_PLUS        59
02789 #define DMPAPER_A4_PLUS            60
02790 #define DMPAPER_A5_TRANSVERSE      61
02791 #define DMPAPER_B5_TRANSVERSE      62
02792 #define DMPAPER_A3_EXTRA           63
02793 #define DMPAPER_A5_EXTRA           64
02794 #define DMPAPER_B5_EXTRA           65
02795 #define DMPAPER_A2                 66
02796 #define DMPAPER_A3_TRANSVERSE      67
02797 #define DMPAPER_A3_EXTRA_TRANSVERSE           68
02798 #define DMPAPER_DBL_JAPANESE_POSTCARD         69
02799 #define DMPAPER_A6                 70
02800 #define DMPAPER_JENV_KAKU2         71
02801 #define DMPAPER_JENV_KAKU3         72
02802 #define DMPAPER_JENV_CHOU3         73
02803 #define DMPAPER_JENV_CHOU4         74
02804 #define DMPAPER_LETTER_ROTATED     75
02805 #define DMPAPER_A3_ROTATED         76
02806 #define DMPAPER_A4_ROTATED         77
02807 #define DMPAPER_A5_ROTATED         78
02808 #define DMPAPER_B4_JIS_ROTATED     79
02809 #define DMPAPER_B5_JIS_ROTATED     80
02810 #define DMPAPER_JAPANESE_POSTCARD_ROTATED     81
02811 #define DMPAPER_DBL_JAPANESE_POSTCARD_ROTATED 82
02812 #define DMPAPER_A6_ROTATED         83
02813 #define DMPAPER_JENV_KAKU2_ROTATED 84
02814 #define DMPAPER_JENV_KAKU3_ROTATED 85
02815 #define DMPAPER_JENV_CHOU3_ROTATED 86
02816 #define DMPAPER_JENV_CHOU4_ROTATED 87
02817 #define DMPAPER_B6_JIS             88
02818 #define DMPAPER_B6_JIS_ROTATED     89
02819 #define DMPAPER_12X11              90
02820 #define DMPAPER_JENV_YOU4          91
02821 #define DMPAPER_JENV_YOU4_ROTATED  92
02822 #define DMPAPER_P16K               93
02823 #define DMPAPER_P32K               94
02824 #define DMPAPER_P32KBIG            95
02825 #define DMPAPER_PENV_1             96
02826 #define DMPAPER_PENV_2             97
02827 #define DMPAPER_PENV_3             98
02828 #define DMPAPER_PENV_4             99
02829 #define DMPAPER_PENV_5             100
02830 #define DMPAPER_PENV_6             101
02831 #define DMPAPER_PENV_7             102
02832 #define DMPAPER_PENV_8             103
02833 #define DMPAPER_PENV_9             104
02834 #define DMPAPER_PENV_10            105
02835 #define DMPAPER_P16K_ROTATED       106
02836 #define DMPAPER_P32K_ROTATED       107
02837 #define DMPAPER_P32KBIG_ROTATED    108
02838 #define DMPAPER_PENV_1_ROTATED     109
02839 #define DMPAPER_PENV_2_ROTATED     110
02840 #define DMPAPER_PENV_3_ROTATED     111
02841 #define DMPAPER_PENV_4_ROTATED     112
02842 #define DMPAPER_PENV_5_ROTATED     113
02843 #define DMPAPER_PENV_6_ROTATED     114
02844 #define DMPAPER_PENV_7_ROTATED     115
02845 #define DMPAPER_PENV_8_ROTATED     116
02846 #define DMPAPER_PENV_9_ROTATED     117
02847 #define DMPAPER_PENV_10_ROTATED    118
02848
02849 #define DMPAPER_LAST               DMPAPER_PENV_10_ROTATED
02850 #define DMPAPER_USER               256
02851
02852 #define DMBIN_FIRST             DMBIN_UPPER
02853 #define DMBIN_UPPER     1
02854 #define DMBIN_ONLYONE           1
02855 #define DMBIN_LOWER     2
02856 #define DMBIN_MIDDLE        3
02857 #define DMBIN_MANUAL        4
02858 #define DMBIN_ENVELOPE      5
02859 #define DMBIN_ENVMANUAL     6
02860 #define DMBIN_AUTO      7
02861 #define DMBIN_TRACTOR           8
02862 #define DMBIN_SMALLFMT          9
```

```
02863 #define DMBIN_LARGEFMT          10
02864 #define DMBIN_LARGECAPACITY 11
02865 #define DMBIN_CASSETTE          14
02866 #define DMBIN_FORMSOURCE        15
02867 #define DMBIN_LAST              DMBIN_FORMSOURCE
02868 #define DMBIN_USER              256
02869
02870 #define DMRES_DRAFT             (-1)
02871 #define DMRES_LOW               (-2)
02872 #define DMRES_MEDIUM            (-3)
02873 #define DMRES_HIGH              (-4)
02874
02875 #define DMCOLOR_MONOCHROME  1
02876 #define DMCOLOR_COLOR       2
02877
02878 #define DMDUP_SIMPLEX           1
02879 #define DMDUP_VERTICAL          2
02880 #define DMDUP_HORIZONTAL        3
02881
02882 #define DMTT_BITMAP     1
02883 #define DMTT_DOWNLOAD       2
02884 #define DMTT_SUBDEV     3
02885 #define DMTT_DOWNLOAD_OUTLINE   4
02886
02887 #define DMCOLLATE_FALSE         0
02888 #define DMCOLLATE_TRUE          1
02889
02890 #define DMICMMETHOD_NONE        1
02891 #define DMICMMETHOD_SYSTEM      2
02892 #define DMICMMETHOD_DRIVER      3
02893 #define DMICMMETHOD_DEVICE      4
02894 #define DMICMMETHOD_USER        256
02895
02896 #define DMICM_SATURATE          1
02897 #define DMICM_CONTRAST          2
02898 #define DMICM_COLORMETRIC       3
02899 #define DMICM_USER              256
02900
02901 #define DMMEDIA_STANDARD        1
02902 #define DMMEDIA_TRANSPARENCY    2
02903 #define DMMEDIA_GLOSSY          3
02904 #define DMMEDIA_USER            256
02905
02906 #define DMDITHER_NONE           1
02907 #define DMDITHER_COARSE         2
02908 #define DMDITHER_FINE           3
02909 #define DMDITHER_LINEART        4
02910 #define DMDITHER_GRAYSCALE      5
02911 #define DMDITHER_USER           256
02912
02913 typedef struct
02914 {
02915     INT    cbSize;
02916     LPCSTR   lpszDocName;
02917     LPCSTR   lpszOutput;
02918     LPCSTR   lpszDatatype;
02919     DWORD    fwType;
02920 } DOCINFOA, *LPDOCINFOA;
02921
02922 typedef struct
02923 {
02924     INT    cbSize;
02925     LPCWSTR  lpszDocName;
02926     LPCWSTR  lpszOutput;
02927     LPCWSTR  lpszDatatype;
02928     DWORD    fwType;
02929 } DOCINFOW, *LPDOCINFOW;
02930
02931 DECL_WINELIB_TYPE_AW(DOCINFO)
02932 DECL_WINELIB_TYPE_AW(LPDOCINFO)
02933
02934 #define DI_APPBANDING     0x0001
02935
02936 /* Flags for PolyDraw and GetPath */
02937 #define PT_CLOSEFIGURE          0x0001
02938 #define PT_LINETO               0x0002
02939 #define PT_BEZIERTO             0x0004
02940 #define PT_MOVETO               0x0006
02941
02942 #define RDH_RECTANGLES  1
02943
02944 typedef struct _RGNDATAHEADER {
02945     DWORD   dwSize;
02946     DWORD   iType;
02947     DWORD   nCount;
02948     DWORD   nRgnSize;
02949     RECT    rcBound;
```

```
02950 } RGNDATAHEADER,*PRGNDATAHEADER;
02951
02952 typedef struct _RGNDATA {
02953     RGNDATAHEADER   rdh;
02954     char        Buffer[1];
02955 } RGNDATA,*PRGNDATA,*LPRGNDATA;
02956
02957 typedef BOOL CALLBACK (*ABORTPROC)(HDC, INT);
02958
02959 typedef struct {
02960     DWORD   cb;
02961     CHAR    DeviceName[32];
02962     CHAR    DeviceString[128];
02963     DWORD   StateFlags;
02964     CHAR    DeviceID[128];
02965     CHAR    DeviceKey[128];
02966 } DISPLAY_DEVICEA,*PDISPLAY_DEVICEA,*LPDISPLAY_DEVICEA;
02967
02968 typedef struct {
02969     DWORD   cb;
02970     WCHAR   DeviceName[32];
02971     WCHAR   DeviceString[128];
02972     DWORD   StateFlags;
02973     WCHAR   DeviceID[128];
02974     WCHAR   DeviceKey[128];
02975 } DISPLAY_DEVICEW,*PDISPLAY_DEVICEW,*LPDISPLAY_DEVICEW;
02976 DECL_WINELIB_TYPE_AW(DISPLAY_DEVICE)
02977 DECL_WINELIB_TYPE_AW(PDISPLAY_DEVICE)
02978 DECL_WINELIB_TYPE_AW(LPDISPLAY_DEVICE)
02979
02980 /* DISPLAY_DEVICE.StateFlags (?)*/
02981 #define DISPLAY_DEVICE_ATTACHED_TO_DESKTOP  0x00000001
02982 #define DISPLAY_DEVICE_MULTI_DRIVER     0x00000002
02983 #define DISPLAY_DEVICE_PRIMARY_DEVICE       0x00000004
02984 #define DISPLAY_DEVICE_MIRRORING_DRIVER     0x00000008
02985 #define DISPLAY_DEVICE_VGA_COMPATIBLE       0x00000010
02986
02987 #define GDI_ERROR                               (0xFFFFFFFFL)
02988 #define HGDI_ERROR                              ((HANDLE)0xFFFFFFFFL)
02989
02990 INT       WINAPI AbortDoc(HDC);
02991 BOOL      WINAPI AbortPath(HDC);
02992 INT       WINAPI AddFontResourceA(LPCSTR);
02993 INT       WINAPI AddFontResourceW(LPCWSTR);
02994 #define     AddFontResource WINELIB_NAME_AW(AddFontResource)
02995 BOOL      WINAPI AngleArc(HDC, INT, INT, DWORD, FLOAT, FLOAT);
02996 BOOL      WINAPI AnimatePalette(HPALETTE,UINT,UINT,const PALETTEENTRY*);
02997 BOOL      WINAPI Arc(HDC,INT,INT,INT,INT,INT,INT,INT,INT);
02998 BOOL      WINAPI ArcTo(HDC, INT, INT, INT, INT, INT, INT, INT, INT);
02999 BOOL      WINAPI BeginPath(HDC);
03000 BOOL      WINAPI BitBlt(HDC,INT,INT,INT,INT,HDC,INT,INT,DWORD);
03001 INT       WINAPI ChoosePixelFormat(HDC,const LPPIXELFORMATDESCRIPTOR);
03002 BOOL      WINAPI Chord(HDC,INT,INT,INT,INT,INT,INT,INT,INT);
03003 HENHMETAFILE WINAPI CloseEnhMetaFile(HDC);
03004 BOOL      WINAPI CloseFigure(HDC);
03005 HMETAFILE WINAPI CloseMetaFile(HDC);
03006 INT       WINAPI CombineRgn(HRGN,HRGN,HRGN,INT);
03007 BOOL      WINAPI CombineTransform(LPXFORM,const XFORM *,const XFORM *);
03008 HENHMETAFILE WINAPI CopyEnhMetaFileA(HENHMETAFILE,LPCSTR);
03009 HENHMETAFILE WINAPI CopyEnhMetaFileW(HENHMETAFILE,LPCWSTR);
03010 #define     CopyEnhMetaFile WINELIB_NAME_AW(CopyEnhMetaFile)
03011 HMETAFILE WINAPI CopyMetaFileA(HMETAFILE,LPCSTR);
03012 HMETAFILE WINAPI CopyMetaFileW(HMETAFILE,LPCWSTR);
03013 #define     CopyMetaFile WINELIB_NAME_AW(CopyMetaFile)
03014 HBITMAP   WINAPI CreateBitmap(INT,INT,UINT,UINT,LPCVOID);
03015 HBITMAP   WINAPI CreateBitmapIndirect(const BITMAP*);
03016 HBRUSH    WINAPI CreateBrushIndirect(const LOGBRUSH*);
03017 HCOLORSPACE WINAPI CreateColorSpaceA(LPLOGCOLORSPACEA);
03018 HCOLORSPACE WINAPI CreateColorSpaceW(LPLOGCOLORSPACEW);
03019 #define     CreateColorSpace WINELIB_NAME_AW(CreateColorSpace)
03020 HBITMAP   WINAPI CreateCompatibleBitmap(HDC,INT,INT);
03021 HDC       WINAPI CreateCompatibleDC(HDC);
03022 HDC       WINAPI CreateDCA(LPCSTR,LPCSTR,LPCSTR,const DEVMODEA*);
03023 HDC       WINAPI CreateDCW(LPCWSTR,LPCWSTR,LPCWSTR,const DEVMODEW*);
03024 #define     CreateDC WINELIB_NAME_AW(CreateDC)
03025 HBITMAP   WINAPI CreateDIBitmap(HDC,const BITMAPINFOHEADER*,DWORD,
03026                                  LPCVOID,const BITMAPINFO*,UINT);
03027 HBRUSH    WINAPI CreateDIBPatternBrush(HGLOBAL,UINT);
03028 HBRUSH    WINAPI CreateDIBPatternBrushPt(const void*,UINT);
03029 HBITMAP   WINAPI CreateDIBSection (HDC, BITMAPINFO *, UINT,
03030                         LPVOID *, HANDLE, DWORD offset);
03031 HBITMAP   WINAPI CreateDiscardableBitmap(HDC,INT,INT);
03032 HRGN      WINAPI CreateEllipticRgn(INT,INT,INT,INT);
03033 HRGN      WINAPI CreateEllipticRgnIndirect(const RECT *);
03034 HDC       WINAPI CreateEnhMetaFileA(HDC,LPCSTR,const RECT*,LPCSTR);
03035 HDC       WINAPI CreateEnhMetaFileW(HDC,LPCWSTR,const RECT*,LPCWSTR);
03036 #define     CreateEnhMetaFile WINELIB_NAME_AW(CreateEnhMetaFile)
```

```
03037 HFONT     WINAPI CreateFontA(INT,INT,INT,INT,INT,DWORD,DWORD,
03038                                DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,LPCSTR);
03039 HFONT     WINAPI CreateFontW(INT,INT,INT,INT,INT,DWORD,DWORD,
03040                                DWORD,DWORD,DWORD,DWORD,DWORD,DWORD,LPCWSTR);
03041 #define     CreateFont WINELIB_NAME_AW(CreateFont)
03042 HFONT     WINAPI CreateFontIndirectA(const LOGFONTA*);
03043 HFONT     WINAPI CreateFontIndirectW(const LOGFONTW*);
03044 #define     CreateFontIndirect WINELIB_NAME_AW(CreateFontIndirect)
03045 HPALETTE  WINAPI CreateHalftonePalette(HDC);
03046 HBRUSH    WINAPI CreateHatchBrush(INT,COLORREF);
03047 HDC       WINAPI CreateICA(LPCSTR,LPCSTR,LPCSTR,const DEVMODEA*);
03048 HDC       WINAPI CreateICW(LPCWSTR,LPCWSTR,LPCWSTR,const DEVMODEW*);
03049 #define     CreateIC WINELIB_NAME_AW(CreateIC)
03050 HDC       WINAPI CreateMetaFileA(LPCSTR);
03051 HDC       WINAPI CreateMetaFileW(LPCWSTR);
03052 #define     CreateMetaFile WINELIB_NAME_AW(CreateMetaFile)
03053 HPALETTE  WINAPI CreatePalette(const LOGPALETTE*);
03054 HBRUSH    WINAPI CreatePatternBrush(HBITMAP);
03055 HPEN      WINAPI CreatePen(INT,INT,COLORREF);
03056 HPEN      WINAPI CreatePenIndirect(const LOGPEN*);
03057 HRGN      WINAPI CreatePolyPolygonRgn(const POINT*,const INT*,INT,INT);
03058 HRGN      WINAPI CreatePolygonRgn(const POINT*,INT,INT);
03059 HRGN      WINAPI CreateRectRgn(INT,INT,INT,INT);
03060 HRGN      WINAPI CreateRectRgnIndirect(const RECT*);
03061 HRGN      WINAPI CreateRoundRectRgn(INT,INT,INT,INT,INT,INT);
03062 BOOL      WINAPI CreateScalableFontResourceA(DWORD,LPCSTR,LPCSTR,LPCSTR);
03063 BOOL      WINAPI CreateScalableFontResourceW(DWORD,LPCWSTR,LPCWSTR,LPCWSTR);
03064 #define     CreateScalableFontResource WINELIB_NAME_AW(CreateScalableFontResource)
03065 HBRUSH    WINAPI CreateSolidBrush(COLORREF);
03066 BOOL      WINAPI DPtoLP(HDC,LPPOINT,INT);
03067 BOOL      WINAPI DeleteColorSpace(HCOLORSPACE);
03068 BOOL      WINAPI DeleteDC(HDC);
03069 BOOL      WINAPI DeleteEnhMetaFile(HENHMETAFILE);
03070 BOOL      WINAPI DeleteMetaFile(HMETAFILE);
03071 BOOL      WINAPI DeleteObject(HGDIOBJ);
03072 INT       WINAPI DescribePixelFormat(HDC,int,UINT,
03073                                      LPPIXELFORMATDESCRIPTOR);
03074 INT       WINAPI DrawEscape(HDC,INT,INT,LPCSTR);
03075 BOOL      WINAPI Ellipse(HDC,INT,INT,INT,INT);
03076 INT       WINAPI EndDoc(HDC);
03077 BOOL      WINAPI EndPath(HDC);
03078 BOOL      WINAPI EnumEnhMetaFile(HDC,HENHMETAFILE,ENHMFENUMPROC,LPVOID,const RECT*);
03079 INT       WINAPI EnumFontFamiliesA(HDC,LPCSTR,FONTENUMPROCA,LPARAM);
03080 INT       WINAPI EnumFontFamiliesW(HDC,LPCWSTR,FONTENUMPROCW,LPARAM);
03081 #define     EnumFontFamilies WINELIB_NAME_AW(EnumFontFamilies)
03082 INT       WINAPI EnumFontFamiliesExA(HDC,LPLOGFONTA,FONTENUMPROCEXA,LPARAM,DWORD);
03083 INT       WINAPI EnumFontFamiliesExW(HDC,LPLOGFONTW,FONTENUMPROCEXW,LPARAM,DWORD);
03084 #define     EnumFontFamiliesEx WINELIB_NAME_AW(EnumFontFamiliesEx)
03085 INT       WINAPI EnumFontsA(HDC,LPCSTR,FONTENUMPROCA,LPARAM);
03086 INT       WINAPI EnumFontsW(HDC,LPCWSTR,FONTENUMPROCW,LPARAM);
03087 #define     EnumFonts WINELIB_NAME_AW(EnumFonts)
03088 BOOL      WINAPI EnumMetaFile(HDC,HMETAFILE,MFENUMPROC,LPARAM);
03089 INT       WINAPI EnumObjects(HDC,INT,GOBJENUMPROC,LPARAM);
03090 BOOL      WINAPI EqualRgn(HRGN,HRGN);
03091 INT       WINAPI Escape(HDC,INT,INT,LPCSTR,LPVOID);
03092 INT       WINAPI ExcludeClipRect(HDC,INT,INT,INT,INT);
03093 HPEN      WINAPI ExtCreatePen(DWORD,DWORD,const LOGBRUSH*,DWORD,const DWORD*);
03094 HRGN      WINAPI ExtCreateRegion(const XFORM*,DWORD,const RGNDATA*);
03095 INT       WINAPI ExtEscape(HDC,INT,INT,LPCSTR,INT,LPSTR);
03096 BOOL      WINAPI ExtFloodFill(HDC,INT,INT,COLORREF,UINT);
03097 INT       WINAPI ExtSelectClipRgn(HDC,HRGN,INT);
03098 BOOL      WINAPI ExtTextOutA(HDC,INT,INT,UINT,const RECT*,
03099                                LPCSTR,UINT,const INT*);
03100 BOOL      WINAPI ExtTextOutW(HDC,INT,INT,UINT,const RECT*,
03101                                LPCWSTR,UINT,const INT*);
03102 #define     ExtTextOut WINELIB_NAME_AW(ExtTextOut)
03103 BOOL      WINAPI FillPath(HDC);
03104 BOOL      WINAPI FillRgn(HDC,HRGN,HBRUSH);
03105 BOOL      WINAPI FixBrushOrgEx(HDC,INT,INT,LPPOINT);
03106 BOOL      WINAPI FlattenPath(HDC);
03107 BOOL      WINAPI FloodFill(HDC,INT,INT,COLORREF);
03108 BOOL      WINAPI FrameRgn(HDC,HRGN,HBRUSH,INT,INT);
03109 BOOL      WINAPI GdiComment(HDC,UINT,const BYTE *);
03110 BOOL      WINAPI GdiFlush(void);
03111 INT       WINAPI GetArcDirection(HDC);
03112 BOOL      WINAPI GetAspectRatioFilterEx(HDC,LPSIZE);
03113 LONG      WINAPI GetBitmapBits(HBITMAP,LONG,LPVOID);
03114 BOOL      WINAPI GetBitmapDimensionEx(HBITMAP,LPSIZE);
03115 BOOL      WINAPI GetBrushOrgEx(HDC,LPPOINT);
03116 COLORREF  WINAPI GetBkColor(HDC);
03117 INT       WINAPI GetBkMode(HDC);
03118 UINT      WINAPI GetBoundsRect(HDC,LPRECT,UINT);
03119 BOOL      WINAPI GetCharABCWidthsA(HDC,UINT,UINT,LPABC);
03120 BOOL      WINAPI GetCharABCWidthsW(HDC,UINT,UINT,LPABC);
03121 #define     GetCharABCWidths WINELIB_NAME_AW(GetCharABCWidths)
03122 BOOL      WINAPI GetCharABCWidthsFloatA(HDC,UINT,UINT,LPABCFLOAT);
03123 BOOL      WINAPI GetCharABCWidthsFloatW(HDC,UINT,UINT,LPABCFLOAT);
```

```
03124 #define     GetCharABCWidthsFloat WINELIB_NAME_AW(GetCharABCWidthsFloat)
03125 DWORD     WINAPI GetCharacterPlacementA(HDC,LPCSTR,INT,INT,GCP_RESULTSA*,DWORD);
03126 DWORD     WINAPI GetCharacterPlacementW(HDC,LPCWSTR,INT,INT,GCP_RESULTSW*,DWORD);
03127 #define     GetCharacterPlacement WINELIB_NAME_AW(GetCharacterPlacement)
03128 BOOL      WINAPI GetCharWidth32A(HDC,UINT,UINT,LPINT);
03129 BOOL      WINAPI GetCharWidth32W(HDC,UINT,UINT,LPINT);
03130 #define     GetCharWidthA GetCharWidth32A
03131 #define     GetCharWidthW GetCharWidth32W
03132 #define     GetCharWidth32 WINELIB_NAME_AW(GetCharWidth32)
03133 #define     GetCharWidth WINELIB_NAME_AW(GetCharWidth)
03134 BOOL      WINAPI GetCharWidthFloatA(HDC,UINT,UINT,PFLOAT);
03135 BOOL      WINAPI GetCharWidthFloatW(HDC,UINT,UINT,PFLOAT);
03136 #define     GetCharWidthFloat WINELIB_NAME_AW(GetCharWidthFloat)
03137 INT       WINAPI GetClipBox(HDC,LPRECT);
03138 INT       WINAPI GetClipRgn(HDC,HRGN);
03139 BOOL      WINAPI GetColorAdjustment(HDC, LPCOLORADJUSTMENT);
03140 HANDLE    WINAPI GetCurrentObject(HDC,UINT);
03141 BOOL      WINAPI GetCurrentPositionEx(HDC,LPPOINT);
03142 INT       WINAPI GetDeviceCaps(HDC,INT);
03143 BOOL      WINAPI GetDeviceGammaRamp(HDC,LPVOID);
03144 COLORREF  WINAPI GetDCBrushColor(HDC);
03145 BOOL      WINAPI GetDCOrgEx(HDC,LPPOINT);
03146 COLORREF  WINAPI GetDCPenColor(HDC);
03147 UINT      WINAPI GetDIBColorTable(HDC,UINT,UINT,RGBQUAD*);
03148 INT       WINAPI GetDIBits(HDC,HBITMAP,UINT,UINT,LPVOID,LPBITMAPINFO,UINT);
03149 HENHMETAFILE WINAPI GetEnhMetaFileA(LPCSTR);
03150 HENHMETAFILE WINAPI GetEnhMetaFileW(LPCWSTR);
03151 #define     GetEnhMetaFile WINELIB_NAME_AW(GetEnhMetaFile)
03152 UINT      WINAPI GetEnhMetaFileBits(HENHMETAFILE,UINT,LPBYTE);
03153 UINT        WINAPI GetEnhMetaFileDescriptionA(HENHMETAFILE,UINT,LPSTR);
03154 UINT        WINAPI GetEnhMetaFileDescriptionW(HENHMETAFILE,UINT,LPWSTR);
03155 #define     GetEnhMetaFileDescription WINELIB_NAME_AW(GetEnhMetaFileDescription)
03156 UINT      WINAPI GetEnhMetaFileHeader(HENHMETAFILE,UINT,LPENHMETAHEADER);
03157 UINT      WINAPI GetEnhMetaFilePaletteEntries(HENHMETAFILE,UINT,LPPALETTEENTRY);
03158 DWORD     WINAPI GetFontData(HDC,DWORD,DWORD,LPVOID,DWORD);
03159 DWORD     WINAPI GetFontLanguageInfo(HDC);
03160 DWORD     WINAPI GetGlyphOutlineA(HDC,UINT,UINT,LPGLYPHMETRICS,DWORD,LPVOID,const MAT2*);
03161 DWORD     WINAPI GetGlyphOutlineW(HDC,UINT,UINT,LPGLYPHMETRICS,DWORD,LPVOID,const MAT2*);
03162 #define     GetGlyphOutline WINELIB_NAME_AW(GetGlyphOutline)
03163 INT       WINAPI GetGraphicsMode(HDC);
03164 DWORD     WINAPI GetKerningPairsA(HDC,DWORD,LPKERNINGPAIR);
03165 DWORD     WINAPI GetKerningPairsW(HDC,DWORD,LPKERNINGPAIR);
03166 #define     GetKerningPairs WINELIB_NAME_AW(GetKerningPairs)
03167 DWORD       WINAPI GetLayout(HDC);
03168 BOOL        WINAPI GetLogColorSpaceA(HCOLORSPACE,LPLOGCOLORSPACEA,DWORD);
03169 BOOL        WINAPI GetLogColorSpaceW(HCOLORSPACE,LPLOGCOLORSPACEW,DWORD);
03170 #define     GetLogColorSpace WINELIB_NAME_AW(GetLogColorSpace)
03171 INT       WINAPI GetMapMode(HDC);
03172 HMETAFILE WINAPI GetMetaFileA(LPCSTR);
03173 HMETAFILE WINAPI GetMetaFileW(LPCWSTR);
03174 #define     GetMetaFile WINELIB_NAME_AW(GetMetaFile)
03175 UINT        WINAPI GetMetaFileBitsEx(HMETAFILE,UINT,LPVOID);
03176 INT         WINAPI GetMetaRgn(HDC,HRGN);
03177 BOOL        WINAPI GetMiterLimit(HDC, PFLOAT);
03178 DWORD       WINAPI GetNearestColor(HDC,DWORD);
03179 UINT        WINAPI GetNearestPaletteIndex(HPALETTE,COLORREF);
03180 INT         WINAPI GetObjectA(HANDLE,INT,LPVOID);
03181 INT         WINAPI GetObjectW(HANDLE,INT,LPVOID);
03182 #define     GetObject WINELIB_NAME_AW(GetObject)
03183 DWORD     WINAPI GetObjectType(HANDLE);
03184 UINT      WINAPI GetOutlineTextMetricsA(HDC,UINT,LPOUTLINETEXTMETRICA);
03185 UINT      WINAPI GetOutlineTextMetricsW(HDC,UINT,LPOUTLINETEXTMETRICW);
03186 #define     GetOutlineTextMetrics WINELIB_NAME_AW(GetOutlineTextMetrics)
03187 UINT      WINAPI GetPaletteEntries(HPALETTE,UINT,UINT,LPPALETTEENTRY);
03188 INT       WINAPI GetPath(HDC,LPPOINT,LPBYTE,INT);
03189 COLORREF  WINAPI GetPixel(HDC,INT,INT);
03190 INT       WINAPI GetPixelFormat(HDC);
03191 INT       WINAPI GetPolyFillMode(HDC);
03192 BOOL      WINAPI GetRasterizerCaps(LPRASTERIZER_STATUS,UINT);
03193 DWORD     WINAPI GetRegionData(HRGN,DWORD,LPRGNDATA);
03194 INT       WINAPI GetRelAbs(HDC,DWORD);
03195 INT       WINAPI GetRgnBox(HRGN,LPRECT);
03196 INT       WINAPI GetROP2(HDC);
03197 HGDIOBJ   WINAPI GetStockObject(INT);
03198 INT       WINAPI GetStretchBltMode(HDC);
03199 UINT      WINAPI GetSystemPaletteEntries(HDC,UINT,UINT,LPPALETTEENTRY);
03200 UINT      WINAPI GetSystemPaletteUse(HDC);
03201 UINT      WINAPI GetTextAlign(HDC);
03202 INT       WINAPI GetTextCharacterExtra(HDC);
03203 UINT      WINAPI GetTextCharset(HDC);
03204 UINT      WINAPI GetTextCharsetInfo(HDC,LPFONTSIGNATURE,DWORD);
03205 COLORREF  WINAPI GetTextColor(HDC);
03206 BOOL      WINAPI GetTextExtentExPointA(HDC,LPCSTR,INT,INT,
03207                                        LPINT,LPINT,LPSIZE);
03208 BOOL      WINAPI GetTextExtentExPointW(HDC,LPCWSTR,INT,INT,
03209                                        LPINT,LPINT,LPSIZE);
03210 BOOL      WINAPI GetTextExtentPointA(HDC,LPCSTR,INT,LPSIZE);
```

```
03211 BOOL      WINAPI GetTextExtentPointW(HDC,LPCWSTR,INT,LPSIZE);
03212 #define     GetTextExtentPoint WINELIB_NAME_AW(GetTextExtentPoint)
03213 BOOL      WINAPI GetTextExtentPoint32A(HDC,LPCSTR,INT,LPSIZE);
03214 BOOL      WINAPI GetTextExtentPoint32W(HDC,LPCWSTR,INT,LPSIZE);
03215 #define     GetTextExtentPoint32 WINELIB_NAME_AW(GetTextExtentPoint32)
03216 #define     GetTextExtentExPoint WINELIB_NAME_AW(GetTextExtentExPoint)
03217 INT       WINAPI GetTextFaceA(HDC,INT,LPSTR);
03218 INT       WINAPI GetTextFaceW(HDC,INT,LPWSTR);
03219 #define     GetTextFace WINELIB_NAME_AW(GetTextFace)
03220 BOOL      WINAPI GetTextMetricsA(HDC,LPTEXTMETRICA);
03221 BOOL      WINAPI GetTextMetricsW(HDC,LPTEXTMETRICW);
03222 #define     GetTextMetrics WINELIB_NAME_AW(GetTextMetrics)
03223 BOOL      WINAPI GetViewportExtEx(HDC,LPSIZE);
03224 BOOL      WINAPI GetViewportOrgEx(HDC,LPPOINT);
03225 BOOL      WINAPI GetWindowExtEx(HDC,LPSIZE);
03226 BOOL      WINAPI GetWindowOrgEx(HDC,LPPOINT);
03227 BOOL      WINAPI GetWorldTransform(HDC,LPXFORM);
03228 INT       WINAPI IntersectClipRect(HDC,INT,INT,INT,INT);
03229 BOOL      WINAPI InvertRgn(HDC,HRGN);
03230 BOOL      WINAPI LineDDA(INT,INT,INT,INT,LINEDDAPROC,LPARAM);
03231 BOOL      WINAPI LineTo(HDC,INT,INT);
03232 BOOL      WINAPI LPtoDP(HDC,LPPOINT,INT);
03233 BOOL      WINAPI MaskBlt(HDC,INT,INT,INT,INT,HDC,INT,INT,HBITMAP,INT,INT,DWORD);
03234 BOOL      WINAPI ModifyWorldTransform(HDC,const XFORM *, DWORD);
03235 BOOL      WINAPI MoveToEx(HDC,INT,INT,LPPOINT);
03236 /* FIXME This is defined in kernel32.spec !?*/
03237 INT       WINAPI MulDiv(INT,INT,INT);
03238 INT       WINAPI OffsetClipRgn(HDC,INT,INT);
03239 INT       WINAPI OffsetRgn(HRGN,INT,INT);
03240 BOOL      WINAPI OffsetViewportOrgEx(HDC,INT,INT,LPPOINT);
03241 BOOL      WINAPI OffsetWindowOrgEx(HDC,INT,INT,LPPOINT);
03242 BOOL      WINAPI PaintRgn(HDC,HRGN);
03243 BOOL      WINAPI PatBlt(HDC,INT,INT,INT,INT,DWORD);
03244 HRGN      WINAPI PathToRegion(HDC);
03245 BOOL      WINAPI Pie(HDC,INT,INT,INT,INT,INT,INT,INT,INT);
03246 BOOL      WINAPI PlayEnhMetaFile(HDC,HENHMETAFILE,const RECT*);
03247 BOOL      WINAPI PlayEnhMetaFileRecord(HDC,LPHANDLETABLE,const ENHMETARECORD*,UINT);
03248 BOOL      WINAPI PlayMetaFile(HDC,HMETAFILE);
03249 BOOL      WINAPI PlayMetaFileRecord(HDC,LPHANDLETABLE,LPMETARECORD,UINT);
03250 BOOL      WINAPI PlgBlt(HDC,const POINT*,HDC,INT,INT,INT,INT,HBITMAP,INT,INT);
03251 BOOL      WINAPI PolyBezier(HDC,const POINT*,DWORD);
03252 BOOL      WINAPI PolyBezierTo(HDC,const POINT*,DWORD);
03253 BOOL      WINAPI PolyDraw(HDC,const POINT*,const BYTE*,DWORD);
03254 BOOL      WINAPI PolyPolygon(HDC,const POINT*,const INT*,UINT);
03255 BOOL      WINAPI PolyPolyline(HDC,const POINT*,const DWORD*,DWORD);
03256 BOOL      WINAPI Polygon(HDC,const POINT*,INT);
03257 BOOL      WINAPI Polyline(HDC,const POINT*,INT);
03258 BOOL      WINAPI PolylineTo(HDC,const POINT*,DWORD);
03259 BOOL      WINAPI PtInRegion(HRGN,INT,INT);
03260 BOOL      WINAPI PtVisible(HDC,INT,INT);
03261 UINT      WINAPI RealizePalette(HDC);
03262 BOOL      WINAPI Rectangle(HDC,INT,INT,INT,INT);
03263 BOOL      WINAPI RectInRegion(HRGN,const RECT *);
03264 BOOL      WINAPI RectVisible(HDC,const RECT*);
03265 BOOL      WINAPI RemoveFontResourceA(LPCSTR);
03266 BOOL      WINAPI RemoveFontResourceW(LPCWSTR);
03267 #define     RemoveFontResource WINELIB_NAME_AW(RemoveFontResource)
03268 HDC       WINAPI ResetDCA(HDC,const DEVMODEA *);
03269 HDC       WINAPI ResetDCW(HDC,const DEVMODEW *);
03270 #define     ResetDC WINELIB_NAME_AW(ResetDC)
03271 BOOL      WINAPI ResizePalette(HPALETTE,UINT);
03272 BOOL      WINAPI RestoreDC(HDC,INT);
03273 BOOL      WINAPI RoundRect(HDC,INT,INT,INT,INT,INT,INT);
03274 INT       WINAPI SaveDC(HDC);
03275 BOOL      WINAPI ScaleViewportExtEx(HDC,INT,INT,INT,INT,LPSIZE);
03276 BOOL      WINAPI ScaleWindowExtEx(HDC,INT,INT,INT,INT,LPSIZE);
03277 BOOL      WINAPI SelectClipPath(HDC,INT);
03278 INT       WINAPI SelectClipRgn(HDC,HRGN);
03279 HGDIOBJ   WINAPI SelectObject(HDC,HGDIOBJ);
03280 HPALETTE  WINAPI SelectPalette(HDC,HPALETTE,BOOL);
03281 INT       WINAPI SetAbortProc(HDC,ABORTPROC);
03282 INT       WINAPI SetArcDirection(HDC,INT);
03283 LONG      WINAPI SetBitmapBits(HBITMAP,LONG,LPCVOID);
03284 BOOL      WINAPI SetBitmapDimensionEx(HBITMAP,INT,INT,LPSIZE);
03285 COLORREF  WINAPI SetBkColor(HDC,COLORREF);
03286 INT       WINAPI SetBkMode(HDC,INT);
03287 UINT      WINAPI SetBoundsRect(HDC,const RECT*,UINT);
03288 BOOL      WINAPI SetBrushOrgEx(HDC,INT,INT,LPPOINT);
03289 BOOL      WINAPI SetColorAdjustment(HDC,const COLORADJUSTMENT*);
03290 HCOLORSPACE WINAPI SetColorSpace(HDC,HCOLORSPACE);
03291 BOOL      WINAPI SetDeviceGammaRamp(HDC,LPVOID);
03292 UINT      WINAPI SetDIBColorTable(HDC,UINT,UINT,RGBQUAD*);
03293 INT       WINAPI SetDIBits(HDC,HBITMAP,UINT,UINT,LPCVOID,const BITMAPINFO*,UINT);
03294 INT       WINAPI SetDIBitsToDevice(HDC,INT,INT,DWORD,DWORD,INT,
03295                            INT,UINT,UINT,LPCVOID,const BITMAPINFO*,UINT);
03296 HENHMETAFILE WINAPI SetEnhMetaFileBits(UINT,const BYTE *);
03297 INT         WINAPI SetGraphicsMode(HDC,INT);
```

```
03298 INT         WINAPI SetICMMode(HDC,INT);
03299 DWORD       WINAPI SetLayout(HDC,DWORD);
03300 INT         WINAPI SetMapMode(HDC,INT);
03301 DWORD       WINAPI SetMapperFlags(HDC,DWORD);
03302 HMETAFILE   WINAPI SetMetaFileBitsEx(UINT,const BYTE*);
03303 INT         WINAPI SetMetaRgn(HDC);
03304 BOOL      WINAPI SetMiterLimit(HDC, FLOAT, PFLOAT);
03305 UINT      WINAPI SetPaletteEntries(HPALETTE,UINT,UINT,LPPALETTEENTRY);
03306 COLORREF  WINAPI SetPixel(HDC,INT,INT,COLORREF);
03307 BOOL      WINAPI SetPixelV(HDC,INT,INT,COLORREF);
03308 BOOL      WINAPI SetPixelFormat(HDC,int,const PIXELFORMATDESCRIPTOR*);
03309 INT       WINAPI SetPolyFillMode(HDC,INT);
03310 BOOL      WINAPI SetRectRgn(HRGN,INT,INT,INT,INT);
03311 INT       WINAPI SetRelAbs(HDC,INT);
03312 INT       WINAPI SetROP2(HDC,INT);
03313 INT       WINAPI SetStretchBltMode(HDC,INT);
03314 UINT      WINAPI SetSystemPaletteUse(HDC,UINT);
03315 UINT      WINAPI SetTextAlign(HDC,UINT);
03316 INT       WINAPI SetTextCharacterExtra(HDC,INT);
03317 COLORREF  WINAPI SetTextColor(HDC,COLORREF);
03318 BOOL      WINAPI SetTextJustification(HDC,INT,INT);
03319 BOOL      WINAPI SetViewportExtEx(HDC,INT,INT,LPSIZE);
03320 BOOL      WINAPI SetViewportOrgEx(HDC,INT,INT,LPPOINT);
03321 BOOL      WINAPI SetWindowExtEx(HDC,INT,INT,LPSIZE);
03322 BOOL      WINAPI SetWindowOrgEx(HDC,INT,INT,LPPOINT);
03323 HENHMETAFILE WINAPI SetWinMetaFileBits(UINT,CONST BYTE*,HDC,CONST METAFILEPICT *);
03324 BOOL      WINAPI SetWorldTransform(HDC,const XFORM*);
03325 INT       WINAPI StartDocA(HDC,const DOCINFOA*);
03326 INT       WINAPI StartDocW(HDC,const DOCINFOW*);
03327 #define     StartDoc WINELIB_NAME_AW(StartDoc)
03328 INT       WINAPI StartPage(HDC);
03329 INT       WINAPI EndPage(HDC);
03330 BOOL      WINAPI StretchBlt(HDC,INT,INT,INT,INT,HDC,INT,
03331                             INT,INT,INT,DWORD);
03332 INT       WINAPI StretchDIBits(HDC,INT,INT,INT,INT,INT,INT,
03333                          INT,INT,const VOID*,const BITMAPINFO*,UINT,DWORD);
03334 BOOL      WINAPI StrokeAndFillPath(HDC);
03335 BOOL      WINAPI StrokePath(HDC);
03336 BOOL      WINAPI SwapBuffers(HDC);
03337 BOOL      WINAPI TextOutA(HDC,INT,INT,LPCSTR,INT);
03338 BOOL      WINAPI TextOutW(HDC,INT,INT,LPCWSTR,INT);
03339 #define     TextOut WINELIB_NAME_AW(TextOut)
03340 BOOL      WINAPI TranslateCharsetInfo(LPDWORD,LPCHARSETINFO,DWORD);
03341 BOOL      WINAPI UnrealizeObject(HGDIOBJ);
03342 BOOL      WINAPI UpdateColors(HDC);
03343 BOOL      WINAPI WidenPath(HDC);
03344 BOOL      WINAPI PolyTextOutA(HDC,PPOLYTEXTA,INT);
03345 BOOL      WINAPI PolyTextOutW(HDC,PPOLYTEXTW,INT);
03346 #define   PolyTextOut WINELIB_NAME_AW(PolyTextOut)
03347
03348 #ifdef __cplusplus
03349 }
03350 #endif
03351
03352 #endif /* !NOGDI */
03353 #endif /* _WINGDI_ */
```

5.12 winnt.h

```
00001 /*
00002  * Win32 definitions for Windows NT
00003  *
00004  * Copyright 1996 Alexandre Julliard
00005  */
00006
00007 #ifndef __WINE_WINNT_H
00008 #define __WINE_WINNT_H
00009
00010 #include "basetsd.h"
00011
00012 #ifndef RC_INVOKED
00013 #include <ctype.h>
00014 #include <stddef.h>
00015 #include <string.h>
00016 #endif
00017
00018
00019 /* On Windows winnt.h depends on a few windef.h types and macros and thus
00020  * is not self-contained. Furthermore windef.h includes winnt.h so that it
00021  * would be pointless to try to use winnt.h directly.
00022  * But for Wine and Winelib I decided to make winnt.h self-contained by
00023  * moving these definitions to winnt.h. It makes no difference to Winelib
00024  * programs since they are not using winnt.h directly anyway, and it allows
00025  * us to use winnt.h and get a minimal set of definitions.
```

```
00026  */
00027
00028 /**** Some Wine specific definitions *****/
00029
00030 /* Architecture dependent settings. */
00031 /* These are hardcoded to avoid dependencies on config.h in Winelib apps. */
00032 #if defined(__i386__)
00033 # undef  WORDS_BIGENDIAN
00034 # undef  BITFIELDS_BIGENDIAN
00035 # define ALLOW_UNALIGNED_ACCESS
00036 #elif defined(__x86_64__)
00037 # undef  WORDS_BIGENDIAN
00038 # undef  BITFIELDS_BIGENDIAN
00039 # define ALLOW_UNALIGNED_ACCESS
00040 #elif defined(__alpha__)
00041 # undef  WORDS_BIGENDIAN
00042 # undef  BITFIELDS_BIGENDIAN
00043 # undef  ALLOW_UNALIGNED_ACCESS
00044 #elif defined(__arm__)
00045 # undef  WORDS_BIGENDIAN
00046 # undef  BITFIELDS_BIGENDIAN
00047 # undef  ALLOW_UNALIGNED_ACCESS
00048 #elif defined(__aarch64__)
00049 # undef  WORDS_BIGENDIAN
00050 # undef  BITFIELDS_BIGENDIAN
00051 # undef  ALLOW_UNALIGNED_ACCESS
00052 #elif defined(__loongarch64)
00053 # undef  WORDS_BIGENDIAN
00054 # undef  BITFIELDS_BIGENDIAN
00055 # undef  ALLOW_UNALIGNED_ACCESS
00056 #elif defined(__sparc__)
00057 # define WORDS_BIGENDIAN
00058 # define BITFIELDS_BIGENDIAN
00059 # undef  ALLOW_UNALIGNED_ACCESS
00060 #elif defined(__PPC__)
00061 # define WORDS_BIGENDIAN
00062 # define BITFIELDS_BIGENDIAN
00063 # undef  ALLOW_UNALIGNED_ACCESS
00064 #elif defined(__s390__)
00065 # define WORDS_BIGENDIAN
00066 # define BITFIELDS_BIGENDIAN
00067 # undef  ALLOW_UNALIGNED_ACCESS
00068 #elif defined(__e2k__)
00069 # undef  WORDS_BIGENDIAN
00070 # undef  BITFIELDS_BIGENDIAN
00071 # undef  ALLOW_UNALIGNED_ACCESS
00072 #elif defined(__MIPSEB__)
00073 # define  WORDS_BIGENDIAN
00074 # define  BITFIELDS_BIGENDIAN
00075 # undef  ALLOW_UNALIGNED_ACCESS
00076 #elif defined(__riscv) && defined(__riscv_xlen) && __riscv_xlen == 64
00077 # undef  WORDS_BIGENDIAN
00078 # undef  BITFIELDS_BIGENDIAN
00079 # undef  ALLOW_UNALIGNED_ACCESS
00080 #elif !defined(RC_INVOKED)
00081 # error Unknown CPU architecture!
00082 #endif
00083
00084
00085 #ifndef DECLSPEC_ALIGN
00086 # if defined(_MSC_VER) && (_MSC_VER >= 1300) && !defined(MIDL_PASS)
00087 #  define DECLSPEC_ALIGN(x) __declspec(align(x))
00088 # elif defined(__GNUC__)
00089 #  define DECLSPEC_ALIGN(x) __attribute__((aligned(x)))
00090 # else
00091 #  define DECLSPEC_ALIGN(x)
00092 # endif
00093 #endif
00094
00095
00096 /* Calling conventions definitions */
00097
00098 #ifdef __i386__
00099 # ifndef _X86_
00100 #  define _X86_
00101 # endif
00102 # if defined(__GNUC__) && ((__GNUC__ > 2) || ((__GNUC__ == 2) && (__GNUC_MINOR__ >= 7)))
00103 #  define __stdcall __attribute__((__stdcall__))
00104 #  define __cdecl   __attribute__((__cdecl__))
00105 # else
00106 #  error You need gcc >= 2.7 to build Wine on a 386
00107 # endif  /* __GNUC__ */
00108 #else  /* __i386__ */
00109 # define __stdcall
00110 # define __cdecl
00111 #endif  /* __i386__ */
00112
```

```
00113 #ifndef __WINE__
00114 #define pascal      __stdcall
00115 #define _pascal     __stdcall
00116 #ifndef _stdcall
00117 #define _stdcall    __stdcall
00118 #endif
00119 #ifndef _fastcall
00120 #define _fastcall   __stdcall
00121 #endif
00122 #ifndef __fastcall
00123 #define __fastcall  __stdcall
00124 #endif
00125 #define __export    __stdcall
00126 #define cdecl       __cdecl
00127 #ifndef _cdecl
00128 #define _cdecl      __cdecl
00129 #endif
00130
00131 #define near
00132 #define far
00133 #define _near
00134 #define _far
00135 #define NEAR
00136 #define FAR
00137
00138 #ifndef _declspec
00139 #define _declspec(x)
00140 #endif
00141 #ifndef __declspec
00142 #define __declspec(x)
00143 #endif
00144 #endif /* __WINE__ */
00145
00146 #define CALLBACK    __stdcall
00147 #if 0
00148 #define WINAPI      __stdcall
00149 #else
00150 #define WINAPI      __attribute__((visibility("default")))
00151 #endif
00152 #define APIPRIVATE  __stdcall
00153 #define PASCAL      __stdcall
00154 #define CDECL       __cdecl
00155 #define _CDECL      __cdecl
00156 #define WINAPIV     __cdecl
00157 #define APIENTRY    WINAPI
00158 #define CONST       const
00159
00160 /* Macro for structure packing and more. */
00161
00162 #ifdef __GNUC__
00163 #define WINE_PACKED   __attribute__((packed))
00164 #define WINE_UNUSED   __attribute__((unused))
00165 #define WINE_NORETURN __attribute__((noreturn))
00166 #else
00167 #define WINE_PACKED    /* nothing */
00168 #define WINE_UNUSED    /* nothing */
00169 #define WINE_NORETURN  /* nothing */
00170 #endif
00171
00172 /* Anonymous union/struct handling */
00173
00174 #ifdef __WINE__
00175 # define NONAMELESSSTRUCT
00176 # define NONAMELESSUNION
00177 #else
00178 #if !defined(__cplusplus)
00179 /* for c we can keep the anonymous version (to avoid compiler warnings) */
00180 #define NONAMELESSSTRUCT
00181 #define NONAMELESSUNION
00182 #else
00183 /* Anonymous struct support starts with gcc/g++ 2.96 */
00184 # if !defined(NONAMELESSSTRUCT) && defined(__GNUC__) && ((__GNUC__ < 2) || ((__GNUC__ == 2) &&
      (__GNUC_MINOR__ < 96)))
00185 /* && !defined(__cplusplus) */
00186 #  define NONAMELESSSTRUCT
00187 # endif
00188 /* Anonymous unions support starts with gcc 2.96/g++ 2.95 */
00189 # if !defined(NONAMELESSUNION) && defined(__GNUC__) && ((__GNUC__ < 2) || ((__GNUC__ == 2) &&
      ((__GNUC_MINOR__ < 95) || ((__GNUC_MINOR__ == 95) && !defined(__cplusplus)))))
00190 #  define NONAMELESSUNION
00191 # endif
00192 #endif
00193 #endif
00194
00195 #ifndef NONAMELESSSTRUCT
00196 #define DUMMYSTRUCTNAME
00197 #define DUMMYSTRUCTNAME1
```

```
00198 #define DUMMYSTRUCTNAME2
00199 #define DUMMYSTRUCTNAME3
00200 #define DUMMYSTRUCTNAME4
00201 #define DUMMYSTRUCTNAME5
00202 #else /* !defined(NONAMELESSSTRUCT) */
00203 #define DUMMYSTRUCTNAME   s
00204 #define DUMMYSTRUCTNAME1  s1
00205 #define DUMMYSTRUCTNAME2  s2
00206 #define DUMMYSTRUCTNAME3  s3
00207 #define DUMMYSTRUCTNAME4  s4
00208 #define DUMMYSTRUCTNAME5  s5
00209 #endif /* !defined(NONAMELESSSTRUCT) */
00210
00211 #ifndef NONAMELESSUNION
00212 #define DUMMYUNIONNAME
00213 #define DUMMYUNIONNAME1
00214 #define DUMMYUNIONNAME2
00215 #define DUMMYUNIONNAME3
00216 #define DUMMYUNIONNAME4
00217 #define DUMMYUNIONNAME5
00218 #define DUMMYUNIONNAME6
00219 #define DUMMYUNIONNAME7
00220 #define DUMMYUNIONNAME8
00221 #else /* !defined(NONAMELESSUNION) */
00222 #define DUMMYUNIONNAME   u
00223 #define DUMMYUNIONNAME1  u1
00224 #define DUMMYUNIONNAME2  u2
00225 #define DUMMYUNIONNAME3  u3
00226 #define DUMMYUNIONNAME4  u4
00227 #define DUMMYUNIONNAME5  u5
00228 #define DUMMYUNIONNAME6  u6
00229 #define DUMMYUNIONNAME7  u7
00230 #define DUMMYUNIONNAME8  u8
00231 #endif /* !defined(NONAMELESSUNION) */
00232
00233
00234 /**** Parts of windef.h that are needed here *****/
00235
00236 /* Misc. constants. */
00237
00238 #undef NULL
00239 #ifdef __cplusplus
00240 #define NULL  0
00241 #else
00242 #define NULL  ((void*)0)
00243 #endif
00244
00245 #ifdef FALSE
00246 #undef FALSE
00247 #endif
00248 #define FALSE 0
00249
00250 #ifdef TRUE
00251 #undef TRUE
00252 #endif
00253 #define TRUE  1
00254
00255 #ifndef IN
00256 #define IN
00257 #endif
00258
00259 #ifndef OUT
00260 #define OUT
00261 #endif
00262
00263 #ifndef OPTIONAL
00264 #define OPTIONAL
00265 #endif
00266
00267 /* Standard data types */
00268 typedef const void                *PCVOID,    *LPCVOID;
00269 typedef int             BOOL,      *PBOOL,     *LPBOOL;
00270 typedef unsigned char   BYTE,      *PBYTE,     *LPBYTE;
00271 typedef unsigned char   UCHAR,     *PUCHAR;
00272 typedef unsigned short  USHORT,    *PUSHORT,   *LPUSHORT;
00273 typedef unsigned short  WORD,      *PWORD,     *LPWORD;
00274 typedef int             INT,       *PINT,      *LPINT;
00275 typedef unsigned int    UINT,      *PUINT,     *LPUINT;
00276 /* Not sure this is correct. Probably should depend on the compiler, too. */
00277 #if defined( __LP64__) || defined(__alpha__)
00278 typedef unsigned int   DWORD,      *PDWORD,    *LPDWORD;
00279 typedef unsigned int   ULONG,      *PULONG,    *LPULONG;
00280 #else
00281 typedef unsigned long   DWORD,     *PDWORD,    *LPDWORD;
00282 typedef unsigned long   ULONG,     *PULONG,    *LPULONG;
00283 #endif
00284 typedef float           FLOAT,     *PFLOAT,    *LPFLOAT;
```

```
00285 typedef double          DOUBLE,     *PDOUBLE,  *LPDOUBLE;
00286 typedef double          DATE;
00287
00288
00289 /**** winnt.h proper *****/
00290
00291 /* Microsoft's macros for declaring functions */
00292
00293 #ifdef __cplusplus
00294 # define EXTERN_C    extern "C"
00295 #else
00296 # define EXTERN_C    extern
00297 #endif
00298
00299 #ifndef __WINE__
00300 #define STDMETHODCALLTYPE       __stdcall
00301 #define STDMETHODVCALLTYPE      __cdecl
00302 #define STDAPICALLTYPE          __stdcall
00303 #define STDAPIVCALLTYPE         __cdecl
00304
00305 #define STDAPI                  EXTERN_C HRESULT STDAPICALLTYPE
00306 #define STDAPI_(type)           EXTERN_C type STDAPICALLTYPE
00307 #define STDMETHODIMP            HRESULT STDMETHODCALLTYPE
00308 #define STDMETHODIMP_(type)     type STDMETHODCALLTYPE
00309 #define STDAPIV                 EXTERN_C HRESULT STDAPIVCALLTYPE
00310 #define STDAPIV_(type)          EXTERN_C type STDAPIVCALLTYPE
00311 #define STDMETHODIMPV           HRESULT STDMETHODVCALLTYPE
00312 #define STDMETHODIMPV_(type)    type STDMETHODVCALLTYPE
00313 #endif
00314
00315 /* Define the basic types */
00316 #ifndef VOID
00317 #define VOID void
00318 #endif
00319 typedef VOID            *PVOID,      *LPVOID;
00320 typedef BYTE             BOOLEAN,    *PBOOLEAN;
00321 typedef char             CHAR,       *PCHAR;
00322 typedef short            SHORT,      *PSHORT;
00323 #if defined(__LP64__) || defined(__alpha__)
00324 typedef int              LONG,       *PLONG,    *LPLONG;
00325 #else
00326 typedef long             LONG,       *PLONG,    *LPLONG;
00327 #endif
00328
00329 /* Some systems might have wchar_t, but we really need 16 bit characters */
00330 #ifndef WINE_WCHAR_DEFINED
00331 #ifdef WINE_UNICODE_NATIVE
00332 typedef wchar_t          WCHAR,      *PWCHAR;
00333 #else
00334 typedef unsigned short   WCHAR,      *PWCHAR;
00335 #endif
00336 #define WINE_WCHAR_DEFINED
00337 #endif
00338
00339 /* 'Extended/Wide' numerical types */
00340 #ifndef _ULONGLONG_
00341 #define _ULONGLONG_
00342 typedef __int64          LONGLONG,   *PLONGLONG;
00343 typedef __uint64         ULONGLONG,  *PULONGLONG;
00344 #endif
00345
00346 #ifndef _DWORDLONG_
00347 #define _DWORDLONG_
00348 typedef ULONGLONG        DWORDLONG,  *PDWORDLONG;
00349 #endif
00350
00351 /* ANSI string types */
00352 typedef CHAR            *PCH,        *LPCH;
00353 typedef const CHAR      *PCCH,       *LPCCH;
00354 typedef CHAR            *PSTR,       *LPSTR;
00355 typedef const CHAR      *PCSTR,      *LPCSTR;
00356
00357 /* Unicode string types */
00358 typedef WCHAR           *PWCH,       *LPWCH;
00359 typedef const WCHAR     *PCWCH,      *LPCWCH;
00360 typedef WCHAR           *PWSTR,      *LPWSTR;
00361 typedef const WCHAR     *PCWSTR,     *LPCWSTR;
00362
00363 /* Neutral character and string types */
00364 /* These are only defined for Winelib, i.e. _not_ defined for
00365  * the emulator. The reason is they depend on the UNICODE
00366  * macro which only exists in the user's code.
00367  */
00368 #ifndef __WINE__
00369 # ifdef WINE_UNICODE_REWRITE
00370
00371 /* Use this if your compiler does not provide a 16bit wchar_t type.
```

```
00372  * Note that you will need to specify -fwritable-strings or an option
00373  * to this effect.
00374  * In C++ both WINE_UNICODE_TEXT('c') and WINE_UNICODE_TEXT("str") are
00375  * supported, but only the string form can be supported in C.
00376  */
00377 EXTERN_C unsigned short* wine_rewrite_s4tos2(const wchar_t* str4);
00378 #  ifdef __cplusplus
00379 inline WCHAR* wine_unicode_text(const wchar_t* str4)
00380 {
00381   return (WCHAR*)wine_rewrite_s4tos2(str4);
00382 }
00383 inline WCHAR wine_unicode_text(wchar_t chr4)
00384 {
00385   return (WCHAR)chr4;
00386 }
00387 #   define WINE_UNICODE_TEXT(x)       wine_unicode_text(L##x)
00388 #  else  /* __cplusplus */
00389 #   define WINE_UNICODE_TEXT(x)       ((WCHAR*)wine_rewrite_s4tos2(L##x))
00390 #  endif  /* __cplusplus */
00391
00392 # else  /* WINE_UNICODE_REWRITE */
00393
00394 /* Define WINE_UNICODE_NATIVE if:
00395  * - your compiler provides a 16bit wchar_t type, e.g. gcc >= 2.96 with
00396  *   -fshort-wchar option
00397  * - or if you decide to use the native 32bit Unix wchar_t type. Be aware
00398  *   though that the Wine APIs only support 16bit WCHAR characters for
00399  *   binary compatibility reasons.
00400  * - or define nothing at all if you don't use Unicode, and blissfully
00401  *   ignore the issue :-)
00402  */
00403 #  define WINE_UNICODE_TEXT(string)   L##string
00404
00405 # endif  /* WINE_UNICODE_REWRITE */
00406
00407 # ifdef UNICODE
00408 typedef WCHAR           TCHAR,      *PTCHAR;
00409 typedef LPWSTR          PTSTR,       LPTSTR;
00410 typedef LPCWSTR         PCTSTR,      LPCTSTR;
00411 #  define __TEXT(string) WINE_UNICODE_TEXT(string)
00412 # else  /* UNICODE */
00413 typedef CHAR            TCHAR,      *PTCHAR;
00414 typedef LPSTR           PTSTR,       LPTSTR;
00415 typedef LPCSTR          PCTSTR,      LPCTSTR;
00416 #  define __TEXT(string) string
00417 # endif /* UNICODE */
00418 # define TEXT(quote) __TEXT(quote)
00419 #endif   /* __WINE__ */
00420
00421 /* Misc common WIN32 types */
00422 typedef LONG            HRESULT;
00423 typedef DWORD           LCID,       *PLCID;
00424 typedef WORD            LANGID;
00425 typedef DWORD       EXECUTION_STATE;
00426
00427 /* Handle type */
00428
00429 /* FIXME: Wine does not compile with strict on, therefore strict
00430  * handles are presently only usable on machines where sizeof(UINT) ==
00431  * sizeof(void*).  HANDLEs are supposed to be void* but a large amount
00432  * of WINE code operates on HANDLES as if they are UINTs. So to WINE
00433  * they exist as UINTs but to the Winelib user who turns on strict,
00434  * they exist as void*. If there is a size difference between UINT and
00435  * void* then things get ugly.
00436  *
00437  * Here is the plan to convert Wine to STRICT:
00438  *
00439  * Types will be converted one at a time by volunteers who will compile
00440  * Wine with STRICT turned on. Handles that have not been converted yet
00441  * will be declared with DECLARE_OLD_HANDLE. Converted handles are
00442  * declared with DECLARE_HANDLE.
00443  * See the bug report 90 for more details:
00444  *    http://wine.codeweavers.com/bugzilla/show_bug.cgi?id=90
00445  */
00446 /*
00447  * when compiling Wine we always treat HANDLE as an UINT. Then when
00448  * we're ready we'll remove the '!defined(__WINE__)' (the equivalent
00449  * of converting it from DECLARE_OLD_HANDLE to DECLARE_HANDLE).
00450  */
00451 #if defined(STRICT) && !defined(__WINE__)
00452 typedef VOID*           HANDLE;
00453 #define DECLARE_OLD_HANDLE(a) \
00454     typedef struct a##__ { int unused; } *a; \
00455     typedef a          *P##a,       *LP##a
00456
00457 #else
00458 typedef UINT            HANDLE;
```

```
00459 #define DECLARE_OLD_HANDLE(a) \
00460     typedef HANDLE      a; \
00461     typedef a          *P##a,       *LP##a
00462 #endif
00463 typedef HANDLE         *PHANDLE,    *LPHANDLE;
00464
00465 #ifdef STRICT
00466 #define DECLARE_HANDLE(a) \
00467     typedef struct a##__ { int unused; } *a; \
00468     typedef a          *P##a,       *LP##a
00469 #else /*STRICT*/
00470 #define DECLARE_HANDLE(a) \
00471     typedef HANDLE      a; \
00472     typedef a          *P##a,       *LP##a
00473 #endif /*STRICT*/
00474
00475 /* Defines */
00476
00477 /* Argument 1 passed to the DllEntryProc. */
00478 #define DLL_PROCESS_DETACH  0   /* detach process (unload library) */
00479 #define DLL_PROCESS_ATTACH  1   /* attach process (load library) */
00480 #define DLL_THREAD_ATTACH   2   /* attach new thread */
00481 #define DLL_THREAD_DETACH   3   /* detach thread */
00482
00483
00484 /* u.x.wProcessorArchitecture (NT) */
00485 #define PROCESSOR_ARCHITECTURE_INTEL    0
00486 #define PROCESSOR_ARCHITECTURE_MIPS 1
00487 #define PROCESSOR_ARCHITECTURE_ALPHA    2
00488 #define PROCESSOR_ARCHITECTURE_PPC  3
00489 #define PROCESSOR_ARCHITECTURE_SHX  4
00490 #define PROCESSOR_ARCHITECTURE_ARM  5
00491 #define PROCESSOR_ARCHITECTURE_UNKNOWN  0xFFFF
00492
00493 /* dwProcessorType */
00494 #define PROCESSOR_INTEL_386      386
00495 #define PROCESSOR_INTEL_486      486
00496 #define PROCESSOR_INTEL_PENTIUM  586
00497 #define PROCESSOR_INTEL_860      860
00498 #define PROCESSOR_MIPS_R2000     2000
00499 #define PROCESSOR_MIPS_R3000     3000
00500 #define PROCESSOR_MIPS_R4000     4000
00501 #define PROCESSOR_ALPHA_21064    21064
00502 #define PROCESSOR_PPC_601        601
00503 #define PROCESSOR_PPC_603        603
00504 #define PROCESSOR_PPC_604        604
00505 #define PROCESSOR_PPC_620        620
00506 #define PROCESSOR_HITACHI_SH3    10003
00507 #define PROCESSOR_HITACHI_SH3E   10004
00508 #define PROCESSOR_HITACHI_SH4    10005
00509 #define PROCESSOR_MOTOROLA_821   821
00510 #define PROCESSOR_SHx_SH3        103
00511 #define PROCESSOR_SHx_SH4        104
00512 #define PROCESSOR_STRONGARM      2577
00513 #define PROCESSOR_ARM720         1824    /* 0x720 */
00514 #define PROCESSOR_ARM820         2080    /* 0x820 */
00515 #define PROCESSOR_ARM920         2336    /* 0x920 */
00516 #define PROCESSOR_ARM_7TDMI      70001
00517
00518 typedef struct _MEMORY_BASIC_INFORMATION
00519 {
00520     LPVOID   BaseAddress;
00521     LPVOID   AllocationBase;
00522     DWORD    AllocationProtect;
00523     DWORD    RegionSize;
00524     DWORD    State;
00525     DWORD    Protect;
00526     DWORD    Type;
00527 } MEMORY_BASIC_INFORMATION,*LPMEMORY_BASIC_INFORMATION,*PMEMORY_BASIC_INFORMATION;
00528
00529 #define PAGE_NOACCESS       0x01
00530 #define PAGE_READONLY       0x02
00531 #define PAGE_READWRITE      0x04
00532 #define PAGE_WRITECOPY      0x08
00533 #define PAGE_EXECUTE        0x10
00534 #define PAGE_EXECUTE_READ   0x20
00535 #define PAGE_EXECUTE_READWRITE  0x40
00536 #define PAGE_EXECUTE_WRITECOPY  0x80
00537 #define PAGE_GUARD      0x100
00538 #define PAGE_NOCACHE        0x200
00539
00540 #define MEM_COMMIT              0x00001000
00541 #define MEM_RESERVE             0x00002000
00542 #define MEM_DECOMMIT            0x00004000
00543 #define MEM_RELEASE             0x00008000
00544 #define MEM_FREE                0x00010000
00545 #define MEM_PRIVATE             0x00020000
```

```
00546 #define MEM_MAPPED              0x00040000
00547 #define MEM_RESET               0x00080000
00548 #define MEM_TOP_DOWN            0x00100000
00549 #ifdef __WINE__
00550 #define MEM_SYSTEM              0x80000000
00551 #endif
00552
00553 #define SEC_FILE                0x00800000
00554 #define SEC_IMAGE               0x01000000
00555 #define SEC_RESERVE             0x04000000
00556 #define SEC_COMMIT              0x08000000
00557 #define SEC_NOCACHE             0x10000000
00558 #define MEM_IMAGE               SEC_IMAGE
00559
00560
00561 #define MINCHAR       0x80
00562 #define MAXCHAR       0x7f
00563 #define MINSHORT      0x8000
00564 #define MAXSHORT      0x7fff
00565 #define MINLONG       0x80000000
00566 #define MAXLONG       0x7fffffff
00567 #define MAXBYTE       0xff
00568 #define MAXWORD       0xffff
00569 #define MAXDWORD      0xffffffff
00570
00571 #define FIELD_OFFSET(type, field) \
00572   ((LONG)(INT)&(((type *)0)->field))
00573
00574 #define CONTAINING_RECORD(address, type, field) \
00575   ((type *)((PCHAR)(address) - (PCHAR)(&((type *)0)->field)))
00576
00577 /* Types */
00578
00579 typedef struct _LIST_ENTRY {
00580   struct _LIST_ENTRY *Flink;
00581   struct _LIST_ENTRY *Blink;
00582 } LIST_ENTRY, *PLIST_ENTRY;
00583
00584 typedef struct _SINGLE_LIST_ENTRY {
00585   struct _SINGLE_LIST_ENTRY *Next;
00586 } SINGLE_LIST_ENTRY, *PSINGLE_LIST_ENTRY;
00587
00588 /* Heap flags */
00589
00590 #define HEAP_NO_SERIALIZE               0x00000001
00591 #define HEAP_GROWABLE                   0x00000002
00592 #define HEAP_GENERATE_EXCEPTIONS        0x00000004
00593 #define HEAP_ZERO_MEMORY                0x00000008
00594 #define HEAP_REALLOC_IN_PLACE_ONLY      0x00000010
00595 #define HEAP_TAIL_CHECKING_ENABLED      0x00000020
00596 #define HEAP_FREE_CHECKING_ENABLED      0x00000040
00597 #define HEAP_DISABLE_COALESCE_ON_FREE   0x00000080
00598 #define HEAP_CREATE_ALIGN_16            0x00010000
00599 #define HEAP_CREATE_ENABLE_TRACING      0x00020000
00600
00601 /* This flag allows it to create heaps shared by all processes under win95,
00602    FIXME: correct name */
00603 #define HEAP_SHARED                     0x04000000
00604
00605 /* Processor feature flags.  */
00606 #define PF_FLOATING_POINT_PRECISION_ERRATA  0
00607 #define PF_FLOATING_POINT_EMULATED      1
00608 #define PF_COMPARE_EXCHANGE_DOUBLE      2
00609 #define PF_MMX_INSTRUCTIONS_AVAILABLE       3
00610 #define PF_PPC_MOVEMEM_64BIT_OK         4
00611 #define PF_ALPHA_BYTE_INSTRUCTIONS      5
00612 #define PF_XMMI_INSTRUCTIONS_AVAILABLE      6
00613 #define PF_AMD3D_INSTRUCTIONS_AVAILABLE     7
00614 #define PF_RDTSC_INSTRUCTION_AVAILABLE      8
00615
00616
00617 /* Execution state flags */
00618 #define ES_SYSTEM_REQUIRED    0x00000001
00619 #define ES_DISPLAY_REQUIRED   0x00000002
00620 #define ES_USER_PRESENT       0x00000004
00621 #define ES_CONTINUOUS         0x80000000
00622
00623 /* The Win32 register context */
00624
00625 /* CONTEXT is the CPU-dependent context; it should be used        */
00626 /* wherever a platform-specific context is needed (e.g. exception */
00627 /* handling, Win32 register functions). */
00628
00629 /* CONTEXT86 is the i386-specific context; it should be used     */
00630 /* wherever only a 386 context makes sense (e.g. DOS interrupts, */
00631 /* Win16 register functions), so that this code can be compiled  */
00632 /* on all platforms. */
```

```
00633
00634 #define SIZE_OF_80387_REGISTERS      80
00635
00636 typedef struct _FLOATING_SAVE_AREA
00637 {
00638     DWORD   ControlWord;
00639     DWORD   StatusWord;
00640     DWORD   TagWord;
00641     DWORD   ErrorOffset;
00642     DWORD   ErrorSelector;
00643     DWORD   DataOffset;
00644     DWORD   DataSelector;
00645     BYTE    RegisterArea[SIZE_OF_80387_REGISTERS];
00646     DWORD   Cr0NpxState;
00647 } FLOATING_SAVE_AREA, *PFLOATING_SAVE_AREA;
00648
00649 #define MAXIMUM_SUPPORTED_EXTENSION     512
00650
00651 typedef struct _CONTEXT86
00652 {
00653     DWORD   ContextFlags;
00654
00655     /* These are selected by CONTEXT_DEBUG_REGISTERS */
00656     DWORD   Dr0;
00657     DWORD   Dr1;
00658     DWORD   Dr2;
00659     DWORD   Dr3;
00660     DWORD   Dr6;
00661     DWORD   Dr7;
00662
00663     /* These are selected by CONTEXT_FLOATING_POINT */
00664     FLOATING_SAVE_AREA FloatSave;
00665
00666     /* These are selected by CONTEXT_SEGMENTS */
00667     DWORD   SegGs;
00668     DWORD   SegFs;
00669     DWORD   SegEs;
00670     DWORD   SegDs;
00671
00672     /* These are selected by CONTEXT_INTEGER */
00673     DWORD   Edi;
00674     DWORD   Esi;
00675     DWORD   Ebx;
00676     DWORD   Edx;
00677     DWORD   Ecx;
00678     DWORD   Eax;
00679
00680     /* These are selected by CONTEXT_CONTROL */
00681     DWORD   Ebp;
00682     DWORD   Eip;
00683     DWORD   SegCs;
00684     DWORD   EFlags;
00685     DWORD   Esp;
00686     DWORD   SegSs;
00687
00688     BYTE    ExtendedRegisters[MAXIMUM_SUPPORTED_EXTENSION];
00689 } CONTEXT86;
00690
00691 #define CONTEXT_X86       0x00010000
00692 #define CONTEXT_i386      CONTEXT_X86
00693 #define CONTEXT_i486      CONTEXT_X86
00694
00695 #define CONTEXT86_CONTROL   (CONTEXT_i386 | 0x0001) /* SS:SP, CS:IP, FLAGS, BP */
00696 #define CONTEXT86_INTEGER   (CONTEXT_i386 | 0x0002) /* AX, BX, CX, DX, SI, DI */
00697 #define CONTEXT86_SEGMENTS  (CONTEXT_i386 | 0x0004) /* DS, ES, FS, GS */
00698 #define CONTEXT86_FLOATING_POINT  (CONTEXT_i386 | 0x0008L) /* 387 state */
00699 #define CONTEXT86_DEBUG_REGISTERS (CONTEXT_i386 | 0x0010L) /* DB 0-3,6,7 */
00700 #define CONTEXT86_FULL (CONTEXT86_CONTROL | CONTEXT86_INTEGER | CONTEXT86_SEGMENTS)
00701
00702 /* i386 context definitions */
00703 #ifdef __i386__
00704
00705 #define CONTEXT_CONTROL         CONTEXT86_CONTROL
00706 #define CONTEXT_INTEGER         CONTEXT86_INTEGER
00707 #define CONTEXT_SEGMENTS        CONTEXT86_SEGMENTS
00708 #define CONTEXT_FLOATING_POINT  CONTEXT86_FLOATING_POINT
00709 #define CONTEXT_DEBUG_REGISTERS CONTEXT86_DEBUG_REGISTERS
00710 #define CONTEXT_FULL            CONTEXT86_FULL
00711
00712 typedef CONTEXT86 CONTEXT;
00713
00714 #endif  /* __i386__ */
00715
00716 /* x86-64 context definitions */
00717 #if defined(__x86_64__)
00718
00719 #define CONTEXT_AMD64   0x00100000
```

```
00720
00721 #define CONTEXT_CONTROL   (CONTEXT_AMD64 | 0x0001)
00722 #define CONTEXT_INTEGER   (CONTEXT_AMD64 | 0x0002)
00723 #define CONTEXT_SEGMENTS  (CONTEXT_AMD64 | 0x0004)
00724 #define CONTEXT_FLOATING_POINT  (CONTEXT_AMD64 | 0x0008L)
00725 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_AMD64 | 0x0010L)
00726 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER | CONTEXT_FLOATING_POINT)
00727 #define CONTEXT_ALL (CONTEXT_CONTROL | CONTEXT_INTEGER | CONTEXT_SEGMENTS | CONTEXT_FLOATING_POINT |
      CONTEXT_DEBUG_REGISTERS)
00728
00729 #define EXCEPTION_READ_FAULT    0
00730 #define EXCEPTION_WRITE_FAULT   1
00731 #define EXCEPTION_EXECUTE_FAULT 8
00732
00733 typedef struct DECLSPEC_ALIGN(16) _M128A {
00734     ULONGLONG Low;
00735     LONGLONG High;
00736 } M128A, *PM128A;
00737
00738 typedef struct _XMM_SAVE_AREA32 {
00739     WORD ControlWord;         /* 000 */
00740     WORD StatusWord;          /* 002 */
00741     BYTE TagWord;             /* 004 */
00742     BYTE Reserved1;           /* 005 */
00743     WORD ErrorOpcode;         /* 006 */
00744     DWORD ErrorOffset;        /* 008 */
00745     WORD ErrorSelector;       /* 00c */
00746     WORD Reserved2;           /* 00e */
00747     DWORD DataOffset;         /* 010 */
00748     WORD DataSelector;        /* 014 */
00749     WORD Reserved3;           /* 016 */
00750     DWORD MxCsr;              /* 018 */
00751     DWORD MxCsr_Mask;         /* 01c */
00752     M128A FloatRegisters[8]; /* 020 */
00753     M128A XmmRegisters[16];  /* 0a0 */
00754     BYTE Reserved4[96];       /* 1a0 */
00755 } XMM_SAVE_AREA32, *PXMM_SAVE_AREA32;
00756
00757 typedef struct DECLSPEC_ALIGN(16) _CONTEXT {
00758     DWORD64 P1Home;           /* 000 */
00759     DWORD64 P2Home;           /* 008 */
00760     DWORD64 P3Home;           /* 010 */
00761     DWORD64 P4Home;           /* 018 */
00762     DWORD64 P5Home;           /* 020 */
00763     DWORD64 P6Home;           /* 028 */
00764
00765     /* Control flags */
00766     DWORD ContextFlags;       /* 030 */
00767     DWORD MxCsr;              /* 034 */
00768
00769     /* Segment */
00770     WORD SegCs;               /* 038 */
00771     WORD SegDs;               /* 03a */
00772     WORD SegEs;               /* 03c */
00773     WORD SegFs;               /* 03e */
00774     WORD SegGs;               /* 040 */
00775     WORD SegSs;               /* 042 */
00776     DWORD EFlags;             /* 044 */
00777
00778     /* Debug */
00779     DWORD64 Dr0;              /* 048 */
00780     DWORD64 Dr1;              /* 050 */
00781     DWORD64 Dr2;              /* 058 */
00782     DWORD64 Dr3;              /* 060 */
00783     DWORD64 Dr6;              /* 068 */
00784     DWORD64 Dr7;              /* 070 */
00785
00786     /* Integer */
00787     DWORD64 Rax;              /* 078 */
00788     DWORD64 Rcx;              /* 080 */
00789     DWORD64 Rdx;              /* 088 */
00790     DWORD64 Rbx;              /* 090 */
00791     DWORD64 Rsp;              /* 098 */
00792     DWORD64 Rbp;              /* 0a0 */
00793     DWORD64 Rsi;              /* 0a8 */
00794     DWORD64 Rdi;              /* 0b0 */
00795     DWORD64 R8;               /* 0b8 */
00796     DWORD64 R9;               /* 0c0 */
00797     DWORD64 R10;              /* 0c8 */
00798     DWORD64 R11;              /* 0d0 */
00799     DWORD64 R12;              /* 0d8 */
00800     DWORD64 R13;              /* 0e0 */
00801     DWORD64 R14;              /* 0e8 */
00802     DWORD64 R15;              /* 0f0 */
00803
00804     /* Counter */
00805     DWORD64 Rip;              /* 0f8 */
```

```
00806
00807     /* Floating point */
00808     union {
00809         XMM_SAVE_AREA32 FltSave;  /* 100 */
00810         struct {
00811             M128A Header[2];      /* 100 */
00812             M128A Legacy[8];      /* 120 */
00813             M128A Xmm0;           /* 1a0 */
00814             M128A Xmm1;           /* 1b0 */
00815             M128A Xmm2;           /* 1c0 */
00816             M128A Xmm3;           /* 1d0 */
00817             M128A Xmm4;           /* 1e0 */
00818             M128A Xmm5;           /* 1f0 */
00819             M128A Xmm6;           /* 200 */
00820             M128A Xmm7;           /* 210 */
00821             M128A Xmm8;           /* 220 */
00822             M128A Xmm9;           /* 230 */
00823             M128A Xmm10;          /* 240 */
00824             M128A Xmm11;          /* 250 */
00825             M128A Xmm12;          /* 260 */
00826             M128A Xmm13;          /* 270 */
00827             M128A Xmm14;          /* 280 */
00828             M128A Xmm15;          /* 290 */
00829         } DUMMYSTRUCTNAME;
00830     } DUMMYUNIONNAME;
00831
00832     /* Vector */
00833     M128A VectorRegister[26];     /* 300 */
00834     DWORD64 VectorControl;        /* 4a0 */
00835
00836     /* Debug control */
00837     DWORD64 DebugControl;         /* 4a8 */
00838     DWORD64 LastBranchToRip;      /* 4b0 */
00839     DWORD64 LastBranchFromRip;    /* 4b8 */
00840     DWORD64 LastExceptionToRip;   /* 4c0 */
00841     DWORD64 LastExceptionFromRip; /* 4c8 */
00842 } CONTEXT;
00843
00844 typedef struct _RUNTIME_FUNCTION
00845 {
00846     DWORD BeginAddress;
00847     DWORD EndAddress;
00848     DWORD UnwindData;
00849 } RUNTIME_FUNCTION, *PRUNTIME_FUNCTION;
00850
00851 #define UNWIND_HISTORY_TABLE_SIZE 12
00852
00853 typedef struct _UNWIND_HISTORY_TABLE_ENTRY
00854 {
00855     ULONG64 ImageBase;
00856     PRUNTIME_FUNCTION FunctionEntry;
00857 } UNWIND_HISTORY_TABLE_ENTRY, *PUNWIND_HISTORY_TABLE_ENTRY;
00858
00859 #define UNWIND_HISTORY_TABLE_NONE 0
00860 #define UNWIND_HISTORY_TABLE_GLOBAL 1
00861 #define UNWIND_HISTORY_TABLE_LOCAL 2
00862
00863 typedef struct _UNWIND_HISTORY_TABLE
00864 {
00865     ULONG Count;
00866     UCHAR Search;
00867     ULONG64 LowAddress;
00868     ULONG64 HighAddress;
00869     UNWIND_HISTORY_TABLE_ENTRY Entry[UNWIND_HISTORY_TABLE_SIZE];
00870 } UNWIND_HISTORY_TABLE, *PUNWIND_HISTORY_TABLE;
00871
00872 typedef struct _KNONVOLATILE_CONTEXT_POINTERS
00873 {
00874     union
00875     {
00876         PM128A FloatingContext[16];
00877         struct
00878         {
00879             PM128A Xmm0;
00880             PM128A Xmm1;
00881             PM128A Xmm2;
00882             PM128A Xmm3;
00883             PM128A Xmm4;
00884             PM128A Xmm5;
00885             PM128A Xmm6;
00886             PM128A Xmm7;
00887             PM128A Xmm8;
00888             PM128A Xmm9;
00889             PM128A Xmm10;
00890             PM128A Xmm11;
00891             PM128A Xmm12;
00892             PM128A Xmm13;
```

```
00893             PM128A Xmm14;
00894             PM128A Xmm15;
00895         } DUMMYSTRUCTNAME1;
00896     } DUMMYUNIONNAME1;
00897
00898     union
00899     {
00900         PULONG64 IntegerContext[16];
00901         struct
00902         {
00903             PULONG64 Rax;
00904             PULONG64 Rcx;
00905             PULONG64 Rdx;
00906             PULONG64 Rbx;
00907             PULONG64 Rsp;
00908             PULONG64 Rbp;
00909             PULONG64 Rsi;
00910             PULONG64 Rdi;
00911             PULONG64 R8;
00912             PULONG64 R9;
00913             PULONG64 R10;
00914             PULONG64 R11;
00915             PULONG64 R12;
00916             PULONG64 R13;
00917             PULONG64 R14;
00918             PULONG64 R15;
00919         } DUMMYSTRUCTNAME2;
00920     } DUMMYUNIONNAME2;
00921 } KNONVOLATILE_CONTEXT_POINTERS, *PKNONVOLATILE_CONTEXT_POINTERS;
00922
00923 BOOLEAN CDECL            RtlAddFunctionTable(RUNTIME_FUNCTION*,DWORD,DWORD64);
00924 BOOLEAN CDECL            RtlDeleteFunctionTable(RUNTIME_FUNCTION*);
00925 PRUNTIME_FUNCTION WINAPI RtlLookupFunctionEntry(DWORD64,DWORD64*,UNWIND_HISTORY_TABLE*);
00926 PVOID WINAPI
      RtlVirtualUnwind(ULONG,ULONG64,ULONG64,RUNTIME_FUNCTION*,CONTEXT*,PVOID*,ULONG64*,KNONVOLATILE_CONTEXT_POINTERS*);
00927
00928 #define UNW_FLAG_NHANDLER  0
00929 #define UNW_FLAG_EHANDLER  1
00930 #define UNW_FLAG_UHANDLER  2
00931 #define UNW_FLAG_CHAININFO 4
00932
00933 #endif /* __x86_64__ */
00934
00935 /* Alpha context definitions */
00936 #if defined(__alpha__)
00937
00938 #define CONTEXT_ALPHA   0x00020000
00939
00940 #define CONTEXT_CONTROL     (CONTEXT_ALPHA | 0x00000001L)
00941 #define CONTEXT_FLOATING_POINT  (CONTEXT_ALPHA | 0x00000002L)
00942 #define CONTEXT_INTEGER     (CONTEXT_ALPHA | 0x00000004L)
00943 #define CONTEXT_FULL  (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
00944
00945 typedef struct _CONTEXT
00946 {
00947     /* selected by CONTEXT_FLOATING_POINT */
00948     ULONGLONG FltF0;
00949     ULONGLONG FltF1;
00950     ULONGLONG FltF2;
00951     ULONGLONG FltF3;
00952     ULONGLONG FltF4;
00953     ULONGLONG FltF5;
00954     ULONGLONG FltF6;
00955     ULONGLONG FltF7;
00956     ULONGLONG FltF8;
00957     ULONGLONG FltF9;
00958     ULONGLONG FltF10;
00959     ULONGLONG FltF11;
00960     ULONGLONG FltF12;
00961     ULONGLONG FltF13;
00962     ULONGLONG FltF14;
00963     ULONGLONG FltF15;
00964     ULONGLONG FltF16;
00965     ULONGLONG FltF17;
00966     ULONGLONG FltF18;
00967     ULONGLONG FltF19;
00968     ULONGLONG FltF20;
00969     ULONGLONG FltF21;
00970     ULONGLONG FltF22;
00971     ULONGLONG FltF23;
00972     ULONGLONG FltF24;
00973     ULONGLONG FltF25;
00974     ULONGLONG FltF26;
00975     ULONGLONG FltF27;
00976     ULONGLONG FltF28;
00977     ULONGLONG FltF29;
00978     ULONGLONG FltF30;
```

```
00979     ULONGLONG FltF31;
00980
00981     /* selected by CONTEXT_INTEGER */
00982     ULONGLONG IntV0;
00983     ULONGLONG IntT0;
00984     ULONGLONG IntT1;
00985     ULONGLONG IntT2;
00986     ULONGLONG IntT3;
00987     ULONGLONG IntT4;
00988     ULONGLONG IntT5;
00989     ULONGLONG IntT6;
00990     ULONGLONG IntT7;
00991     ULONGLONG IntS0;
00992     ULONGLONG IntS1;
00993     ULONGLONG IntS2;
00994     ULONGLONG IntS3;
00995     ULONGLONG IntS4;
00996     ULONGLONG IntS5;
00997     ULONGLONG IntFp;
00998     ULONGLONG IntA0;
00999     ULONGLONG IntA1;
01000     ULONGLONG IntA2;
01001     ULONGLONG IntA3;
01002     ULONGLONG IntA4;
01003     ULONGLONG IntA5;
01004     ULONGLONG IntT8;
01005     ULONGLONG IntT9;
01006     ULONGLONG IntT10;
01007     ULONGLONG IntT11;
01008     ULONGLONG IntRa;
01009     ULONGLONG IntT12;
01010     ULONGLONG IntAt;
01011     ULONGLONG IntGp;
01012     ULONGLONG IntSp;
01013     ULONGLONG IntZero;
01014
01015     /* selected by CONTEXT_FLOATING_POINT */
01016     ULONGLONG Fpcr;
01017     ULONGLONG SoftFpcr;
01018
01019     /* selected by CONTEXT_CONTROL */
01020     ULONGLONG Fir;
01021     DWORD Psr;
01022     DWORD ContextFlags;
01023     DWORD Fill[4];
01024 } CONTEXT;
01025
01026 #define _QUAD_PSR_OFFSET   HighSoftFpcr
01027 #define _QUAD_FLAGS_OFFSET HighFir
01028
01029 #endif  /* _ALPHA_ */
01030
01031 #ifdef __loongarch64
01032 /*
01033  * FIXME:
01034  *
01035  * There is not yet an official CONTEXT structure defined for the
01036  * loongarch64 architecture (64-bit LE), so I just made one up.
01037  *
01038  */
01039
01040 #define CONTEXT_LOONGARCH64             0x4000000
01041 #define CONTEXT_CONTROL         (CONTEXT_LOONGARCH64 | 0x00000001)
01042 #define CONTEXT_INTEGER         (CONTEXT_LOONGARCH64 | 0x00000002)
01043 #define CONTEXT_FLOATING_POINT  (CONTEXT_LOONGARCH64 | 0x00000004)
01044 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_LOONGARCH64 | 0x00000008)
01045
01046 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01047
01048 #define EXCEPTION_READ_FAULT    0
01049 #define EXCEPTION_WRITE_FAULT   1
01050 #define EXCEPTION_EXECUTE_FAULT 8
01051
01052 typedef struct _CONTEXT {
01053     ULONG ContextFlags;
01054
01055     /* This section is specified/returned if the ContextFlags word contains
01056        the flag CONTEXT_INTEGER. */
01057     ULONGLONG X0;
01058     ULONGLONG X1;
01059     ULONGLONG X2;
01060     ULONGLONG X3;
01061     ULONGLONG X4;
01062     ULONGLONG X5;
01063     ULONGLONG X6;
01064     ULONGLONG X7;
01065     ULONGLONG X8;
```

```
01066     ULONGLONG X9;
01067     ULONGLONG X10;
01068     ULONGLONG X11;
01069     ULONGLONG X12;
01070     ULONGLONG X13;
01071     ULONGLONG X14;
01072     ULONGLONG X15;
01073     ULONGLONG X16;
01074     ULONGLONG X17;
01075     ULONGLONG X18;
01076     ULONGLONG X19;
01077     ULONGLONG X20;
01078     ULONGLONG X21;
01079     ULONGLONG X22;
01080     ULONGLONG X23;
01081     ULONGLONG X24;
01082     ULONGLONG X25;
01083     ULONGLONG X26;
01084     ULONGLONG X27;
01085     ULONGLONG X28;
01086     ULONGLONG X29;
01087     ULONGLONG X30;
01088     ULONGLONG X31;
01089
01090     /* These are selected by CONTEXT_CONTROL */
01091     ULONGLONG Sp;
01092     ULONGLONG Pc;
01093     ULONGLONG PState;
01094
01095     /* These are selected by CONTEXT_FLOATING_POINT */
01096     /* FIXME */
01097 } CONTEXT;
01098
01099 #endif /* __loongarch64 */
01100
01101 /* Mips context definitions */
01102 #if defined(_MIPS_) || defined(__MIPS__) || defined(__mips__)
01103
01104 #define CONTEXT_R4000   0x00010000
01105
01106 #define CONTEXT_CONTROL         (CONTEXT_R4000 | 0x00000001)
01107 #define CONTEXT_FLOATING_POINT  (CONTEXT_R4000 | 0x00000002)
01108 #define CONTEXT_INTEGER         (CONTEXT_R4000 | 0x00000004)
01109
01110 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01111
01112 typedef struct _CONTEXT
01113 {
01114     DWORD Argument[4];
01115     /* These are selected by CONTEXT_FLOATING_POINT */
01116     DWORD FltF0;
01117     DWORD FltF1;
01118     DWORD FltF2;
01119     DWORD FltF3;
01120     DWORD FltF4;
01121     DWORD FltF5;
01122     DWORD FltF6;
01123     DWORD FltF7;
01124     DWORD FltF8;
01125     DWORD FltF9;
01126     DWORD FltF10;
01127     DWORD FltF11;
01128     DWORD FltF12;
01129     DWORD FltF13;
01130     DWORD FltF14;
01131     DWORD FltF15;
01132     DWORD FltF16;
01133     DWORD FltF17;
01134     DWORD FltF18;
01135     DWORD FltF19;
01136     DWORD FltF20;
01137     DWORD FltF21;
01138     DWORD FltF22;
01139     DWORD FltF23;
01140     DWORD FltF24;
01141     DWORD FltF25;
01142     DWORD FltF26;
01143     DWORD FltF27;
01144     DWORD FltF28;
01145     DWORD FltF29;
01146     DWORD FltF30;
01147     DWORD FltF31;
01148
01149     /* These are selected by CONTEXT_INTEGER */
01150     DWORD IntZero;
01151     DWORD IntAt;
01152     DWORD IntV0;
```

```
01153     DWORD IntV1;
01154     DWORD IntA0;
01155     DWORD IntA1;
01156     DWORD IntA2;
01157     DWORD IntA3;
01158     DWORD IntT0;
01159     DWORD IntT1;
01160     DWORD IntT2;
01161     DWORD IntT3;
01162     DWORD IntT4;
01163     DWORD IntT5;
01164     DWORD IntT6;
01165     DWORD IntT7;
01166     DWORD IntS0;
01167     DWORD IntS1;
01168     DWORD IntS2;
01169     DWORD IntS3;
01170     DWORD IntS4;
01171     DWORD IntS5;
01172     DWORD IntS6;
01173     DWORD IntS7;
01174     DWORD IntT8;
01175     DWORD IntT9;
01176     DWORD IntK0;
01177     DWORD IntK1;
01178     DWORD IntGp;
01179     DWORD IntSp;
01180     DWORD IntS8;
01181     DWORD IntRa;
01182     DWORD IntLo;
01183     DWORD IntHi;
01184
01185     /* These are selected by CONTEXT_FLOATING_POINT */
01186     DWORD Fsr;
01187
01188     /* These are selected by CONTEXT_CONTROL */
01189     DWORD Fir;
01190     DWORD Psr;
01191
01192     DWORD ContextFlags;
01193     DWORD Fill[2];
01194 } CONTEXT;
01195
01196 #endif  /* _MIPS_ */
01197
01198 /* PowerPC context definitions */
01199 #ifdef __PPC__
01200
01201 #define CONTEXT_CONTROL         0x0001
01202 #define CONTEXT_FLOATING_POINT  0x0002
01203 #define CONTEXT_INTEGER         0x0004
01204 #define CONTEXT_DEBUG_REGISTERS 0x0008
01205 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01206
01207 typedef struct
01208 {
01209     /* These are selected by CONTEXT_FLOATING_POINT */
01210     double Fpr0;
01211     double Fpr1;
01212     double Fpr2;
01213     double Fpr3;
01214     double Fpr4;
01215     double Fpr5;
01216     double Fpr6;
01217     double Fpr7;
01218     double Fpr8;
01219     double Fpr9;
01220     double Fpr10;
01221     double Fpr11;
01222     double Fpr12;
01223     double Fpr13;
01224     double Fpr14;
01225     double Fpr15;
01226     double Fpr16;
01227     double Fpr17;
01228     double Fpr18;
01229     double Fpr19;
01230     double Fpr20;
01231     double Fpr21;
01232     double Fpr22;
01233     double Fpr23;
01234     double Fpr24;
01235     double Fpr25;
01236     double Fpr26;
01237     double Fpr27;
01238     double Fpr28;
01239     double Fpr29;
```

```
01240     double Fpr30;
01241     double Fpr31;
01242     double Fpscr;
01243
01244     /* These are selected by CONTEXT_INTEGER */
01245     DWORD Gpr0;
01246     DWORD Gpr1;
01247     DWORD Gpr2;
01248     DWORD Gpr3;
01249     DWORD Gpr4;
01250     DWORD Gpr5;
01251     DWORD Gpr6;
01252     DWORD Gpr7;
01253     DWORD Gpr8;
01254     DWORD Gpr9;
01255     DWORD Gpr10;
01256     DWORD Gpr11;
01257     DWORD Gpr12;
01258     DWORD Gpr13;
01259     DWORD Gpr14;
01260     DWORD Gpr15;
01261     DWORD Gpr16;
01262     DWORD Gpr17;
01263     DWORD Gpr18;
01264     DWORD Gpr19;
01265     DWORD Gpr20;
01266     DWORD Gpr21;
01267     DWORD Gpr22;
01268     DWORD Gpr23;
01269     DWORD Gpr24;
01270     DWORD Gpr25;
01271     DWORD Gpr26;
01272     DWORD Gpr27;
01273     DWORD Gpr28;
01274     DWORD Gpr29;
01275     DWORD Gpr30;
01276     DWORD Gpr31;
01277
01278     DWORD Cr;
01279     DWORD Xer;
01280
01281     /* These are selected by CONTEXT_CONTROL */
01282     DWORD Msr;
01283     DWORD Iar;
01284     DWORD Lr;
01285     DWORD Ctr;
01286
01287     DWORD ContextFlags;
01288     DWORD Fill[3];
01289
01290     /* These are selected by CONTEXT_DEBUG_REGISTERS */
01291     DWORD Dr0;
01292     DWORD Dr1;
01293     DWORD Dr2;
01294     DWORD Dr3;
01295     DWORD Dr4;
01296     DWORD Dr5;
01297     DWORD Dr6;
01298     DWORD Dr7;
01299 } CONTEXT;
01300
01301 typedef struct _STACK_FRAME_HEADER
01302 {
01303     DWORD BackChain;
01304     DWORD GlueSaved1;
01305     DWORD GlueSaved2;
01306     DWORD Reserved1;
01307     DWORD Spare1;
01308     DWORD Spare2;
01309
01310     DWORD Parameter0;
01311     DWORD Parameter1;
01312     DWORD Parameter2;
01313     DWORD Parameter3;
01314     DWORD Parameter4;
01315     DWORD Parameter5;
01316     DWORD Parameter6;
01317     DWORD Parameter7;
01318 } STACK_FRAME_HEADER,*PSTACK_FRAME_HEADER;
01319
01320 #endif  /* __PPC__ */
01321
01322 #ifdef __sparc__
01323
01324 /*
01325  * FIXME:
01326  *
```

```
01327  * There is no official CONTEXT structure defined for the SPARC
01328  * architecture, so I just made one up.
01329  *
01330  * This structure is valid only for 32-bit SPARC architectures,
01331  * not for 64-bit SPARC.
01332  *
01333  * Note that this structure contains only the 'top-level' registers;
01334  * the rest of the register window chain is not visible.
01335  *
01336  * The layout follows the Solaris 'prgregset_t' structure.
01337  *
01338  */
01339
01340 #define CONTEXT_SPARC            0x10000000
01341
01342 #define CONTEXT_CONTROL         (CONTEXT_SPARC | 0x00000001)
01343 #define CONTEXT_FLOATING_POINT  (CONTEXT_SPARC | 0x00000002)
01344 #define CONTEXT_INTEGER         (CONTEXT_SPARC | 0x00000004)
01345
01346 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01347
01348 typedef struct _CONTEXT
01349 {
01350     DWORD ContextFlags;
01351
01352     /* These are selected by CONTEXT_INTEGER */
01353     DWORD g0;
01354     DWORD g1;
01355     DWORD g2;
01356     DWORD g3;
01357     DWORD g4;
01358     DWORD g5;
01359     DWORD g6;
01360     DWORD g7;
01361     DWORD o0;
01362     DWORD o1;
01363     DWORD o2;
01364     DWORD o3;
01365     DWORD o4;
01366     DWORD o5;
01367     DWORD o6;
01368     DWORD o7;
01369     DWORD l0;
01370     DWORD l1;
01371     DWORD l2;
01372     DWORD l3;
01373     DWORD l4;
01374     DWORD l5;
01375     DWORD l6;
01376     DWORD l7;
01377     DWORD i0;
01378     DWORD i1;
01379     DWORD i2;
01380     DWORD i3;
01381     DWORD i4;
01382     DWORD i5;
01383     DWORD i6;
01384     DWORD i7;
01385
01386     /* These are selected by CONTEXT_CONTROL */
01387     DWORD psr;
01388     DWORD pc;
01389     DWORD npc;
01390     DWORD y;
01391     DWORD wim;
01392     DWORD tbr;
01393
01394     /* FIXME: floating point registers missing */
01395
01396 } CONTEXT;
01397
01398 #endif  /* __sparc__ */
01399
01400 #ifdef __s390__
01401
01402 /*
01403  * FIXME:
01404  *
01405  * There is no official CONTEXT structure defined for the S390
01406  * architecture, so I just made one up.
01407  *
01408  * Note that this structure contains only the 'top-level' registers;
01409  * the rest of the register window chain is not visible.
01410  *
01411  * The layout is based on the sparc one.
01412  *
01413  */
```

```
01414
01415 #define CONTEXT_S390C            0x20000000
01416
01417 #define CONTEXT_CONTROL         (CONTEXT_S390 | 0x00000001)
01418 #define CONTEXT_FLOATING_POINT  (CONTEXT_S390 | 0x00000002)
01419 #define CONTEXT_INTEGER         (CONTEXT_S390 | 0x00000004)
01420
01421 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01422
01423 typedef struct _CONTEXT
01424 {
01425     DWORD ContextFlags;
01426
01427     /* These are selected by CONTEXT_INTEGER */
01428     DWORD r0;
01429     DWORD r1;
01430     DWORD r2;
01431     DWORD r3;
01432     DWORD r4;
01433     DWORD r5;
01434     DWORD r6;
01435     DWORD r7;
01436     DWORD r8;
01437     DWORD r9;
01438     DWORD r10;
01439     DWORD r11;
01440     DWORD r12;
01441     DWORD r13;
01442     DWORD r14;
01443     DWORD r15;
01444
01445     /* FIXME: this section is fictional (copied from sparc) */
01446     DWORD psr;
01447     DWORD pc;
01448     DWORD npc;
01449     DWORD y;
01450     DWORD wim;
01451     DWORD tbr;
01452
01453     /* FIXME: floating point registers missing */
01454
01455 } CONTEXT;
01456
01457 #endif  /* __s390__ */
01458
01459 #ifdef __arm__
01460
01461 /* These definitions are taken directly from wine
01462  * http://source.winehq.org/git/wine.git/blob_plain/HEAD:/include/winnt.h */
01463
01464 /* The following flags control the contents of the CONTEXT structure. */
01465
01466 #define CONTEXT_ARM             0x0200000
01467 #define CONTEXT_CONTROL         (CONTEXT_ARM | 0x00000001)
01468 #define CONTEXT_INTEGER         (CONTEXT_ARM | 0x00000002)
01469 #define CONTEXT_FLOATING_POINT  (CONTEXT_ARM | 0x00000004)
01470 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_ARM | 0x00000008)
01471
01472 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01473
01474 #define EXCEPTION_READ_FAULT    0
01475 #define EXCEPTION_WRITE_FAULT   1
01476 #define EXCEPTION_EXECUTE_FAULT 8
01477
01478 typedef struct _CONTEXT {
01479 /* The flags values within this flag control the contents of
01480  * a CONTEXT record.
01481  *
01482  * If the context record is used as an input parameter, then
01483  * for each portion of the context record controlled by a flag
01484  * whose value is set, it is assumed that that portion of the
01485  * context record contains valid context. If the context record
01486  * is being used to modify a thread's context, then only that
01487  * portion of the threads context will be modified.
01488  *
01489  * If the context record is used as an IN OUT parameter to capture
01490  * the context of a thread, then only those portions of the thread's
01491  * context corresponding to set flags will be returned.
01492  *
01493  * The context record is never used as an OUT only parameter. */
01494
01495 ULONG ContextFlags;
01496
01497 /* This section is specified/returned if the ContextFlags word contains
01498  *    the flag CONTEXT_INTEGER. */
01499 ULONG R0;
01500 ULONG R1;
```

```
01501 ULONG R2;
01502 ULONG R3;
01503 ULONG R4;
01504 ULONG R5;
01505 ULONG R6;
01506 ULONG R7;
01507 ULONG R8;
01508 ULONG R9;
01509 ULONG R10;
01510 ULONG Fp;
01511 ULONG Ip;
01512
01513 /* These are selected by CONTEXT_CONTROL */
01514 ULONG Sp;
01515 ULONG Lr;
01516 ULONG Pc;
01517 ULONG Cpsr;
01518 } CONTEXT;
01519
01520 #endif /* __arm__ */
01521
01522 #ifdef __aarch64__
01523 /*
01524  * FIXME:
01525  *
01526  * There is not yet an official CONTEXT structure defined for the AArch64
01527  * architecture, so I just made one up.
01528  *
01529  */
01530
01531 /* These definitions are taken directly from wine
01532  * http://source.winehq.org/git/wine.git/blob_plain/HEAD:/include/winnt.h */
01533
01534 #define CONTEXT_ARM64           0x2000000
01535 #define CONTEXT_CONTROL         (CONTEXT_ARM64 | 0x00000001)
01536 #define CONTEXT_INTEGER         (CONTEXT_ARM64 | 0x00000002)
01537 #define CONTEXT_FLOATING_POINT  (CONTEXT_ARM64 | 0x00000004)
01538 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_ARM64 | 0x00000008)
01539
01540 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01541
01542 #define EXCEPTION_READ_FAULT    0
01543 #define EXCEPTION_WRITE_FAULT   1
01544 #define EXCEPTION_EXECUTE_FAULT 8
01545
01546 typedef struct _CONTEXT {
01547     ULONG ContextFlags;
01548
01549     /* This section is specified/returned if the ContextFlags word contains
01550        the flag CONTEXT_INTEGER. */
01551     ULONGLONG X0;
01552     ULONGLONG X1;
01553     ULONGLONG X2;
01554     ULONGLONG X3;
01555     ULONGLONG X4;
01556     ULONGLONG X5;
01557     ULONGLONG X6;
01558     ULONGLONG X7;
01559     ULONGLONG X8;
01560     ULONGLONG X9;
01561     ULONGLONG X10;
01562     ULONGLONG X11;
01563     ULONGLONG X12;
01564     ULONGLONG X13;
01565     ULONGLONG X14;
01566     ULONGLONG X15;
01567     ULONGLONG X16;
01568     ULONGLONG X17;
01569     ULONGLONG X18;
01570     ULONGLONG X19;
01571     ULONGLONG X20;
01572     ULONGLONG X21;
01573     ULONGLONG X22;
01574     ULONGLONG X23;
01575     ULONGLONG X24;
01576     ULONGLONG X25;
01577     ULONGLONG X26;
01578     ULONGLONG X27;
01579     ULONGLONG X28;
01580     ULONGLONG X29;
01581     ULONGLONG X30;
01582
01583     /* These are selected by CONTEXT_CONTROL */
01584     ULONGLONG Sp;
01585     ULONGLONG Pc;
01586     ULONGLONG PState;
01587
```

```
01588     /* These are selected by CONTEXT_FLOATING_POINT */
01589     /* FIXME */
01590 } CONTEXT;
01591
01592 #endif /* __aarch64__ */
01593
01594 #ifdef __e2k__
01595 /*
01596  * FIXME:
01597  *
01598  * There is not yet an official CONTEXT structure defined for the
01599  * Elbrus 2000 architecture (64-bit LE), so I just made one up.
01600  *
01601  */
01602
01603 #define CONTEXT_E2K             0x4000000
01604 #define CONTEXT_CONTROL         (CONTEXT_E2K | 0x00000001)
01605 #define CONTEXT_INTEGER         (CONTEXT_E2K | 0x00000002)
01606 #define CONTEXT_FLOATING_POINT  (CONTEXT_E2K | 0x00000004)
01607 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_E2K | 0x00000008)
01608
01609 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01610
01611 #define EXCEPTION_READ_FAULT    0
01612 #define EXCEPTION_WRITE_FAULT   1
01613 #define EXCEPTION_EXECUTE_FAULT 8
01614
01615 typedef struct _CONTEXT {
01616     ULONG ContextFlags;
01617
01618     /* This section is specified/returned if the ContextFlags word contains
01619        the flag CONTEXT_INTEGER. */
01620     ULONGLONG X0;
01621     ULONGLONG X1;
01622     ULONGLONG X2;
01623     ULONGLONG X3;
01624     ULONGLONG X4;
01625     ULONGLONG X5;
01626     ULONGLONG X6;
01627     ULONGLONG X7;
01628     ULONGLONG X8;
01629     ULONGLONG X9;
01630     ULONGLONG X10;
01631     ULONGLONG X11;
01632     ULONGLONG X12;
01633     ULONGLONG X13;
01634     ULONGLONG X14;
01635     ULONGLONG X15;
01636     ULONGLONG X16;
01637     ULONGLONG X17;
01638     ULONGLONG X18;
01639     ULONGLONG X19;
01640     ULONGLONG X20;
01641     ULONGLONG X21;
01642     ULONGLONG X22;
01643     ULONGLONG X23;
01644     ULONGLONG X24;
01645     ULONGLONG X25;
01646     ULONGLONG X26;
01647     ULONGLONG X27;
01648     ULONGLONG X28;
01649     ULONGLONG X29;
01650     ULONGLONG X30;
01651
01652     /* These are selected by CONTEXT_CONTROL */
01653     ULONGLONG Sp;
01654     ULONGLONG Pc;
01655     ULONGLONG PState;
01656
01657     /* These are selected by CONTEXT_FLOATING_POINT */
01658     /* FIXME */
01659 } CONTEXT;
01660
01661 #endif /* __e2k__ */
01662
01663 #ifdef __riscv && __riscv_xlen==64
01664 /*
01665  * FIXME:
01666  *
01667  * There is not yet an official CONTEXT structure defined for the
01668  * riscv64 architecture (64-bit LE), so I just made one up.
01669  *
01670  */
01671
01672 #define CONTEXT_RISCV64             0x4000000
01673 #define CONTEXT_CONTROL         (CONTEXT_RISCV64 | 0x00000001)
01674 #define CONTEXT_INTEGER         (CONTEXT_RISCV64 | 0x00000002)
```

```
01675 #define CONTEXT_FLOATING_POINT  (CONTEXT_RISCV64 | 0x00000004)
01676 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_RISCV64 | 0x00000008)
01677
01678 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01679
01680 #define EXCEPTION_READ_FAULT    0
01681 #define EXCEPTION_WRITE_FAULT   1
01682 #define EXCEPTION_EXECUTE_FAULT 8
01683
01684 typedef struct _CONTEXT {
01685     ULONG ContextFlags;
01686
01687     /* This section is specified/returned if the ContextFlags word contains
01688        the flag CONTEXT_INTEGER. */
01689     ULONGLONG X0;
01690     ULONGLONG X1;
01691     ULONGLONG X2;
01692     ULONGLONG X3;
01693     ULONGLONG X4;
01694     ULONGLONG X5;
01695     ULONGLONG X6;
01696     ULONGLONG X7;
01697     ULONGLONG X8;
01698     ULONGLONG X9;
01699     ULONGLONG X10;
01700     ULONGLONG X11;
01701     ULONGLONG X12;
01702     ULONGLONG X13;
01703     ULONGLONG X14;
01704     ULONGLONG X15;
01705     ULONGLONG X16;
01706     ULONGLONG X17;
01707     ULONGLONG X18;
01708     ULONGLONG X19;
01709     ULONGLONG X20;
01710     ULONGLONG X21;
01711     ULONGLONG X22;
01712     ULONGLONG X23;
01713     ULONGLONG X24;
01714     ULONGLONG X25;
01715     ULONGLONG X26;
01716     ULONGLONG X27;
01717     ULONGLONG X28;
01718     ULONGLONG X29;
01719     ULONGLONG X30;
01720     ULONGLONG X31;
01721
01722     /* These are selected by CONTEXT_CONTROL */
01723     ULONGLONG Sp;
01724     ULONGLONG Pc;
01725     ULONGLONG PState;
01726
01727     /* These are selected by CONTEXT_FLOATING_POINT */
01728     /* FIXME */
01729 } CONTEXT;
01730
01731 #endif /* __riscv64__ */
01732
01733
01734 #if !defined(CONTEXT_FULL) && !defined(RC_INVOKED)
01735 #error You need to define a CONTEXT for your CPU
01736 #endif
01737
01738 typedef CONTEXT *PCONTEXT;
01739
01740 #ifdef __WINE__
01741
01742 /* Macros for easier access to i386 context registers */
01743
01744 #define AX_reg(context)      (*(WORD*)&(context)->Eax)
01745 #define BX_reg(context)      (*(WORD*)&(context)->Ebx)
01746 #define CX_reg(context)      (*(WORD*)&(context)->Ecx)
01747 #define DX_reg(context)      (*(WORD*)&(context)->Edx)
01748 #define SI_reg(context)      (*(WORD*)&(context)->Esi)
01749 #define DI_reg(context)      (*(WORD*)&(context)->Edi)
01750 #define BP_reg(context)      (*(WORD*)&(context)->Ebp)
01751
01752 #define AL_reg(context)      (*(BYTE*)&(context)->Eax)
01753 #define AH_reg(context)      (*((BYTE*)&(context)->Eax + 1))
01754 #define BL_reg(context)      (*(BYTE*)&(context)->Ebx)
01755 #define BH_reg(context)      (*((BYTE*)&(context)->Ebx + 1))
01756 #define CL_reg(context)      (*(BYTE*)&(context)->Ecx)
01757 #define CH_reg(context)      (*((BYTE*)&(context)->Ecx + 1))
01758 #define DL_reg(context)      (*(BYTE*)&(context)->Edx)
01759 #define DH_reg(context)      (*((BYTE*)&(context)->Edx + 1))
01760
01761 #define SET_CFLAG(context)   ((context)->EFlags |= 0x0001)
```

```
01762 #define RESET_CFLAG(context) ((context)->EFlags &= ~0x0001)
01763 #define SET_ZFLAG(context)   ((context)->EFlags |= 0x0040)
01764 #define RESET_ZFLAG(context) ((context)->EFlags &= ~0x0040)
01765 #define ISV86(context)       ((context)->EFlags & 0x00020000)
01766
01767
01768 /* Macros to retrieve the current context */
01769
01770 #ifdef NEED_UNDERSCORE_PREFIX
01771 # define __ASM_NAME(name) "_" name
01772 #else
01773 # define __ASM_NAME(name) name
01774 #endif
01775
01776 #ifdef NEED_TYPE_IN_DEF
01777 # define __ASM_FUNC(name) ".def " __ASM_NAME(name) "; .scl 2; .type 32; .endef"
01778 #else
01779 # define __ASM_FUNC(name) ".type " __ASM_NAME(name) ",@function"
01780 #endif
01781
01782 #ifdef __GNUC__
01783 # define __ASM_GLOBAL_FUNC(name,code) \
01784       __asm__( ".align 4\n\t" \
01785                ".globl " __ASM_NAME(#name) "\n\t" \
01786                __ASM_FUNC(#name) "\n" \
01787                __ASM_NAME(#name) ":\n\t" \
01788                code );
01789 #else  /* __GNUC__ */
01790 # define __ASM_GLOBAL_FUNC(name,code) \
01791       void __asm_dummy_##name(void) { \
01792           asm( ".align 4\n\t" \
01793                ".globl " __ASM_NAME(#name) "\n\t" \
01794                __ASM_FUNC(#name) "\n" \
01795                __ASM_NAME(#name) ":\n\t" \
01796                code ); \
01797       }
01798 #endif  /* __GNUC__ */
01799
01800 #ifdef __i386__
01801
01802 #define _DEFINE_REGS_ENTRYPOINT( name, fn, args ) \
01803     __ASM_GLOBAL_FUNC( name, \
01804                        "call " __ASM_NAME("__wine_call_from_32_regs") "\n\t" \
01805                        ".long " __ASM_NAME(#fn) "\n\t" \
01806                        ".byte " #args ", " #args )
01807 #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01808   extern void WINAPI name(void); \
01809   _DEFINE_REGS_ENTRYPOINT( name, fn, 0 )
01810 #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01811   extern void WINAPI name( t1 a1 ); \
01812   _DEFINE_REGS_ENTRYPOINT( name, fn, 4 )
01813 #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01814   extern void WINAPI name( t1 a1, t2 a2 ); \
01815   _DEFINE_REGS_ENTRYPOINT( name, fn, 8 )
01816 #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01817   extern void WINAPI name( t1 a1, t2 a2, t3 a3 ); \
01818   _DEFINE_REGS_ENTRYPOINT( name, fn, 12 )
01819 #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01820   extern void WINAPI name( t1 a1, t2 a2, t3 a3, t4 a4 ); \
01821   _DEFINE_REGS_ENTRYPOINT( name, fn, 16 )
01822
01823 #endif  /* __i386__ */
01824
01825 #ifdef __sparc__
01826 /* FIXME: use getcontext() to retrieve full context */
01827 #define _GET_CONTEXT \
01828     CONTEXT context;   \
01829     do { memset(&context, 0, sizeof(CONTEXT));            \
01830          context.ContextFlags = CONTEXT_CONTROL;          \
01831          context.pc = (DWORD)__builtin_return_address(0); \
01832        } while (0)
01833
01834 #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01835   void WINAPI name ( void ) \
01836   { _GET_CONTEXT; fn( &context ); }
01837 #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01838   void WINAPI name ( t1 a1 ) \
01839   { _GET_CONTEXT; fn( a1, &context ); }
01840 #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01841   void WINAPI name ( t1 a1, t2 a2 ) \
01842   { _GET_CONTEXT; fn( a1, a2, &context ); }
01843 #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01844   void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01845   { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01846 #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01847   void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01848   { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
```

```
01849
01850 #endif /* __sparc__ */
01851
01852 #ifdef __s390__
01853 /* FIXME: use getcontext() to retrieve full context */
01854 #define _GET_CONTEXT \
01855     CONTEXT context;   \
01856     do { memset(&context, 0, sizeof(CONTEXT));            \
01857          context.ContextFlags = CONTEXT_CONTROL;          \
01858          context.pc = (DWORD)__builtin_return_address(0); \
01859        } while (0)
01860
01861 #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01862   void WINAPI name ( void ) \
01863   { _GET_CONTEXT; fn( &context ); }
01864 #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01865   void WINAPI name ( t1 a1 ) \
01866   { _GET_CONTEXT; fn( a1, &context ); }
01867 #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01868   void WINAPI name ( t1 a1, t2 a2 ) \
01869   { _GET_CONTEXT; fn( a1, a2, &context ); }
01870 #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01871   void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01872   { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01873 #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01874   void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01875   { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
01876
01877 #endif /* __s390__ */
01878
01879 #ifdef __PPC__
01880
01881 /* FIXME: use getcontext() to retrieve full context */
01882 #define _GET_CONTEXT \
01883     CONTEXT context;   \
01884     do { memset(&context, 0, sizeof(CONTEXT));            \
01885          context.ContextFlags = CONTEXT_CONTROL;          \
01886        } while (0)
01887
01888 #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01889   void WINAPI name ( void ) \
01890   { _GET_CONTEXT; fn( &context ); }
01891 #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01892   void WINAPI name ( t1 a1 ) \
01893   { _GET_CONTEXT; fn( a1, &context ); }
01894 #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01895   void WINAPI name ( t1 a1, t2 a2 ) \
01896   { _GET_CONTEXT; fn( a1, a2, &context ); }
01897 #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01898   void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01899   { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01900 #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01901   void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01902   { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
01903
01904 #endif /* __PPC__ */
01905
01906
01907 #ifndef DEFINE_REGS_ENTRYPOINT_0
01908 #error You need to define DEFINE_REGS_ENTRYPOINT macros for your CPU
01909 #endif
01910
01911 /* Constructor functions */
01912
01913 #ifdef __GNUC__
01914 # define DECL_GLOBAL_CONSTRUCTOR(func) \
01915     static void func(void) __attribute__((constructor)); \
01916     static void func(void)
01917 #else  /* __GNUC__ */
01918 # ifdef __i386__
01919 #  define DECL_GLOBAL_CONSTRUCTOR(func) \
01920     static void __dummy_init_##func(void) { \
01921         asm(".section .init,\"ax\"\n\t" \
01922             "call " #func "\n\t" \
01923             ".previous"); } \
01924     static void func(void)
01925 # else  /* __i386__ */
01926 #  error You must define the DECL_GLOBAL_CONSTRUCTOR macro for your platform
01927 # endif
01928 #endif  /* __GNUC__ */
01929
01930 /* Segment register access */
01931
01932 #ifdef __i386__
01933 # ifdef __GNUC__
01934 #  define __DEFINE_GET_SEG(seg) \
01935     extern inline unsigned short __get_##seg(void) \
```

```
01936     { unsigned short res; __asm__("movw %%" #seg ",%w0" : "=r"(res)); return res; }
01937 #  define __DEFINE_SET_SEG(seg) \
01938     extern inline void __set_##seg(int val) { __asm__("movw %w0,%%" #seg : : "r" (val)); }
01939 # else  /* __GNUC__ */
01940 #  define __DEFINE_GET_SEG(seg) extern unsigned short __get_##seg(void);
01941 #  define __DEFINE_SET_SEG(seg) extern void __set_##seg(unsigned int);
01942 # endif /* __GNUC__ */
01943 #else  /* __i386__ */
01944 # define __DEFINE_GET_SEG(seg) inline static unsigned short __get_##seg(void) { return 0; }
01945 # define __DEFINE_SET_SEG(seg) /* nothing */
01946 #endif  /* __i386__ */
01947
01948 __DEFINE_GET_SEG(cs)
01949 __DEFINE_GET_SEG(ds)
01950 __DEFINE_GET_SEG(es)
01951 __DEFINE_GET_SEG(fs)
01952 __DEFINE_GET_SEG(gs)
01953 __DEFINE_GET_SEG(ss)
01954 __DEFINE_SET_SEG(fs)
01955 __DEFINE_SET_SEG(gs)
01956 #undef __DEFINE_GET_SEG
01957 #undef __DEFINE_SET_SEG
01958
01959 #endif  /* __WINE__ */
01960
01961
01962
01963 /*
01964  * Language IDs
01965  */
01966
01967 #define MAKELCID(l, s)       (MAKELONG(l, s))
01968
01969 #define MAKELANGID(p, s)         ((((WORD)(s))«10) | (WORD)(p))
01970 #define PRIMARYLANGID(l)         ((WORD)(l) & 0x3ff)
01971 #define SUBLANGID(l)             ((WORD)(l) » 10)
01972
01973 #define LANGIDFROMLCID(lcid)     ((WORD)(lcid))
01974 #define SORTIDFROMLCID(lcid)     ((WORD)((((DWORD)(lcid)) » 16) & 0x0f))
01975
01976 #define LANG_SYSTEM_DEFAULT (MAKELANGID(LANG_NEUTRAL, SUBLANG_SYS_DEFAULT))
01977 #define LANG_USER_DEFAULT   (MAKELANGID(LANG_NEUTRAL, SUBLANG_DEFAULT))
01978 #define LOCALE_SYSTEM_DEFAULT   (MAKELCID(LANG_SYSTEM_DEFAULT, SORT_DEFAULT))
01979 #define LOCALE_USER_DEFAULT (MAKELCID(LANG_USER_DEFAULT, SORT_DEFAULT))
01980 #define LOCALE_NEUTRAL       (MAKELCID(MAKELANGID(LANG_NEUTRAL,SUBLANG_NEUTRAL),SORT_DEFAULT))
01981
01982 /* FIXME: are the symbolic names correct for LIDs:  0x17, 0x20, 0x28,
01983  *    0x2a, 0x2b, 0x2c, 0x2f, 0x30, 0x31, 0x32, 0x33, 0x34, 0x35,
01984  *    0x37, 0x39, 0x3a, 0x3b, 0x3c, 0x3e, 0x3f, 0x41, 0x43, 0x44,
01985  *    0x45, 0x46, 0x47, 0x48, 0x49, 0x4a, 0x4b, 0x4c, 0x4d, 0x4e,
01986  *    0x4f, 0x57
01987  */
01988 #define LANG_NEUTRAL                    0x00
01989 #define LANG_AFRIKAANS           0x36
01990 #define LANG_ALBANIAN            0x1c
01991 #define LANG_ARABIC                     0x01
01992 #define LANG_ARMENIAN            0x2b
01993 #define LANG_ASSAMESE            0x4d
01994 #define LANG_AZERI           0x2c
01995 #define LANG_BASQUE                     0x2d
01996 #define LANG_BENGALI             0x45
01997 #define LANG_BULGARIAN                  0x02
01998 #define LANG_BYELORUSSIAN               0x23
01999 #define LANG_CATALAN                    0x03
02000 #define LANG_CHINESE                    0x04
02001 #define LANG_SERBO_CROATIAN             0x1a
02002 #define LANG_CROATIAN     LANG_SERBO_CROATIAN
02003 #define LANG_SERBIAN      LANG_SERBO_CROATIAN
02004 #define LANG_CZECH                      0x05
02005 #define LANG_DANISH                     0x06
02006 #define LANG_DUTCH                      0x13
02007 #define LANG_ENGLISH                    0x09
02008 #define LANG_ESTONIAN                   0x25
02009 #define LANG_FAEROESE                   0x38
02010 #define LANG_FARSI                      0x29
02011 #define LANG_FINNISH                    0x0b
02012 #define LANG_FRENCH                     0x0c
02013 #define LANG_GAELIC          0x3c
02014 #define LANG_GEORGIAN            0x37
02015 #define LANG_GERMAN                     0x07
02016 #define LANG_GREEK                      0x08
02017 #define LANG_GUJARATI            0x47
02018 #define LANG_HEBREW                     0x0D
02019 #define LANG_HINDI           0x39
02020 #define LANG_HUNGARIAN                  0x0e
02021 #define LANG_ICELANDIC                  0x0f
02022 #define LANG_INDONESIAN                 0x21
```

```
02023 #define LANG_ITALIAN                     0x10
02024 #define LANG_JAPANESE                    0x11
02025 #define LANG_KANNADA             0x4b
02026 #define LANG_KAZAKH          0x3f
02027 #define LANG_KONKANI             0x57
02028 #define LANG_KOREAN                      0x12
02029 #define LANG_LATVIAN                     0x26
02030 #define LANG_LITHUANIAN                  0x27
02031 #define LANG_MACEDONIAN          0x2f
02032 #define LANG_MALAY           0x3e
02033 #define LANG_MALAYALAM           0x4c
02034 #define LANG_MALTESE             0x3a
02035 #define LANG_MAORI           0x28
02036 #define LANG_MARATHI             0x4e
02037 #define LANG_NORWEGIAN                   0x14
02038 #define LANG_ORIYA           0x48
02039 #define LANG_POLISH                      0x15
02040 #define LANG_PORTUGUESE                  0x16
02041 #define LANG_PUNJABI             0x46
02042 #define LANG_RHAETO_ROMANCE      0x17
02043 #define LANG_ROMANIAN                    0x18
02044 #define LANG_RUSSIAN                     0x19
02045 #define LANG_SAAMI           0x3b
02046 #define LANG_SANSKRIT            0x4f
02047 #define LANG_SLOVAK                      0x1b
02048 #define LANG_SLOVENIAN                   0x24
02049 #define LANG_SORBIAN                     0x2e
02050 #define LANG_SPANISH                     0x0a
02051 #define LANG_SUTU            0x30
02052 #define LANG_SWAHILI             0x41
02053 #define LANG_SWEDISH                     0x1d
02054 #define LANG_TAMIL           0x49
02055 #define LANG_TATAR           0x44
02056 #define LANG_TELUGU          0x4a
02057 #define LANG_THAI                        0x1e
02058 #define LANG_TSONGA          0x31
02059 #define LANG_TSWANA          0x32
02060 #define LANG_TURKISH                     0x1f
02061 #define LANG_UKRAINIAN                   0x22
02062 #define LANG_URDU            0x20
02063 #define LANG_UZBEK           0x43
02064 #define LANG_VENDA           0x33
02065 #define LANG_VIETNAMESE          0x2a
02066 #define LANG_XHOSA           0x34
02067 #define LANG_ZULU            0x35
02068 /* non standard; keep the number high enough (but < 0xff) */
02069 #define LANG_ESPERANTO           0x8f
02070 #define LANG_WALON           0x90
02071 #define LANG_CORNISH                     0x91
02072 #define LANG_WELSH                       0x92
02073 #define LANG_BRETON                      0x93
02074
02075 /* Sublanguage definitions */
02076 #define SUBLANG_NEUTRAL                  0x00    /* language neutral */
02077 #define SUBLANG_DEFAULT                  0x01    /* user default */
02078 #define SUBLANG_SYS_DEFAULT              0x02    /* system default */
02079
02080 #define SUBLANG_ARABIC                   0x01
02081 #define SUBLANG_ARABIC_SAUDI_ARABIA      0x01
02082 #define SUBLANG_ARABIC_IRAQ              0x02
02083 #define SUBLANG_ARABIC_EGYPT             0x03
02084 #define SUBLANG_ARABIC_LIBYA             0x04
02085 #define SUBLANG_ARABIC_ALGERIA           0x05
02086 #define SUBLANG_ARABIC_MOROCCO           0x06
02087 #define SUBLANG_ARABIC_TUNISIA           0x07
02088 #define SUBLANG_ARABIC_OMAN              0x08
02089 #define SUBLANG_ARABIC_YEMEN             0x09
02090 #define SUBLANG_ARABIC_SYRIA             0x0a
02091 #define SUBLANG_ARABIC_JORDAN            0x0b
02092 #define SUBLANG_ARABIC_LEBANON           0x0c
02093 #define SUBLANG_ARABIC_KUWAIT            0x0d
02094 #define SUBLANG_ARABIC_UAE               0x0e
02095 #define SUBLANG_ARABIC_BAHRAIN           0x0f
02096 #define SUBLANG_ARABIC_QATAR             0x10
02097 #define SUBLANG_CHINESE_TRADITIONAL      0x01
02098 #define SUBLANG_CHINESE_SIMPLIFIED       0x02
02099 #define SUBLANG_CHINESE_HONGKONG         0x03
02100 #define SUBLANG_CHINESE_SINGAPORE        0x04
02101 #define SUBLANG_CHINESE_MACAU            0x05
02102 #define SUBLANG_DUTCH                    0x01
02103 #define SUBLANG_DUTCH_BELGIAN            0x02
02104 #define SUBLANG_DUTCH_SURINAM        0x03
02105 #define SUBLANG_ENGLISH_US               0x01
02106 #define SUBLANG_ENGLISH_UK               0x02
02107 #define SUBLANG_ENGLISH_AUS              0x03
02108 #define SUBLANG_ENGLISH_CAN              0x04
02109 #define SUBLANG_ENGLISH_NZ               0x05
```

```
02110 #define SUBLANG_ENGLISH_EIRE             0x06
02111 #define SUBLANG_ENGLISH_SAFRICA          0x07
02112 #define SUBLANG_ENGLISH_JAMAICA          0x08
02113 #define SUBLANG_ENGLISH_CARRIBEAN        0x09
02114 #define SUBLANG_ENGLISH_BELIZE           0x0a
02115 #define SUBLANG_ENGLISH_TRINIDAD         0x0b
02116 #define SUBLANG_ENGLISH_ZIMBABWE         0x0c
02117 #define SUBLANG_ENGLISH_PHILIPPINES      0x0d
02118 #define SUBLANG_FRENCH                   0x01
02119 #define SUBLANG_FRENCH_BELGIAN           0x02
02120 #define SUBLANG_FRENCH_CANADIAN          0x03
02121 #define SUBLANG_FRENCH_SWISS             0x04
02122 #define SUBLANG_FRENCH_LUXEMBOURG        0x05
02123 #define SUBLANG_FRENCH_MONACO            0x06
02124 #define SUBLANG_GERMAN                   0x01
02125 #define SUBLANG_GERMAN_SWISS             0x02
02126 #define SUBLANG_GERMAN_AUSTRIAN          0x03
02127 #define SUBLANG_GERMAN_LUXEMBOURG        0x04
02128 #define SUBLANG_GERMAN_LIECHTENSTEIN     0x05
02129 #define SUBLANG_ITALIAN                  0x01
02130 #define SUBLANG_ITALIAN_SWISS            0x02
02131 #define SUBLANG_KOREAN                   0x01
02132 #define SUBLANG_KOREAN_JOHAB             0x02
02133 #define SUBLANG_NORWEGIAN_BOKMAL         0x01
02134 #define SUBLANG_NORWEGIAN_NYNORSK        0x02
02135 #define SUBLANG_PORTUGUESE               0x02
02136 #define SUBLANG_PORTUGUESE_BRAZILIAN     0x01
02137 #define SUBLANG_SPANISH                  0x01
02138 #define SUBLANG_SPANISH_MEXICAN          0x02
02139 #define SUBLANG_SPANISH_MODERN           0x03
02140 #define SUBLANG_SPANISH_GUATEMALA        0x04
02141 #define SUBLANG_SPANISH_COSTARICA        0x05
02142 #define SUBLANG_SPANISH_PANAMA           0x06
02143 #define SUBLANG_SPANISH_DOMINICAN        0x07
02144 #define SUBLANG_SPANISH_VENEZUELA        0x08
02145 #define SUBLANG_SPANISH_COLOMBIA         0x09
02146 #define SUBLANG_SPANISH_PERU             0x0a
02147 #define SUBLANG_SPANISH_ARGENTINA        0x0b
02148 #define SUBLANG_SPANISH_ECUADOR          0x0c
02149 #define SUBLANG_SPANISH_CHILE            0x0d
02150 #define SUBLANG_SPANISH_URUGUAY          0x0e
02151 #define SUBLANG_SPANISH_PARAGUAY         0x0f
02152 #define SUBLANG_SPANISH_BOLIVIA          0x10
02153 #define SUBLANG_SPANISH_EL_SALVADOR  0x11
02154 #define SUBLANG_SPANISH_HONDURAS         0x12
02155 #define SUBLANG_SPANISH_NICARAGUA        0x13
02156 #define SUBLANG_SPANISH_PUERTO_RICO      0x14
02157 /* FIXME: I don't know the symbolic names for those */
02158 #define SUBLANG_ROMANIAN         0x01
02159 #define SUBLANG_ROMANIAN_MOLDAVIA    0x02
02160 #define SUBLANG_RUSSIAN          0x01
02161 #define SUBLANG_RUSSIAN_MOLDAVIA     0x02
02162 #define SUBLANG_CROATIAN         0x01
02163 #define SUBLANG_SERBIAN          0x02
02164 #define SUBLANG_SERBIAN_LATIN        0x03
02165 #define SUBLANG_SWEDISH          0x01
02166 #define SUBLANG_SWEDISH_FINLAND      0x02
02167 #define SUBLANG_LITHUANIAN       0x01
02168 #define SUBLANG_LITHUANIAN_CLASSIC   0x02
02169 #define SUBLANG_AZERI            0x01
02170 #define SUBLANG_AZERI_CYRILLIC       0x02
02171 #define SUBLANG_GAELIC           0x01
02172 #define SUBLANG_GAELIC_SCOTTISH      0x02
02173 #define SUBLANG_GAELIC_MANX              0x03
02174 #define SUBLANG_MALAY            0x01
02175 #define SUBLANG_MALAY_BRUNEI_DARUSSALAM  0x02
02176 #define SUBLANG_UZBEK            0x01
02177 #define SUBLANG_UZBEK_CYRILLIC       0x02
02178 #define SUBLANG_URDU_PAKISTAN            0x01
02179
02180
02181
02182 /*
02183  * Sort definitions
02184  */
02185
02186 #define SORT_DEFAULT                     0x0
02187 #define SORT_JAPANESE_XJIS               0x0
02188 #define SORT_JAPANESE_UNICODE            0x1
02189 #define SORT_CHINESE_BIG5                0x0
02190 #define SORT_CHINESE_UNICODE             0x1
02191 #define SORT_KOREAN_KSC                  0x0
02192 #define SORT_KOREAN_UNICODE              0x1
02193
02194
02195
02196 /*
```

```
02197  * Definitions for IsTextUnicode()
02198  */
02199
02200 #define IS_TEXT_UNICODE_ASCII16        0x0001
02201 #define IS_TEXT_UNICODE_STATISTICS         0x0002
02202 #define IS_TEXT_UNICODE_CONTROLS           0x0004
02203 #define IS_TEXT_UNICODE_SIGNATURE      0x0008
02204 #define IS_TEXT_UNICODE_UNICODE_MASK       0x000F
02205 #define IS_TEXT_UNICODE_REVERSE_ASCII16    0x0010
02206 #define IS_TEXT_UNICODE_REVERSE_STATISTICS 0x0020
02207 #define IS_TEXT_UNICODE_REVERSE_CONTROLS   0x0040
02208 #define IS_TEXT_UNICODE_REVERSE_SIGNATURE  0x0080
02209 #define IS_TEXT_UNICODE_REVERSE_MASK       0x00F0
02210 #define IS_TEXT_UNICODE_ILLEGAL_CHARS      0x0100
02211 #define IS_TEXT_UNICODE_ODD_LENGTH     0x0200
02212 #define IS_TEXT_UNICODE_DBCS_LEADBYTE      0x0400
02213 #define IS_TEXT_UNICODE_NOT_UNICODE_MASK   0x0F00
02214 #define IS_TEXT_UNICODE_NULL_BYTES         0x1000
02215 #define IS_TEXT_UNICODE_NOT_ASCII_MASK     0xF000
02216
02217
02218
02219 /*
02220  * Exception codes
02221  */
02222
02223 #define STATUS_SUCCESS                   0x00000000
02224 #define STATUS_WAIT_0                    0x00000000
02225 #define STATUS_ABANDONED_WAIT_0          0x00000080
02226 #define STATUS_ABANDONED_WAIT_63         0x000000BF
02227 #define STATUS_USER_APC                  0x000000C0
02228 #define STATUS_ALERTED                   0x00000101
02229 #define STATUS_TIMEOUT                   0x00000102
02230 #define STATUS_PENDING                   0x00000103
02231 #define STATUS_REPARSE                   0x00000104
02232 #define STATUS_MORE_ENTRIES              0x00000105
02233 #define STATUS_NOT_ALL_ASSIGNED          0x00000106
02234 #define STATUS_SOME_NOT_MAPPED           0x00000107
02235 #define STATUS_OPLOCK_BREAK_IN_PROGRESS  0x00000108
02236 #define STATUS_VOLUME_MOUNTED            0x00000109
02237 #define STATUS_RXACT_COMMITTED           0x0000010A
02238 #define STATUS_NOTIFY_CLEANUP            0x0000010B
02239 #define STATUS_NOTIFY_ENUM_DIR           0x0000010C
02240 #define STATUS_NO_QUOTAS_FOR_ACCOUNT     0x0000010D
02241 #define STATUS_PRIMARY_TRANSPORT_CONNECT_FAILED 0x0000010E
02242 #define STATUS_PAGE_FAULT_TRANSITION     0x00000110
02243 #define STATUS_PAGE_FAULT_DEMAND_ZERO    0x00000111
02244 #define STATUS_PAGE_FAULT_COPY_ON_WRITE  0x00000112
02245 #define STATUS_PAGE_FAULT_GUARD_PAGE     0x00000113
02246 #define STATUS_PAGE_FAULT_PAGING_FILE    0x00000114
02247 #define STATUS_CACHE_PAGE_LOCKED         0x00000115
02248 #define STATUS_CRASH_DUMP                0x00000116
02249 #define STATUS_BUFFER_ALL_ZEROS          0x00000117
02250 #define STATUS_REPARSE_OBJECT            0x00000118
02251
02252 #define STATUS_THREAD_WAS_SUSPENDED      0x40000001
02253 #define STATUS_WORKING_SET_LIMIT_RANGE   0x40000002
02254 #define STATUS_IMAGE_NOT_AT_BASE         0x40000003
02255 #define STATUS_RXACT_STATE_CREATED       0x40000004
02256 #define STATUS_SEGMENT_NOTIFICATION      0x40000005
02257 #define STATUS_LOCAL_USER_SESSION_KEY    0x40000006
02258 #define STATUS_BAD_CURRENT_DIRECTORY     0x40000007
02259 #define STATUS_SERIAL_MORE_WRITES        0x40000008
02260 #define STATUS_REGISTRY_RECOVERED        0x40000009
02261 #define STATUS_FT_READ_RECOVERY_FROM_BACKUP 0x4000000A
02262 #define STATUS_FT_WRITE_RECOVERY         0x4000000B
02263 #define STATUS_SERIAL_COUNTER_TIMEOUT    0x4000000C
02264 #define STATUS_NULL_LM_PASSWORD          0x4000000D
02265 #define STATUS_IMAGE_MACHINE_TYPE_MISMATCH 0x4000000E
02266 #define STATUS_RECEIVE_PARTIAL           0x4000000F
02267 #define STATUS_RECEIVE_EXPEDITED         0x40000010
02268 #define STATUS_RECEIVE_PARTIAL_EXPEDITED 0x40000011
02269 #define STATUS_EVENT_DONE                0x40000012
02270 #define STATUS_EVENT_PENDING             0x40000013
02271 #define STATUS_CHECKING_FILE_SYSTEM      0x40000014
02272 #define STATUS_FATAL_APP_EXIT            0x40000015
02273 #define STATUS_PREDEFINED_HANDLE         0x40000016
02274 #define STATUS_WAS_UNLOCKED              0x40000017
02275 #define STATUS_SERVICE_NOTIFICATION      0x40000018
02276 #define STATUS_WAS_LOCKED                0x40000019
02277 #define STATUS_LOG_HARD_ERROR            0x4000001A
02278 #define STATUS_ALREADY_WIN32             0x4000001B
02279 #define STATUS_WX86_UNSIMULATE           0x4000001C
02280 #define STATUS_WX86_CONTINUE             0x4000001D
02281 #define STATUS_WX86_SINGLE_STEP          0x4000001E
02282 #define STATUS_WX86_BREAKPOINT           0x4000001F
02283 #define STATUS_WX86_EXCEPTION_CONTINUE   0x40000020
```

```
02284 #define STATUS_WX86_EXCEPTION_LASTCHANCE 0x40000021
02285 #define STATUS_WX86_EXCEPTION_CHAIN      0x40000022
02286 #define STATUS_IMAGE_MACHINE_TYPE_MISMATCH_EXE 0x40000023
02287 #define STATUS_NO_YIELD_PERFORMED        0x40000024
02288 #define STATUS_TIMER_RESUME_IGNORED      0x40000025
02289
02290 #define STATUS_GUARD_PAGE_VIOLATION      0x80000001
02291 #define STATUS_DATATYPE_MISALIGNMENT     0x80000002
02292 #define STATUS_BREAKPOINT                0x80000003
02293 #define STATUS_SINGLE_STEP               0x80000004
02294 #define STATUS_BUFFER_OVERFLOW           0x80000005
02295 #define STATUS_NO_MORE_FILES             0x80000006
02296 #define STATUS_WAKE_SYSTEM_DEBUGGER      0x80000007
02297
02298 #define STATUS_HANDLES_CLOSED            0x8000000A
02299 #define STATUS_NO_INHERITANCE            0x8000000B
02300 #define STATUS_GUID_SUBSTITUTION_MADE    0x8000000C
02301 #define STATUS_PARTIAL_COPY              0x8000000D
02302 #define STATUS_DEVICE_PAPER_EMPTY        0x8000000E
02303 #define STATUS_DEVICE_POWERED_OFF        0x8000000F
02304 #define STATUS_DEVICE_OFF_LINE           0x80000010
02305 #define STATUS_DEVICE_BUSY               0x80000011
02306 #define STATUS_NO_MORE_EAS               0x80000012
02307 #define STATUS_INVALID_EA_NAME           0x80000013
02308 #define STATUS_EA_LIST_INCONSISTENT      0x80000014
02309 #define STATUS_INVALID_EA_FLAG           0x80000015
02310 #define STATUS_VERIFY_REQUIRED           0x80000016
02311 #define STATUS_EXTRANEOUS_INFORMATION    0x80000017
02312 #define STATUS_RXACT_COMMIT_NECESSARY    0x80000018
02313 #define STATUS_NO_MORE_ENTRIES           0x8000001A
02314 #define STATUS_FILEMARK_DETECTED         0x8000001B
02315 #define STATUS_MEDIA_CHANGED             0x8000001C
02316 #define STATUS_BUS_RESET                 0x8000001D
02317 #define STATUS_END_OF_MEDIA              0x8000001E
02318 #define STATUS_BEGINNING_OF_MEDIA        0x8000001F
02319 #define STATUS_MEDIA_CHECK               0x80000020
02320 #define STATUS_SETMARK_DETECTED          0x80000021
02321 #define STATUS_NO_DATA_DETECTED          0x80000022
02322 #define STATUS_REDIRECTOR_HAS_OPEN_HANDLES 0x80000023
02323 #define STATUS_SERVER_HAS_OPEN_HANDLES   0x80000024
02324 #define STATUS_ALREADY_DISCONNECTED      0x80000025
02325 #define STATUS_LONGJUMP                  0x80000026
02326
02327 #define STATUS_UNSUCCESSFUL              0xC0000001
02328 #define STATUS_NOT_IMPLEMENTED           0xC0000002
02329 #define STATUS_INVALID_INFO_CLASS        0xC0000003
02330 #define STATUS_INFO_LENGTH_MISMATCH      0xC0000004
02331 #define STATUS_ACCESS_VIOLATION          0xC0000005
02332 #define STATUS_IN_PAGE_ERROR             0xC0000006
02333 #define STATUS_PAGEFILE_QUOTA            0xC0000007
02334 #define STATUS_INVALID_HANDLE            0xC0000008
02335 #define STATUS_BAD_INITIAL_STACK         0xC0000009
02336 #define STATUS_BAD_INITIAL_PC            0xC000000A
02337 #define STATUS_INVALID_CID               0xC000000B
02338 #define STATUS_TIMER_NOT_CANCELED        0xC000000C
02339 #define STATUS_INVALID_PARAMETER         0xC000000D
02340 #define STATUS_NO_SUCH_DEVICE            0xC000000E
02341 #define STATUS_NO_SUCH_FILE              0xC000000F
02342 #define STATUS_INVALID_DEVICE_REQUEST    0xC0000010
02343 #define STATUS_END_OF_FILE               0xC0000011
02344 #define STATUS_WRONG_VOLUME              0xC0000012
02345 #define STATUS_NO_MEDIA_IN_DEVICE        0xC0000013
02346 #define STATUS_UNRECOGNIZED_MEDIA        0xC0000014
02347 #define STATUS_NONEXISTENT_SECTOR        0xC0000015
02348 #define STATUS_MORE_PROCESSING_REQUIRED  0xC0000016
02349 #define STATUS_NO_MEMORY                 0xC0000017
02350 #define STATUS_CONFLICTING_ADDRESSES     0xC0000018
02351 #define STATUS_NOT_MAPPED_VIEW           0xC0000019
02352 #define STATUS_UNABLE_TO_FREE_VM         0xC000001A
02353 #define STATUS_UNABLE_TO_DELETE_SECTION  0xC000001B
02354 #define STATUS_INVALID_SYSTEM_SERVICE    0xC000001C
02355 #define STATUS_ILLEGAL_INSTRUCTION       0xC000001D
02356 #define STATUS_INVALID_LOCK_SEQUENCE     0xC000001E
02357 #define STATUS_INVALID_VIEW_SIZE         0xC000001F
02358 #define STATUS_INVALID_FILE_FOR_SECTION  0xC0000020
02359 #define STATUS_ALREADY_COMMITTED         0xC0000021
02360 #define STATUS_ACCESS_DENIED             0xC0000022
02361 #define STATUS_BUFFER_TOO_SMALL          0xC0000023
02362 #define STATUS_OBJECT_TYPE_MISMATCH      0xC0000024
02363 #define STATUS_NONCONTINUABLE_EXCEPTION  0xC0000025
02364 #define STATUS_INVALID_DISPOSITION       0xC0000026
02365 #define STATUS_UNWIND                    0xC0000027
02366 #define STATUS_BAD_STACK                 0xC0000028
02367 #define STATUS_INVALID_UNWIND_TARGET     0xC0000029
02368 #define STATUS_NOT_LOCKED                0xC000002A
02369 #define STATUS_PARITY_ERROR              0xC000002B
02370 #define STATUS_UNABLE_TO_DECOMMIT_VM     0xC000002C
```

```
02371 #define STATUS_NOT_COMMITTED              0xC000002D
02372 #define STATUS_INVALID_PORT_ATTRIBUTES    0xC000002E
02373 #define STATUS_PORT_MESSAGE_TOO_LONG      0xC000002F
02374 #define STATUS_INVALID_PARAMETER_MIX      0xC0000030
02375 #define STATUS_INVALID_QUOTA_LOWER        0xC0000031
02376 #define STATUS_DISK_CORRUPT_ERROR         0xC0000032
02377 #define STATUS_OBJECT_NAME_INVALID        0xC0000033
02378 #define STATUS_OBJECT_NAME_NOT_FOUND      0xC0000034
02379 #define STATUS_OBJECT_NAME_COLLISION      0xC0000035
02380 #define STATUS_PORT_DISCONNECTED          0xC0000037
02381 #define STATUS_DEVICE_ALREADY_ATTACHED    0xC0000038
02382 #define STATUS_OBJECT_PATH_INVALID        0xC0000039
02383 #define STATUS_OBJECT_PATH_NOT_FOUND      0xC000003A
02384 #define STATUS_PATH_SYNTAX_BAD            0xC000003B
02385 #define STATUS_DATA_OVERRUN               0xC000003C
02386 #define STATUS_DATA_LATE_ERROR            0xC000003D
02387 #define STATUS_DATA_ERROR                 0xC000003E
02388 #define STATUS_CRC_ERROR                  0xC000003F
02389 #define STATUS_SECTION_TOO_BIG            0xC0000040
02390 #define STATUS_PORT_CONNECTION_REFUSED    0xC0000041
02391 #define STATUS_INVALID_PORT_HANDLE        0xC0000042
02392 #define STATUS_SHARING_VIOLATION          0xC0000043
02393 #define STATUS_QUOTA_EXCEEDED             0xC0000044
02394 #define STATUS_INVALID_PAGE_PROTECTION    0xC0000045
02395 #define STATUS_MUTANT_NOT_OWNED           0xC0000046
02396 #define STATUS_SEMAPHORE_LIMIT_EXCEEDED   0xC0000047
02397 #define STATUS_PORT_ALREADY_SET           0xC0000048
02398 #define STATUS_SECTION_NOT_IMAGE          0xC0000049
02399 #define STATUS_SUSPEND_COUNT_EXCEEDED     0xC000004A
02400 #define STATUS_THREAD_IS_TERMINATING      0xC000004B
02401 #define STATUS_BAD_WORKING_SET_LIMIT      0xC000004C
02402 #define STATUS_INCOMPATIBLE_FILE_MAP      0xC000004D
02403 #define STATUS_SECTION_PROTECTION         0xC000004E
02404 #define STATUS_EAS_NOT_SUPPORTED          0xC000004F
02405 #define STATUS_EA_TOO_LARGE               0xC0000050
02406 #define STATUS_NONEXISTENT_EA_ENTRY       0xC0000051
02407 #define STATUS_NO_EAS_ON_FILE             0xC0000052
02408 #define STATUS_EA_CORRUPT_ERROR           0xC0000053
02409 #define STATUS_LOCK_NOT_GRANTED           0xC0000054  /* FIXME: not sure */
02410 #define STATUS_FILE_LOCK_CONFLICT         0xC0000055  /* FIXME: not sure */
02411 #define STATUS_DELETE_PENDING             0xC0000056
02412 #define STATUS_CTL_FILE_NOT_SUPPORTED     0xC0000057
02413 #define STATUS_UNKNOWN_REVISION           0xC0000058
02414 #define STATUS_REVISION_MISMATCH          0xC0000059
02415 #define STATUS_INVALID_OWNER              0xC000005A
02416 #define STATUS_INVALID_PRIMARY_GROUP      0xC000005B
02417 #define STATUS_NO_IMPERSONATION_TOKEN     0xC000005C
02418 #define STATUS_CANT_DISABLE_MANDATORY     0xC000005D
02419 #define STATUS_NO_LOGON_SERVERS           0xC000005E
02420 #define STATUS_NO_SUCH_LOGON_SESSION      0xC000005F
02421 #define STATUS_NO_SUCH_PRIVILEGE          0xC0000060
02422 #define STATUS_PRIVILEGE_NOT_HELD         0xC0000061
02423 #define STATUS_INVALID_ACCOUNT_NAME       0xC0000062
02424 #define STATUS_USER_EXISTS                0xC0000063
02425 #define STATUS_NO_SUCH_USER               0xC0000064
02426 #define STATUS_GROUP_EXISTS               0xC0000065
02427 #define STATUS_NO_SUCH_GROUP              0xC0000066
02428 #define STATUS_MEMBER_IN_GROUP            0xC0000067
02429 #define STATUS_MEMBER_NOT_IN_GROUP        0xC0000068
02430 #define STATUS_LAST_ADMIN                 0xC0000069
02431 #define STATUS_WRONG_PASSWORD             0xC000006A
02432 #define STATUS_ILL_FORMED_PASSWORD        0xC000006B
02433 #define STATUS_PASSWORD_RESTRICTION       0xC000006C
02434 #define STATUS_LOGON_FAILURE              0xC000006D
02435 #define STATUS_ACCOUNT_RESTRICTION        0xC000006E
02436 #define STATUS_INVALID_LOGON_HOURS        0xC000006F
02437 #define STATUS_INVALID_WORKSTATION        0xC0000070
02438 #define STATUS_PASSWORD_EXPIRED           0xC0000071
02439 #define STATUS_ACCOUNT_DISABLED           0xC0000072
02440 #define STATUS_NONE_MAPPED                0xC0000073
02441 #define STATUS_TOO_MANY_LUIDS_REQUESTED   0xC0000074
02442 #define STATUS_LUIDS_EXHAUSTED            0xC0000075
02443 #define STATUS_INVALID_SUB_AUTHORITY      0xC0000076
02444 #define STATUS_INVALID_ACL                0xC0000077
02445 #define STATUS_INVALID_SID                0xC0000078
02446 #define STATUS_INVALID_SECURITY_DESCR     0xC0000079
02447 #define STATUS_PROCEDURE_NOT_FOUND        0xC000007A
02448 #define STATUS_INVALID_IMAGE_FORMAT       0xC000007B
02449 #define STATUS_NO_TOKEN                   0xC000007C
02450 #define STATUS_BAD_INHERITANCE_ACL        0xC000007D
02451 #define STATUS_RANGE_NOT_LOCKED           0xC000007E
02452 #define STATUS_DISK_FULL                  0xC000007F
02453 #define STATUS_SERVER_DISABLED            0xC0000080
02454 #define STATUS_SERVER_NOT_DISABLED        0xC0000081
02455 #define STATUS_TOO_MANY_GUIDS_REQUESTED   0xC0000082
02456 #define STATUS_GUIDS_EXHAUSTED            0xC0000083
02457 #define STATUS_INVALID_ID_AUTHORITY       0xC0000084
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02458 #define STATUS_AGENTS_EXHAUSTED          0xC0000085
02459 #define STATUS_INVALID_VOLUME_LABEL      0xC0000086
02460 #define STATUS_SECTION_NOT_EXTENDED      0xC0000087
02461 #define STATUS_NOT_MAPPED_DATA           0xC0000088
02462 #define STATUS_RESOURCE_DATA_NOT_FOUND   0xC0000089
02463 #define STATUS_RESOURCE_TYPE_NOT_FOUND   0xC000008A
02464 #define STATUS_RESOURCE_NAME_NOT_FOUND   0xC000008B
02465 #define STATUS_ARRAY_BOUNDS_EXCEEDED     0xC000008C
02466 #define STATUS_FLOAT_DENORMAL_OPERAND    0xC000008D
02467 #define STATUS_FLOAT_DIVIDE_BY_ZERO      0xC000008E
02468 #define STATUS_FLOAT_INEXACT_RESULT      0xC000008F
02469 #define STATUS_FLOAT_INVALID_OPERATION   0xC0000090
02470 #define STATUS_FLOAT_OVERFLOW            0xC0000091
02471 #define STATUS_FLOAT_STACK_CHECK         0xC0000092
02472 #define STATUS_FLOAT_UNDERFLOW           0xC0000093
02473 #define STATUS_INTEGER_DIVIDE_BY_ZERO    0xC0000094
02474 #define STATUS_INTEGER_OVERFLOW          0xC0000095
02475 #define STATUS_PRIVILEGED_INSTRUCTION    0xC0000096
02476 #define STATUS_TOO_MANY_PAGING_FILES     0xC0000097
02477 #define STATUS_FILE_INVALID              0xC0000098
02478 #define STATUS_ALLOTTED_SPACE_EXCEEDED   0xC0000099
02479 #define STATUS_INSUFFICIENT_RESOURCES    0xC000009A
02480 #define STATUS_DFS_EXIT_PATH_FOUND       0xC000009B
02481 #define STATUS_DEVICE_DATA_ERROR         0xC000009C
02482 #define STATUS_DEVICE_NOT_CONNECTED      0xC000009D
02483 #define STATUS_DEVICE_POWER_FAILURE      0xC000009E
02484 #define STATUS_FREE_VM_NOT_AT_BASE       0xC000009F
02485 #define STATUS_MEMORY_NOT_ALLOCATED      0xC00000A0
02486 #define STATUS_WORKING_SET_QUOTA         0xC00000A1
02487 #define STATUS_MEDIA_WRITE_PROTECTED     0xC00000A2
02488 #define STATUS_DEVICE_NOT_READY          0xC00000A3
02489 #define STATUS_INVALID_GROUP_ATTRIBUTES  0xC00000A4
02490 #define STATUS_BAD_IMPERSONATION_LEVEL   0xC00000A5
02491 #define STATUS_CANT_OPEN_ANONYMOUS       0xC00000A6
02492 #define STATUS_BAD_VALIDATION_CLASS      0xC00000A7
02493 #define STATUS_BAD_TOKEN_TYPE            0xC00000A8
02494 #define STATUS_BAD_MASTER_BOOT_RECORD    0xC00000A9
02495 #define STATUS_INSTRUCTION_MISALIGNMENT  0xC00000AA
02496 #define STATUS_INSTANCE_NOT_AVAILABLE    0xC00000AB
02497 #define STATUS_PIPE_NOT_AVAILABLE        0xC00000AC
02498 #define STATUS_INVALID_PIPE_STATE        0xC00000AD
02499 #define STATUS_PIPE_BUSY                 0xC00000AE
02500 #define STATUS_ILLEGAL_FUNCTION          0xC00000AF
02501 #define STATUS_PIPE_DISCONNECTED         0xC00000B0
02502 #define STATUS_PIPE_CLOSING              0xC00000B1
02503 #define STATUS_PIPE_CONNECTED            0xC00000B2
02504 #define STATUS_PIPE_LISTENING            0xC00000B3
02505 #define STATUS_INVALID_READ_MODE         0xC00000B4
02506 #define STATUS_IO_TIMEOUT                0xC00000B5
02507 #define STATUS_FILE_FORCED_CLOSED        0xC00000B6
02508 #define STATUS_PROFILING_NOT_STARTED     0xC00000B7
02509 #define STATUS_PROFILING_NOT_STOPPED     0xC00000B8
02510 #define STATUS_COULD_NOT_INTERPRET       0xC00000B9
02511 #define STATUS_FILE_IS_A_DIRECTORY       0xC00000BA
02512 #define STATUS_NOT_SUPPORTED             0xC00000BB
02513 #define STATUS_REMOTE_NOT_LISTENING      0xC00000BC
02514 #define STATUS_DUPLICATE_NAME            0xC00000BD
02515 #define STATUS_BAD_NETWORK_PATH          0xC00000BE
02516 #define STATUS_NETWORK_BUSY              0xC00000BF
02517 #define STATUS_DEVICE_DOES_NOT_EXIST     0xC00000C0
02518 #define STATUS_TOO_MANY_COMMANDS         0xC00000C1
02519 #define STATUS_ADAPTER_HARDWARE_ERROR    0xC00000C2
02520 #define STATUS_INVALID_NETWORK_RESPONSE  0xC00000C3
02521 #define STATUS_UNEXPECTED_NETWORK_ERROR  0xC00000C4
02522 #define STATUS_BAD_REMOTE_ADAPTER        0xC00000C5
02523 #define STATUS_PRINT_QUEUE_FULL          0xC00000C6
02524 #define STATUS_NO_SPOOL_SPACE            0xC00000C7
02525 #define STATUS_PRINT_CANCELLED           0xC00000C8
02526 #define STATUS_NETWORK_NAME_DELETED      0xC00000C9
02527 #define STATUS_NETWORK_ACCESS_DENIED     0xC00000CA
02528 #define STATUS_BAD_DEVICE_TYPE           0xC00000CB
02529 #define STATUS_BAD_NETWORK_NAME          0xC00000CC
02530 #define STATUS_TOO_MANY_NAMES            0xC00000CD
02531 #define STATUS_TOO_MANY_SESSIONS         0xC00000CE
02532 #define STATUS_SHARING_PAUSED            0xC00000CF
02533 #define STATUS_REQUEST_NOT_ACCEPTED      0xC00000D0
02534 #define STATUS_REDIRECTOR_PAUSED         0xC00000D1
02535 #define STATUS_NET_WRITE_FAULT           0xC00000D2
02536 #define STATUS_PROFILING_AT_LIMIT        0xC00000D3
02537 #define STATUS_NOT_SAME_DEVICE           0xC00000D4
02538 #define STATUS_FILE_RENAMED              0xC00000D5
02539 #define STATUS_VIRTUAL_CIRCUIT_CLOSED    0xC00000D6
02540 #define STATUS_NO_SECURITY_ON_OBJECT     0xC00000D7
02541 #define STATUS_CANT_WAIT                 0xC00000D8
02542 #define STATUS_PIPE_EMPTY                0xC00000D9
02543 #define STATUS_CANT_ACCESS_DOMAIN_INFO   0xC00000DA
02544 #define STATUS_CANT_TERMINATE_SELF       0xC00000DB
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02545 #define STATUS_INVALID_SERVER_STATE      0xC00000DC
02546 #define STATUS_INVALID_DOMAIN_STATE      0xC00000DD
02547 #define STATUS_INVALID_DOMAIN_ROLE       0xC00000DE
02548 #define STATUS_NO_SUCH_DOMAIN            0xC00000DF
02549 #define STATUS_DOMAIN_EXISTS             0xC00000E0
02550 #define STATUS_DOMAIN_LIMIT_EXCEEDED     0xC00000E1
02551 #define STATUS_OPLOCK_NOT_GRANTED        0xC00000E2
02552 #define STATUS_INVALID_OPLOCK_PROTOCOL   0xC00000E3
02553 #define STATUS_INTERNAL_DB_CORRUPTION    0xC00000E4
02554 #define STATUS_INTERNAL_ERROR            0xC00000E5
02555 #define STATUS_GENERIC_NOT_MAPPED        0xC00000E6
02556 #define STATUS_BAD_DESCRIPTOR_FORMAT     0xC00000E7
02557 #define STATUS_INVALID_USER_BUFFER       0xC00000E8
02558 #define STATUS_UNEXPECTED_IO_ERROR       0xC00000E9
02559 #define STATUS_UNEXPECTED_MM_CREATE_ERR  0xC00000EA
02560 #define STATUS_UNEXPECTED_MM_MAP_ERROR   0xC00000EB
02561 #define STATUS_UNEXPECTED_MM_EXTEND_ERR  0xC00000EC
02562 #define STATUS_NOT_LOGON_PROCESS         0xC00000ED
02563 #define STATUS_LOGON_SESSION_EXISTS      0xC00000EE
02564 #define STATUS_INVALID_PARAMETER_1       0xC00000EF
02565 #define STATUS_INVALID_PARAMETER_2       0xC00000F0
02566 #define STATUS_INVALID_PARAMETER_3       0xC00000F1
02567 #define STATUS_INVALID_PARAMETER_4       0xC00000F2
02568 #define STATUS_INVALID_PARAMETER_5       0xC00000F3
02569 #define STATUS_INVALID_PARAMETER_6       0xC00000F4
02570 #define STATUS_INVALID_PARAMETER_7       0xC00000F5
02571 #define STATUS_INVALID_PARAMETER_8       0xC00000F6
02572 #define STATUS_INVALID_PARAMETER_9       0xC00000F7
02573 #define STATUS_INVALID_PARAMETER_10      0xC00000F8
02574 #define STATUS_INVALID_PARAMETER_11      0xC00000F9
02575 #define STATUS_INVALID_PARAMETER_12      0xC00000FA
02576 #define STATUS_REDIRECTOR_NOT_STARTED    0xC00000FB
02577 #define STATUS_REDIRECTOR_STARTED        0xC00000FC
02578 #define STATUS_STACK_OVERFLOW            0xC00000FD
02579 #define STATUS_BAD_FUNCTION_TABLE        0xC00000FF
02580 #define STATUS_VARIABLE_NOT_FOUND        0xC0000100
02581 #define STATUS_DIRECTORY_NOT_EMPTY       0xC0000101
02582 #define STATUS_FILE_CORRUPT_ERROR        0xC0000102
02583 #define STATUS_NOT_A_DIRECTORY           0xC0000103
02584 #define STATUS_BAD_LOGON_SESSION_STATE   0xC0000104
02585 #define STATUS_LOGON_SESSION_COLLISION   0xC0000105
02586 #define STATUS_NAME_TOO_LONG             0xC0000106
02587 #define STATUS_FILES_OPEN                0xC0000107
02588 #define STATUS_CONNECTION_IN_USE         0xC0000108
02589 #define STATUS_MESSAGE_NOT_FOUND         0xC0000109
02590 #define STATUS_PROCESS_IS_TERMINATING    0xC000010A
02591 #define STATUS_INVALID_LOGON_TYPE        0xC000010B
02592 #define STATUS_NO_GUID_TRANSLATION       0xC000010C
02593 #define STATUS_CANNOT_IMPERSONATE        0xC000010D
02594 #define STATUS_IMAGE_ALREADY_LOADED      0xC000010E
02595 #define STATUS_ABIOS_NOT_PRESENT         0xC000010F
02596 #define STATUS_ABIOS_LID_NOT_EXIST       0xC0000110
02597 #define STATUS_ABIOS_LID_ALREADY_OWNED   0xC0000111
02598 #define STATUS_ABIOS_NOT_LID_OWNER       0xC0000112
02599 #define STATUS_ABIOS_INVALID_COMMAND     0xC0000113
02600 #define STATUS_ABIOS_INVALID_LID         0xC0000114
02601 #define STATUS_ABIOS_SELECTOR_NOT_AVAILABLE 0xC0000115
02602 #define STATUS_ABIOS_INVALID_SELECTOR    0xC0000116
02603 #define STATUS_NO_LDT                    0xC0000117
02604 #define STATUS_INVALID_LDT_SIZE          0xC0000118
02605 #define STATUS_INVALID_LDT_OFFSET        0xC0000119
02606 #define STATUS_INVALID_LDT_DESCRIPTOR    0xC000011A
02607 #define STATUS_INVALID_IMAGE_NE_FORMAT   0xC000011B
02608 #define STATUS_RXACT_INVALID_STATE       0xC000011C
02609 #define STATUS_RXACT_COMMIT_FAILURE      0xC000011D
02610 #define STATUS_MAPPED_FILE_SIZE_ZERO     0xC000011E
02611 #define STATUS_TOO_MANY_OPENED_FILES     0xC000011F
02612 #define STATUS_CANCELLED                 0xC0000120
02613 #define STATUS_CANNOT_DELETE             0xC0000121
02614 #define STATUS_INVALID_COMPUTER_NAME     0xC0000122
02615 #define STATUS_FILE_DELETED              0xC0000123
02616 #define STATUS_SPECIAL_ACCOUNT           0xC0000124
02617 #define STATUS_SPECIAL_GROUP             0xC0000125
02618 #define STATUS_SPECIAL_USER              0xC0000126
02619 #define STATUS_MEMBERS_PRIMARY_GROUP     0xC0000127
02620 #define STATUS_FILE_CLOSED               0xC0000128
02621 #define STATUS_TOO_MANY_THREADS          0xC0000129
02622 #define STATUS_THREAD_NOT_IN_PROCESS     0xC000012A
02623 #define STATUS_TOKEN_ALREADY_IN_USE      0xC000012B
02624 #define STATUS_PAGEFILE_QUOTA_EXCEEDED   0xC000012C
02625 #define STATUS_COMMITMENT_LIMIT          0xC000012D
02626 #define STATUS_INVALID_IMAGE_LE_FORMAT   0xC000012E
02627 #define STATUS_INVALID_IMAGE_NOT_MZ      0xC000012F
02628 #define STATUS_INVALID_IMAGE_PROTECT     0xC0000130
02629 #define STATUS_INVALID_IMAGE_WIN_16      0xC0000131
02630 #define STATUS_LOGON_SERVER_CONFLICT     0xC0000132
02631 #define STATUS_TIME_DIFFERENCE_AT_DC     0xC0000133
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02632 #define STATUS_SYNCHRONIZATION_REQUIRED  0xC0000134
02633 #define STATUS_DLL_NOT_FOUND             0xC0000135
02634 #define STATUS_OPEN_FAILED               0xC0000136
02635 #define STATUS_IO_PRIVILEGE_FAILED       0xC0000137
02636 #define STATUS_ORDINAL_NOT_FOUND         0xC0000138
02637 #define STATUS_ENTRYPOINT_NOT_FOUND      0xC0000139
02638 #define STATUS_CONTROL_C_EXIT            0xC000013A
02639 #define STATUS_LOCAL_DISCONNECT          0xC000013B
02640 #define STATUS_REMOTE_DISCONNECT         0xC000013C
02641 #define STATUS_REMOTE_RESOURCES          0xC000013D
02642 #define STATUS_LINK_FAILED               0xC000013E
02643 #define STATUS_LINK_TIMEOUT              0xC000013F
02644 #define STATUS_INVALID_CONNECTION        0xC0000140
02645 #define STATUS_INVALID_ADDRESS           0xC0000141
02646 #define STATUS_DLL_INIT_FAILED           0xC0000142
02647 #define STATUS_MISSING_SYSTEMFILE        0xC0000143
02648 #define STATUS_UNHANDLED_EXCEPTION       0xC0000144
02649 #define STATUS_APP_INIT_FAILURE          0xC0000145
02650 #define STATUS_PAGEFILE_CREATE_FAILED    0xC0000146
02651 #define STATUS_NO_PAGEFILE               0xC0000147
02652 #define STATUS_INVALID_LEVEL             0xC0000148
02653 #define STATUS_WRONG_PASSWORD_CORE       0xC0000149
02654 #define STATUS_ILLEGAL_FLOAT_CONTEXT     0xC000014A
02655 #define STATUS_PIPE_BROKEN               0xC000014B
02656 #define STATUS_REGISTRY_CORRUPT          0xC000014C
02657 #define STATUS_REGISTRY_IO_FAILED        0xC000014D
02658 #define STATUS_NO_EVENT_PAIR             0xC000014E
02659 #define STATUS_UNRECOGNIZED_VOLUME       0xC000014F
02660 #define STATUS_SERIAL_NO_DEVICE_INITED   0xC0000150
02661 #define STATUS_NO_SUCH_ALIAS             0xC0000151
02662 #define STATUS_MEMBER_NOT_IN_ALIAS       0xC0000152
02663 #define STATUS_MEMBER_IN_ALIAS           0xC0000153
02664 #define STATUS_ALIAS_EXISTS              0xC0000154
02665 #define STATUS_LOGON_NOT_GRANTED         0xC0000155
02666 #define STATUS_TOO_MANY_SECRETS          0xC0000156
02667 #define STATUS_SECRET_TOO_LONG           0xC0000157
02668 #define STATUS_INTERNAL_DB_ERROR         0xC0000158
02669 #define STATUS_FULLSCREEN_MODE           0xC0000159
02670 #define STATUS_TOO_MANY_CONTEXT_IDS      0xC000015A
02671 #define STATUS_LOGON_TYPE_NOT_GRANTED    0xC000015B
02672 #define STATUS_NOT_REGISTRY_FILE         0xC000015C
02673 #define STATUS_NT_CROSS_ENCRYPTION_REQUIRED 0xC000015D
02674 #define STATUS_DOMAIN_CTRLR_CONFIG_ERROR 0xC000015E
02675 #define STATUS_FT_MISSING_MEMBER         0xC000015F
02676 #define STATUS_ILL_FORMED_SERVICE_ENTRY  0xC0000160
02677 #define STATUS_ILLEGAL_CHARACTER         0xC0000161
02678 #define STATUS_UNMAPPABLE_CHARACTER      0xC0000162
02679 #define STATUS_UNDEFINED_CHARACTER       0xC0000163
02680 #define STATUS_FLOPPY_VOLUME             0xC0000164
02681 #define STATUS_FLOPPY_ID_MARK_NOT_FOUND  0xC0000165
02682 #define STATUS_FLOPPY_WRONG_CYLINDER     0xC0000166
02683 #define STATUS_FLOPPY_UNKNOWN_ERROR      0xC0000167
02684 #define STATUS_FLOPPY_BAD_REGISTERS      0xC0000168
02685 #define STATUS_DISK_RECALIBRATE_FAILED   0xC0000169
02686 #define STATUS_DISK_OPERATION_FAILED     0xC000016A
02687 #define STATUS_DISK_RESET_FAILED         0xC000016B
02688 #define STATUS_SHARED_IRQ_BUSY           0xC000016C
02689 #define STATUS_FT_ORPHANING              0xC000016D
02690 #define STATUS_BIOS_FAILED_TO_CONNECT_INTERRUPT 0xC000016E
02691
02692 #define STATUS_PARTITION_FAILURE         0xC0000172
02693 #define STATUS_INVALID_BLOCK_LENGTH      0xC0000173
02694 #define STATUS_DEVICE_NOT_PARTITIONED    0xC0000174
02695 #define STATUS_UNABLE_TO_LOCK_MEDIA      0xC0000175
02696 #define STATUS_UNABLE_TO_UNLOAD_MEDIA    0xC0000176
02697 #define STATUS_EOM_OVERFLOW              0xC0000177
02698 #define STATUS_NO_MEDIA                  0xC0000178
02699 #define STATUS_NO_SUCH_MEMBER            0xC000017A
02700 #define STATUS_INVALID_MEMBER            0xC000017B
02701 #define STATUS_KEY_DELETED               0xC000017C
02702 #define STATUS_NO_LOG_SPACE              0xC000017D
02703 #define STATUS_TOO_MANY_SIDS             0xC000017E
02704 #define STATUS_LM_CROSS_ENCRYPTION_REQUIRED 0xC000017F
02705 #define STATUS_KEY_HAS_CHILDREN          0xC0000180
02706 #define STATUS_CHILD_MUST_BE_VOLATILE    0xC0000181
02707 #define STATUS_DEVICE_CONFIGURATION_ERROR 0xC0000182
02708 #define STATUS_DRIVER_INTERNAL_ERROR     0xC0000183
02709 #define STATUS_INVALID_DEVICE_STATE      0xC0000184
02710 #define STATUS_IO_DEVICE_ERROR           0xC0000185
02711 #define STATUS_DEVICE_PROTOCOL_ERROR     0xC0000186
02712 #define STATUS_BACKUP_CONTROLLER         0xC0000187
02713 #define STATUS_LOG_FILE_FULL             0xC0000188
02714 #define STATUS_TOO_LATE                  0xC0000189
02715 #define STATUS_NO_TRUST_LSA_SECRET       0xC000018A
02716 #define STATUS_NO_TRUST_SAM_ACCOUNT      0xC000018B
02717 #define STATUS_TRUSTED_DOMAIN_FAILURE    0xC000018C
02718 #define STATUS_TRUSTED_RELATIONSHIP_FAILURE 0xC000018D
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02719 #define STATUS_EVENTLOG_FILE_CORRUPT     0xC000018E
02720 #define STATUS_EVENTLOG_CANT_START       0xC000018F
02721 #define STATUS_TRUST_FAILURE             0xC0000190
02722 #define STATUS_MUTANT_LIMIT_EXCEEDED     0xC0000191
02723 #define STATUS_NETLOGON_NOT_STARTED      0xC0000192
02724 #define STATUS_ACCOUNT_EXPIRED           0xC0000193
02725 #define STATUS_POSSIBLE_DEADLOCK         0xC0000194
02726 #define STATUS_NETWORK_CREDENTIAL_CONFLICT 0xC0000195
02727 #define STATUS_REMOTE_SESSION_LIMIT      0xC0000196
02728 #define STATUS_EVENTLOG_FILE_CHANGED     0xC0000197
02729 #define STATUS_NOLOGON_INTERDOMAIN_TRUST_ACCOUNT 0xC0000198
02730 #define STATUS_NOLOGON_WORKSTATION_TRUST_ACCOUNT 0xC0000199
02731 #define STATUS_NOLOGON_SERVER_TRUST_ACCOUNT 0xC000019A
02732 #define STATUS_DOMAIN_TRUST_INCONSISTENT 0xC000019B
02733 #define STATUS_FS_DRIVER_REQUIRED        0xC000019C
02734
02735 #define STATUS_NO_USER_SESSION_KEY       0xC0000202
02736 #define STATUS_USER_SESSION_DELETED      0xC0000203
02737 #define STATUS_RESOURCE_LANG_NOT_FOUND   0xC0000204
02738 #define STATUS_INSUFF_SERVER_RESOURCES   0xC0000205
02739 #define STATUS_INVALID_BUFFER_SIZE       0xC0000206
02740 #define STATUS_INVALID_ADDRESS_COMPONENT 0xC0000207
02741 #define STATUS_INVALID_ADDRESS_WILDCARD  0xC0000208
02742 #define STATUS_TOO_MANY_ADDRESSES        0xC0000209
02743 #define STATUS_ADDRESS_ALREADY_EXISTS    0xC000020A
02744 #define STATUS_ADDRESS_CLOSED            0xC000020B
02745 #define STATUS_CONNECTION_DISCONNECTED   0xC000020C
02746 #define STATUS_CONNECTION_RESET          0xC000020D
02747 #define STATUS_TOO_MANY_NODES            0xC000020E
02748 #define STATUS_TRANSACTION_ABORTED       0xC000020F
02749 #define STATUS_TRANSACTION_TIMED_OUT     0xC0000210
02750 #define STATUS_TRANSACTION_NO_RELEASE    0xC0000211
02751 #define STATUS_TRANSACTION_NO_MATCH      0xC0000212
02752 #define STATUS_TRANSACTION_RESPONDED     0xC0000213
02753 #define STATUS_TRANSACTION_INVALID_ID    0xC0000214
02754 #define STATUS_TRANSACTION_INVALID_TYPE  0xC0000215
02755 #define STATUS_NOT_SERVER_SESSION        0xC0000216
02756 #define STATUS_NOT_CLIENT_SESSION        0xC0000217
02757 #define STATUS_CANNOT_LOAD_REGISTRY_FILE 0xC0000218
02758 #define STATUS_DEBUG_ATTACH_FAILED       0xC0000219
02759 #define STATUS_SYSTEM_PROCESS_TERMINATED 0xC000021A
02760 #define STATUS_DATA_NOT_ACCEPTED         0xC000021B
02761 #define STATUS_NO_BROWSER_SERVERS_FOUND  0xC000021C
02762 #define STATUS_VDM_HARD_ERROR            0xC000021D
02763 #define STATUS_DRIVER_CANCEL_TIMEOUT     0xC000021E
02764 #define STATUS_REPLY_MESSAGE_MISMATCH    0xC000021F
02765 #define STATUS_MAPPED_ALIGNMENT          0xC0000220
02766 #define STATUS_IMAGE_CHECKSUM_MISMATCH   0xC0000221
02767 #define STATUS_LOST_WRITEBEHIND_DATA     0xC0000222
02768 #define STATUS_CLIENT_SERVER_PARAMETERS_INVALID 0xC0000223
02769 #define STATUS_PASSWORD_MUST_CHANGE      0xC0000224
02770 #define STATUS_NOT_FOUND                 0xC0000225
02771 #define STATUS_NOT_TINY_STREAM           0xC0000226
02772 #define STATUS_RECOVERY_FAILURE          0xC0000227
02773 #define STATUS_STACK_OVERFLOW_READ       0xC0000228
02774 #define STATUS_FAIL_CHECK                0xC0000229
02775 #define STATUS_DUPLICATE_OBJECTID        0xC000022A
02776 #define STATUS_OBJECTID_EXISTS           0xC000022B
02777 #define STATUS_CONVERT_TO_LARGE          0xC000022C
02778 #define STATUS_RETRY                     0xC000022D
02779 #define STATUS_FOUND_OUT_OF_SCOPE        0xC000022E
02780 #define STATUS_ALLOCATE_BUCKET           0xC000022F
02781 #define STATUS_PROPSET_NOT_FOUND         0xC0000230
02782 #define STATUS_MARSHALL_OVERFLOW         0xC0000231
02783 #define STATUS_INVALID_VARIANT           0xC0000232
02784 #define STATUS_DOMAIN_CONTROLLER_NOT_FOUND 0xC0000233
02785 #define STATUS_ACCOUNT_LOCKED_OUT        0xC0000234
02786 #define STATUS_HANDLE_NOT_CLOSABLE       0xC0000235
02787 #define STATUS_CONNECTION_REFUSED        0xC0000236
02788 #define STATUS_GRACEFUL_DISCONNECT       0xC0000237
02789 #define STATUS_ADDRESS_ALREADY_ASSOCIATED 0xC0000238
02790 #define STATUS_ADDRESS_NOT_ASSOCIATED    0xC0000239
02791 #define STATUS_CONNECTION_INVALID        0xC000023A
02792 #define STATUS_CONNECTION_ACTIVE         0xC000023B
02793 #define STATUS_NETWORK_UNREACHABLE       0xC000023C
02794 #define STATUS_HOST_UNREACHABLE          0xC000023D
02795 #define STATUS_PROTOCOL_UNREACHABLE      0xC000023E
02796 #define STATUS_PORT_UNREACHABLE          0xC000023F
02797 #define STATUS_REQUEST_ABORTED           0xC0000240
02798 #define STATUS_CONNECTION_ABORTED        0xC0000241
02799 #define STATUS_BAD_COMPRESSION_BUFFER    0xC0000242
02800 #define STATUS_USER_MAPPED_FILE          0xC0000243
02801 #define STATUS_AUDIT_FAILED              0xC0000244
02802 #define STATUS_TIMER_RESOLUTION_NOT_SET  0xC0000245
02803 #define STATUS_CONNECTION_COUNT_LIMIT    0xC0000246
02804 #define STATUS_LOGIN_TIME_RESTRICTION    0xC0000247
02805 #define STATUS_LOGIN_WKSTA_RESTRICTION   0xC0000248
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02806 #define STATUS_IMAGE_MP_UP_MISMATCH      0xC0000249
02807 #define STATUS_INSUFFICIENT_LOGON_INFO   0xC0000250
02808 #define STATUS_BAD_DLL_ENTRYPOINT        0xC0000251
02809 #define STATUS_BAD_SERVICE_ENTRYPOINT    0xC0000252
02810 #define STATUS_LPC_REPLY_LOST            0xC0000253
02811 #define STATUS_IP_ADDRESS_CONFLICT1      0xC0000254
02812 #define STATUS_IP_ADDRESS_CONFLICT2      0xC0000255
02813 #define STATUS_REGISTRY_QUOTA_LIMIT      0xC0000256
02814 #define STATUS_PATH_NOT_COVERED          0xC0000257
02815 #define STATUS_NO_CALLBACK_ACTIVE        0xC0000258
02816 #define STATUS_LICENSE_QUOTA_EXCEEDED    0xC0000259
02817 #define STATUS_PWD_TOO_SHORT             0xC000025A
02818 #define STATUS_PWD_TOO_RECENT            0xC000025B
02819 #define STATUS_PWD_HISTORY_CONFLICT      0xC000025C
02820 #define STATUS_PLUGPLAY_NO_DEVICE        0xC000025E
02821 #define STATUS_UNSUPPORTED_COMPRESSION   0xC000025F
02822 #define STATUS_INVALID_HW_PROFILE        0xC0000260
02823 #define STATUS_INVALID_PLUGPLAY_DEVICE_PATH 0xC0000261
02824 #define STATUS_DRIVER_ORDINAL_NOT_FOUND  0xC0000262
02825 #define STATUS_DRIVER_ENTRYPOINT_NOT_FOUND 0xC0000263
02826 #define STATUS_RESOURCE_NOT_OWNED        0xC0000264
02827 #define STATUS_TOO_MANY_LINKS            0xC0000265
02828 #define STATUS_QUOTA_LIST_INCONSISTENT   0xC0000266
02829 #define STATUS_FILE_IS_OFFLINE           0xC0000267
02830 #define STATUS_EVALUATION_EXPIRATION     0xC0000268
02831 #define STATUS_ILLEGAL_DLL_RELOCATION    0xC0000269
02832 #define STATUS_LICENSE_VIOLATION         0xC000026A
02833 #define STATUS_DLL_INIT_FAILED_LOGOFF    0xC000026B
02834 #define STATUS_DRIVER_UNABLE_TO_LOAD     0xC000026C
02835 #define STATUS_DFS_UNAVAILABLE           0xC000026D
02836 #define STATUS_VOLUME_DISMOUNTED         0xC000026E
02837 #define STATUS_WX86_INTERNAL_ERROR       0xC000026F
02838 #define STATUS_WX86_FLOAT_STACK_CHECK    0xC0000270
02839 #define STATUS_WOW_ASSERTION             0xC0009898
02840 #define RPC_NT_INVALID_STRING_BINDING    0xC0020001
02841 #define RPC_NT_WRONG_KIND_OF_BINDING     0xC0020002
02842 #define RPC_NT_INVALID_BINDING           0xC0020003
02843 #define RPC_NT_PROTSEQ_NOT_SUPPORTED     0xC0020004
02844 #define RPC_NT_INVALID_RPC_PROTSEQ       0xC0020005
02845 #define RPC_NT_INVALID_STRING_UUID       0xC0020006
02846 #define RPC_NT_INVALID_ENDPOINT_FORMAT   0xC0020007
02847 #define RPC_NT_INVALID_NET_ADDR          0xC0020008
02848 #define RPC_NT_NO_ENDPOINT_FOUND         0xC0020009
02849 #define RPC_NT_INVALID_TIMEOUT           0xC002000A
02850 #define RPC_NT_OBJECT_NOT_FOUND          0xC002000B
02851 #define RPC_NT_ALREADY_REGISTERED        0xC002000C
02852 #define RPC_NT_TYPE_ALREADY_REGISTERED   0xC002000D
02853 #define RPC_NT_ALREADY_LISTENING         0xC002000E
02854 #define RPC_NT_NO_PROTSEQS_REGISTERED    0xC002000F
02855 #define RPC_NT_NOT_LISTENING             0xC0020010
02856 #define RPC_NT_UNKNOWN_MGR_TYPE          0xC0020011
02857 #define RPC_NT_UNKNOWN_IF                0xC0020012
02858 #define RPC_NT_NO_BINDINGS               0xC0020013
02859 #define RPC_NT_NO_PROTSEQS               0xC0020014
02860 #define RPC_NT_CANT_CREATE_ENDPOINT      0xC0020015
02861 #define RPC_NT_OUT_OF_RESOURCES          0xC0020016
02862 #define RPC_NT_SERVER_UNAVAILABLE        0xC0020017
02863 #define RPC_NT_SERVER_TOO_BUSY           0xC0020018
02864 #define RPC_NT_INVALID_NETWORK_OPTIONS   0xC0020019
02865 #define RPC_NT_NO_CALL_ACTIVE            0xC002001A
02866 #define RPC_NT_CALL_FAILED               0xC002001B
02867 #define RPC_NT_CALL_FAILED_DNE           0xC002001C
02868 #define RPC_NT_PROTOCOL_ERROR            0xC002001D
02869 #define RPC_NT_UNSUPPORTED_TRANS_SYN     0xC002001F
02870 #define RPC_NT_UNSUPPORTED_TYPE          0xC0020021
02871 #define RPC_NT_INVALID_TAG               0xC0020022
02872 #define RPC_NT_INVALID_BOUND             0xC0020023
02873 #define RPC_NT_NO_ENTRY_NAME             0xC0020024
02874 #define RPC_NT_INVALID_NAME_SYNTAX       0xC0020025
02875 #define RPC_NT_UNSUPPORTED_NAME_SYNTAX   0xC0020026
02876 #define RPC_NT_UUID_NO_ADDRESS           0xC0020028
02877 #define RPC_NT_DUPLICATE_ENDPOINT        0xC0020029
02878 #define RPC_NT_UNKNOWN_AUTHN_TYPE        0xC002002A
02879 #define RPC_NT_MAX_CALLS_TOO_SMALL       0xC002002B
02880 #define RPC_NT_STRING_TOO_LONG           0xC002002C
02881 #define RPC_NT_PROTSEQ_NOT_FOUND         0xC002002D
02882 #define RPC_NT_PROCNUM_OUT_OF_RANGE      0xC002002E
02883 #define RPC_NT_BINDING_HAS_NO_AUTH       0xC002002F
02884 #define RPC_NT_UNKNOWN_AUTHN_SERVICE     0xC0020030
02885 #define RPC_NT_UNKNOWN_AUTHN_LEVEL       0xC0020031
02886 #define RPC_NT_INVALID_AUTH_IDENTITY     0xC0020032
02887 #define RPC_NT_UNKNOWN_AUTHZ_SERVICE     0xC0020033
02888 #define EPT_NT_INVALID_ENTRY             0xC0020034
02889 #define EPT_NT_CANT_PERFORM_OP           0xC0020035
02890 #define EPT_NT_NOT_REGISTERED            0xC0020036
02891 #define RPC_NT_NOTHING_TO_EXPORT         0xC0020037
02892 #define RPC_NT_INCOMPLETE_NAME           0xC0020038
```

```
02893 #define RPC_NT_INVALID_VERS_OPTION       0xC0020039
02894 #define RPC_NT_NO_MORE_MEMBERS           0xC002003A
02895 #define RPC_NT_NOT_ALL_OBJS_UNEXPORTED   0xC002003B
02896 #define RPC_NT_INTERFACE_NOT_FOUND       0xC002003C
02897 #define RPC_NT_ENTRY_ALREADY_EXISTS      0xC002003D
02898 #define RPC_NT_ENTRY_NOT_FOUND           0xC002003E
02899 #define RPC_NT_NAME_SERVICE_UNAVAILABLE  0xC002003F
02900 #define RPC_NT_INVALID_NAF_ID            0xC0020040
02901 #define RPC_NT_CANNOT_SUPPORT            0xC0020041
02902 #define RPC_NT_NO_CONTEXT_AVAILABLE      0xC0020042
02903 #define RPC_NT_INTERNAL_ERROR            0xC0020043
02904 #define RPC_NT_ZERO_DIVIDE               0xC0020044
02905 #define RPC_NT_ADDRESS_ERROR             0xC0020045
02906 #define RPC_NT_FP_DIV_ZERO               0xC0020046
02907 #define RPC_NT_FP_UNDERFLOW              0xC0020047
02908 #define RPC_NT_FP_OVERFLOW               0xC0020048
02909 #define RPC_NT_NO_MORE_ENTRIES           0xC0030001
02910 #define RPC_NT_SS_CHAR_TRANS_OPEN_FAIL   0xC0030002
02911 #define RPC_NT_SS_CHAR_TRANS_SHORT_FILE  0xC0030003
02912 #define RPC_NT_SS_IN_NULL_CONTEXT        0xC0030004
02913 #define RPC_NT_SS_CONTEXT_MISMATCH       0xC0030005
02914 #define RPC_NT_SS_CONTEXT_DAMAGED        0xC0030006
02915 #define RPC_NT_SS_HANDLES_MISMATCH       0xC0030007
02916 #define RPC_NT_SS_CANNOT_GET_CALL_HANDLE 0xC0030008
02917 #define RPC_NT_NULL_REF_POINTER          0xC0030009
02918 #define RPC_NT_ENUM_VALUE_OUT_OF_RANGE   0xC003000A
02919 #define RPC_NT_BYTE_COUNT_TOO_SMALL      0xC003000B
02920 #define RPC_NT_BAD_STUB_DATA             0xC003000C
02921 #define RPC_NT_CALL_IN_PROGRESS          0xC0020049
02922 #define RPC_NT_NO_MORE_BINDINGS          0xC002004A
02923 #define RPC_NT_GROUP_MEMBER_NOT_FOUND    0xC002004B
02924 #define EPT_NT_CANT_CREATE               0xC002004C
02925 #define RPC_NT_INVALID_OBJECT            0xC002004D
02926 #define RPC_NT_NO_INTERFACES             0xC002004F
02927 #define RPC_NT_CALL_CANCELLED            0xC0020050
02928 #define RPC_NT_BINDING_INCOMPLETE        0xC0020051
02929 #define RPC_NT_COMM_FAILURE              0xC0020052
02930 #define RPC_NT_UNSUPPORTED_AUTHN_LEVEL   0xC0020053
02931 #define RPC_NT_NO_PRINC_NAME             0xC0020054
02932 #define RPC_NT_NOT_RPC_ERROR             0xC0020055
02933 #define RPC_NT_UUID_LOCAL_ONLY           0x40020056
02934 #define RPC_NT_SEC_PKG_ERROR             0xC0020057
02935 #define RPC_NT_NOT_CANCELLED             0xC0020058
02936 #define RPC_NT_INVALID_ES_ACTION         0xC0030059
02937 #define RPC_NT_WRONG_ES_VERSION          0xC003005A
02938 #define RPC_NT_WRONG_STUB_VERSION        0xC003005B
02939 #define RPC_NT_INVALID_PIPE_OBJECT       0xC003005C
02940 #define RPC_NT_INVALID_PIPE_OPERATION    0xC003005D
02941 #define RPC_NT_WRONG_PIPE_VERSION        0xC003005E
02942 #define RPC_NT_SEND_INCOMPLETE           0x400200AF
02943
02944 #define MAXIMUM_WAIT_OBJECTS 64
02945 #define MAXIMUM_SUSPEND_COUNT 127
02946
02947
02948 /*
02949  * Return values from the actual exception handlers
02950  */
02951
02952 #define ExceptionContinueExecution 0
02953 #define ExceptionContinueSearch    1
02954 #define ExceptionNestedException   2
02955 #define ExceptionCollidedUnwind    3
02956
02957 /*
02958  * Return values from filters in except() and from UnhandledExceptionFilter
02959  */
02960
02961 #define EXCEPTION_EXECUTE_HANDLER        1
02962 #define EXCEPTION_CONTINUE_SEARCH        0
02963 #define EXCEPTION_CONTINUE_EXECUTION    -1
02964
02965 /*
02966  * From OS/2 2.0 exception handling
02967  * Win32 seems to use the same flags as ExceptionFlags in an EXCEPTION_RECORD
02968  */
02969
02970 #define EH_NONCONTINUABLE   0x01
02971 #define EH_UNWINDING        0x02
02972 #define EH_EXIT_UNWIND      0x04
02973 #define EH_STACK_INVALID    0x08
02974 #define EH_NESTED_CALL      0x10
02975
02976 #define EXCEPTION_CONTINUABLE        0
02977 #define EXCEPTION_NONCONTINUABLE     EH_NONCONTINUABLE
02978
02979 /*
```

```
02980  * The exception record used by Win32 to give additional information
02981  * about exception to exception handlers.
02982  */
02983
02984 #define EXCEPTION_MAXIMUM_PARAMETERS 15
02985
02986 typedef struct __EXCEPTION_RECORD
02987 {
02988     DWORD    ExceptionCode;
02989     DWORD    ExceptionFlags;
02990     struct __EXCEPTION_RECORD *ExceptionRecord;
02991
02992     LPVOID   ExceptionAddress;
02993     DWORD    NumberParameters;
02994     DWORD    ExceptionInformation[EXCEPTION_MAXIMUM_PARAMETERS];
02995 } EXCEPTION_RECORD, *PEXCEPTION_RECORD;
02996
02997 /*
02998  * The exception pointers structure passed to exception filters
02999  * in except() and the UnhandledExceptionFilter().
03000  */
03001
03002 typedef struct _EXCEPTION_POINTERS
03003 {
03004   PEXCEPTION_RECORD  ExceptionRecord;
03005   PCONTEXT           ContextRecord;
03006 } EXCEPTION_POINTERS, *PEXCEPTION_POINTERS;
03007
03008
03009 /*
03010  * The exception frame, used for registering exception handlers
03011  * Win32 cares only about this, but compilers generally emit
03012  * larger exception frames for their own use.
03013  */
03014
03015 struct __EXCEPTION_FRAME;
03016
03017 typedef DWORD (*PEXCEPTION_HANDLER)(PEXCEPTION_RECORD,struct __EXCEPTION_FRAME*,
03018                                     PCONTEXT,struct __EXCEPTION_FRAME **);
03019
03020 typedef struct __EXCEPTION_FRAME
03021 {
03022   struct __EXCEPTION_FRAME *Prev;
03023   PEXCEPTION_HANDLER       Handler;
03024 } EXCEPTION_FRAME, *PEXCEPTION_FRAME;
03025
03026 /*
03027  * function pointer to a exception filter
03028  */
03029
03030 typedef LONG CALLBACK (*PTOP_LEVEL_EXCEPTION_FILTER)(PEXCEPTION_POINTERS ExceptionInfo);
03031 typedef PTOP_LEVEL_EXCEPTION_FILTER LPTOP_LEVEL_EXCEPTION_FILTER;
03032
03033 DWORD WINAPI UnhandledExceptionFilter( PEXCEPTION_POINTERS epointers );
03034 LPTOP_LEVEL_EXCEPTION_FILTER
03035 WINAPI SetUnhandledExceptionFilter( LPTOP_LEVEL_EXCEPTION_FILTER filter );
03036
03037 /* status values for ContinueDebugEvent */
03038 #define DBG_CONTINUE                0x00010002
03039 #define DBG_TERMINATE_THREAD        0x40010003
03040 #define DBG_TERMINATE_PROCESS       0x40010004
03041 #define DBG_CONTROL_C               0x40010005
03042 #define DBG_CONTROL_BREAK           0x40010008
03043 #define DBG_EXCEPTION_NOT_HANDLED   0x80010001
03044
03045 typedef struct _NT_TIB
03046 {
03047     struct _EXCEPTION_REGISTRATION_RECORD *ExceptionList;
03048     PVOID StackBase;
03049     PVOID StackLimit;
03050     PVOID SubSystemTib;
03051     union {
03052           PVOID FiberData;
03053           DWORD Version;
03054     } DUMMYUNIONNAME;
03055     PVOID ArbitraryUserPointer;
03056     struct _NT_TIB *Self;
03057 } NT_TIB, *PNT_TIB;
03058
03059 struct _TEB;
03060
03061 #if defined(__i386__) && defined(__GNUC__) && !defined(__CHECKER__)
03062 extern inline struct _TEB WINAPI *NtCurrentTeb(void);
03063 extern inline struct _TEB WINAPI *NtCurrentTeb(void)
03064 {
03065     struct _TEB *teb;
03066     __asm__(".byte 0x64\n\tmovl (0x18),%0" : "=r" (teb));
```

```
03067     return teb;
03068 }
03069 #else
03070 extern struct _TEB WINAPI *NtCurrentTeb(void);
03071 #endif
03072
03073
03074 /*
03075  * File formats definitions
03076  */
03077
03078 typedef struct _IMAGE_DOS_HEADER {
03079     WORD  e_magic;      /* 00: MZ Header signature */
03080     WORD  e_cblp;       /* 02: Bytes on last page of file */
03081     WORD  e_cp;         /* 04: Pages in file */
03082     WORD  e_crlc;       /* 06: Relocations */
03083     WORD  e_cparhdr;    /* 08: Size of header in paragraphs */
03084     WORD  e_minalloc;   /* 0a: Minimum extra paragraphs needed */
03085     WORD  e_maxalloc;   /* 0c: Maximum extra paragraphs needed */
03086     WORD  e_ss;         /* 0e: Initial (relative) SS value */
03087     WORD  e_sp;         /* 10: Initial SP value */
03088     WORD  e_csum;       /* 12: Checksum */
03089     WORD  e_ip;         /* 14: Initial IP value */
03090     WORD  e_cs;         /* 16: Initial (relative) CS value */
03091     WORD  e_lfarlc;     /* 18: File address of relocation table */
03092     WORD  e_ovno;       /* 1a: Overlay number */
03093     WORD  e_res[4];     /* 1c: Reserved words */
03094     WORD  e_oemid;      /* 24: OEM identifier (for e_oeminfo) */
03095     WORD  e_oeminfo;    /* 26: OEM information; e_oemid specific */
03096     WORD  e_res2[10];   /* 28: Reserved words */
03097     DWORD e_lfanew;     /* 3c: Offset to extended header */
03098 } IMAGE_DOS_HEADER, *PIMAGE_DOS_HEADER;
03099
03100 #define IMAGE_DOS_SIGNATURE    0x5A4D     /* MZ   */
03101 #define IMAGE_OS2_SIGNATURE    0x454E     /* NE   */
03102 #define IMAGE_OS2_SIGNATURE_LE 0x454C     /* LE   */
03103 #define IMAGE_OS2_SIGNATURE_LX 0x584C     /* LX */
03104 #define IMAGE_VXD_SIGNATURE    0x454C     /* LE   */
03105 #define IMAGE_NT_SIGNATURE     0x00004550 /* PE00 */
03106
03107 /*
03108  * This is the Windows executable (NE) header.
03109  * the name IMAGE_OS2_HEADER is misleading, but in the SDK this way.
03110  */
03111 typedef struct
03112 {
03113     WORD  ne_magic;             /* 00 NE signature 'NE' */
03114     BYTE  ne_ver;               /* 02 Linker version number */
03115     BYTE  ne_rev;               /* 03 Linker revision number */
03116     WORD  ne_enttab;            /* 04 Offset to entry table relative to NE */
03117     WORD  ne_cbenttab;          /* 06 Length of entry table in bytes */
03118     LONG  ne_crc;               /* 08 Checksum */
03119     WORD  ne_flags;             /* 0c Flags about segments in this file */
03120     WORD  ne_autodata;          /* 0e Automatic data segment number */
03121     WORD  ne_heap;              /* 10 Initial size of local heap */
03122     WORD  ne_stack;             /* 12 Initial size of stack */
03123     DWORD ne_csip;              /* 14 Initial CS:IP */
03124     DWORD ne_sssp;              /* 18 Initial SS:SP */
03125     WORD  ne_cseg;              /* 1c # of entries in segment table */
03126     WORD  ne_cmod;              /* 1e # of entries in module reference tab. */
03127     WORD  ne_cbnrestab;         /* 20 Length of nonresident-name table     */
03128     WORD  ne_segtab;            /* 22 Offset to segment table */
03129     WORD  ne_rsrctab;           /* 24 Offset to resource table */
03130     WORD  ne_restab;            /* 26 Offset to resident-name table */
03131     WORD  ne_modtab;            /* 28 Offset to module reference table */
03132     WORD  ne_imptab;            /* 2a Offset to imported name table */
03133     DWORD ne_nrestab;           /* 2c Offset to nonresident-name table */
03134     WORD  ne_cmovent;           /* 30 # of movable entry points */
03135     WORD  ne_align;             /* 32 Logical sector alignment shift count */
03136     WORD  ne_cres;              /* 34 # of resource segments */
03137     BYTE  ne_exetyp;            /* 36 Flags indicating target OS */
03138     BYTE  ne_flagsothers;       /* 37 Additional information flags */
03139     WORD  fastload_offset;      /* 38 Offset to fast load area (should be ne_pretthunks)*/
03140     WORD  fastload_length;      /* 3a Length of fast load area (should be ne_psegrefbytes) */
03141     WORD  ne_swaparea;          /* 3c Reserved by Microsoft */
03142     WORD  ne_expver;            /* 3e Expected Windows version number */
03143 } IMAGE_OS2_HEADER,*PIMAGE_OS2_HEADER;
03144
03145 typedef struct _IMAGE_VXD_HEADER {
03146   WORD  e32_magic;
03147   BYTE  e32_border;
03148   BYTE  e32_worder;
03149   DWORD e32_level;
03150   WORD  e32_cpu;
03151   WORD  e32_os;
03152   DWORD e32_ver;
03153   DWORD e32_mflags;
```

```
03154   DWORD e32_mpages;
03155   DWORD e32_startobj;
03156   DWORD e32_eip;
03157   DWORD e32_stackobj;
03158   DWORD e32_esp;
03159   DWORD e32_pagesize;
03160   DWORD e32_lastpagesize;
03161   DWORD e32_fixupsize;
03162   DWORD e32_fixupsum;
03163   DWORD e32_ldrsize;
03164   DWORD e32_ldrsum;
03165   DWORD e32_objtab;
03166   DWORD e32_objcnt;
03167   DWORD e32_objmap;
03168   DWORD e32_itermap;
03169   DWORD e32_rsrctab;
03170   DWORD e32_rsrccnt;
03171   DWORD e32_restab;
03172   DWORD e32_enttab;
03173   DWORD e32_dirtab;
03174   DWORD e32_dircnt;
03175   DWORD e32_fpagetab;
03176   DWORD e32_frectab;
03177   DWORD e32_impmod;
03178   DWORD e32_impmodcnt;
03179   DWORD e32_impproc;
03180   DWORD e32_pagesum;
03181   DWORD e32_datapage;
03182   DWORD e32_preload;
03183   DWORD e32_nrestab;
03184   DWORD e32_cbnrestab;
03185   DWORD e32_nressum;
03186   DWORD e32_autodata;
03187   DWORD e32_debuginfo;
03188   DWORD e32_debuglen;
03189   DWORD e32_instpreload;
03190   DWORD e32_instdemand;
03191   DWORD e32_heapsize;
03192   BYTE   e32_res3[12];
03193   DWORD e32_winresoff;
03194   DWORD e32_winreslen;
03195   WORD  e32_devid;
03196   WORD  e32_ddkver;
03197 } IMAGE_VXD_HEADER, *PIMAGE_VXD_HEADER;
03198
03199
03200 /* These defines describe the meanings of the bits in the Characteristics
03201    field */
03202
03203 #define IMAGE_FILE_RELOCS_STRIPPED  0x0001 /* No relocation info */
03204 #define IMAGE_FILE_EXECUTABLE_IMAGE 0x0002
03205 #define IMAGE_FILE_LINE_NUMS_STRIPPED   0x0004
03206 #define IMAGE_FILE_LOCAL_SYMS_STRIPPED  0x0008
03207 #define IMAGE_FILE_16BIT_MACHINE    0x0040
03208 #define IMAGE_FILE_BYTES_REVERSED_LO    0x0080
03209 #define IMAGE_FILE_32BIT_MACHINE    0x0100
03210 #define IMAGE_FILE_DEBUG_STRIPPED   0x0200
03211 #define IMAGE_FILE_SYSTEM       0x1000
03212 #define IMAGE_FILE_DLL          0x2000
03213 #define IMAGE_FILE_BYTES_REVERSED_HI    0x8000
03214
03215 /* These are the settings of the Machine field. */
03216 #define IMAGE_FILE_MACHINE_UNKNOWN  0
03217 #define IMAGE_FILE_MACHINE_I860     0x14d
03218 #define IMAGE_FILE_MACHINE_I386     0x14c
03219 #define IMAGE_FILE_MACHINE_R3000    0x162
03220 #define IMAGE_FILE_MACHINE_R4000    0x166
03221 #define IMAGE_FILE_MACHINE_R10000   0x168
03222 #define IMAGE_FILE_MACHINE_ALPHA    0x184
03223 #define IMAGE_FILE_MACHINE_POWERPC  0x1F0
03224
03225 #define IMAGE_SIZEOF_FILE_HEADER    20
03226
03227 /* Possible Magic values */
03228 #define IMAGE_NT_OPTIONAL_HDR_MAGIC        0x10b
03229 #define IMAGE_ROM_OPTIONAL_HDR_MAGIC       0x107
03230
03231 /* These are indexes into the DataDirectory array */
03232 #define IMAGE_FILE_EXPORT_DIRECTORY     0
03233 #define IMAGE_FILE_IMPORT_DIRECTORY     1
03234 #define IMAGE_FILE_RESOURCE_DIRECTORY       2
03235 #define IMAGE_FILE_EXCEPTION_DIRECTORY      3
03236 #define IMAGE_FILE_SECURITY_DIRECTORY       4
03237 #define IMAGE_FILE_BASE_RELOCATION_TABLE    5
03238 #define IMAGE_FILE_DEBUG_DIRECTORY      6
03239 #define IMAGE_FILE_DESCRIPTION_STRING       7
03240 #define IMAGE_FILE_MACHINE_VALUE        8  /* Mips */
```

```
03241 #define IMAGE_FILE_THREAD_LOCAL_STORAGE     9
03242 #define IMAGE_FILE_CALLBACK_DIRECTORY       10
03243
03244 /* Directory Entries, indices into the DataDirectory array */
03245
03246 #define IMAGE_DIRECTORY_ENTRY_EXPORT        0
03247 #define IMAGE_DIRECTORY_ENTRY_IMPORT        1
03248 #define IMAGE_DIRECTORY_ENTRY_RESOURCE      2
03249 #define IMAGE_DIRECTORY_ENTRY_EXCEPTION     3
03250 #define IMAGE_DIRECTORY_ENTRY_SECURITY      4
03251 #define IMAGE_DIRECTORY_ENTRY_BASERELOC     5
03252 #define IMAGE_DIRECTORY_ENTRY_DEBUG     6
03253 #define IMAGE_DIRECTORY_ENTRY_COPYRIGHT     7
03254 #define IMAGE_DIRECTORY_ENTRY_GLOBALPTR     8   /* (MIPS GP) */
03255 #define IMAGE_DIRECTORY_ENTRY_TLS       9
03256 #define IMAGE_DIRECTORY_ENTRY_LOAD_CONFIG   10
03257 #define IMAGE_DIRECTORY_ENTRY_BOUND_IMPORT  11
03258 #define IMAGE_DIRECTORY_ENTRY_IAT       12  /* Import Address Table */
03259 #define IMAGE_DIRECTORY_ENTRY_DELAY_IMPORT  13
03260 #define IMAGE_DIRECTORY_ENTRY_COM_DESCRIPTOR    14
03261
03262 /* Subsystem Values */
03263
03264 #define IMAGE_SUBSYSTEM_UNKNOWN     0
03265 #define IMAGE_SUBSYSTEM_NATIVE      1
03266 #define IMAGE_SUBSYSTEM_WINDOWS_GUI 2   /* Windows GUI subsystem */
03267 #define IMAGE_SUBSYSTEM_WINDOWS_CUI 3   /* Windows character subsystem*/
03268 #define IMAGE_SUBSYSTEM_OS2_CUI     5
03269 #define IMAGE_SUBSYSTEM_POSIX_CUI   7
03270
03271 typedef struct _IMAGE_FILE_HEADER {
03272   WORD  Machine;
03273   WORD  NumberOfSections;
03274   DWORD TimeDateStamp;
03275   DWORD PointerToSymbolTable;
03276   DWORD NumberOfSymbols;
03277   WORD  SizeOfOptionalHeader;
03278   WORD  Characteristics;
03279 } IMAGE_FILE_HEADER, *PIMAGE_FILE_HEADER;
03280
03281 typedef struct _IMAGE_DATA_DIRECTORY {
03282   DWORD VirtualAddress;
03283   DWORD Size;
03284 } IMAGE_DATA_DIRECTORY, *PIMAGE_DATA_DIRECTORY;
03285
03286 #define IMAGE_NUMBEROF_DIRECTORY_ENTRIES 16
03287
03288 typedef struct _IMAGE_OPTIONAL_HEADER {
03289
03290   /* Standard fields */
03291
03292   WORD  Magic; /* 0x10b or 0x107 */ /* 0x00 */
03293   BYTE  MajorLinkerVersion;
03294   BYTE  MinorLinkerVersion;
03295   DWORD SizeOfCode;
03296   DWORD SizeOfInitializedData;
03297   DWORD SizeOfUninitializedData;
03298   DWORD AddressOfEntryPoint;        /* 0x10 */
03299   DWORD BaseOfCode;
03300   DWORD BaseOfData;
03301
03302   /* NT additional fields */
03303
03304   DWORD ImageBase;
03305   DWORD SectionAlignment;       /* 0x20 */
03306   DWORD FileAlignment;
03307   WORD  MajorOperatingSystemVersion;
03308   WORD  MinorOperatingSystemVersion;
03309   WORD  MajorImageVersion;
03310   WORD  MinorImageVersion;
03311   WORD  MajorSubsystemVersion;      /* 0x30 */
03312   WORD  MinorSubsystemVersion;
03313   DWORD Win32VersionValue;
03314   DWORD SizeOfImage;
03315   DWORD SizeOfHeaders;
03316   DWORD CheckSum;           /* 0x40 */
03317   WORD  Subsystem;
03318   WORD  DllCharacteristics;
03319   DWORD SizeOfStackReserve;
03320   DWORD SizeOfStackCommit;
03321   DWORD SizeOfHeapReserve;      /* 0x50 */
03322   DWORD SizeOfHeapCommit;
03323   DWORD LoaderFlags;
03324   DWORD NumberOfRvaAndSizes;
03325   IMAGE_DATA_DIRECTORY DataDirectory[IMAGE_NUMBEROF_DIRECTORY_ENTRIES]; /* 0x60 */
03326 } IMAGE_OPTIONAL_HEADER, *PIMAGE_OPTIONAL_HEADER;
03327
```

```
03328 typedef struct _IMAGE_NT_HEADERS {
03329   DWORD Signature; /* "PE"\0\0 */
03330   IMAGE_FILE_HEADER FileHeader;
03331   IMAGE_OPTIONAL_HEADER OptionalHeader;
03332 } IMAGE_NT_HEADERS, *PIMAGE_NT_HEADERS;
03333
03334 #define IMAGE_SIZEOF_SHORT_NAME 8
03335
03336 typedef struct _IMAGE_SECTION_HEADER {
03337   BYTE  Name[IMAGE_SIZEOF_SHORT_NAME];
03338   union {
03339     DWORD PhysicalAddress;
03340     DWORD VirtualSize;
03341   } Misc;
03342   DWORD VirtualAddress;
03343   DWORD SizeOfRawData;
03344   DWORD PointerToRawData;
03345   DWORD PointerToRelocations;
03346   DWORD PointerToLinenumbers;
03347   WORD  NumberOfRelocations;
03348   WORD  NumberOfLinenumbers;
03349   DWORD Characteristics;
03350 } IMAGE_SECTION_HEADER, *PIMAGE_SECTION_HEADER;
03351
03352 #define IMAGE_SIZEOF_SECTION_HEADER 40
03353
03354 #define IMAGE_FIRST_SECTION(ntheader) \
03355   ((PIMAGE_SECTION_HEADER)((LPBYTE)&((PIMAGE_NT_HEADERS)(ntheader))->OptionalHeader + \
03356                            ((PIMAGE_NT_HEADERS)(ntheader))->FileHeader.SizeOfOptionalHeader))
03357
03358 /* These defines are for the Characteristics bitfield. */
03359 /* #define IMAGE_SCN_TYPE_REG           0x00000000 - Reserved */
03360 /* #define IMAGE_SCN_TYPE_DSECT         0x00000001 - Reserved */
03361 /* #define IMAGE_SCN_TYPE_NOLOAD        0x00000002 - Reserved */
03362 /* #define IMAGE_SCN_TYPE_GROUP         0x00000004 - Reserved */
03363 /* #define IMAGE_SCN_TYPE_NO_PAD        0x00000008 - Reserved */
03364 /* #define IMAGE_SCN_TYPE_COPY          0x00000010 - Reserved */
03365
03366 #define IMAGE_SCN_CNT_CODE          0x00000020
03367 #define IMAGE_SCN_CNT_INITIALIZED_DATA      0x00000040
03368 #define IMAGE_SCN_CNT_UNINITIALIZED_DATA    0x00000080
03369
03370 #define IMAGE_SCN_LNK_OTHER         0x00000100
03371 #define IMAGE_SCN_LNK_INFO          0x00000200
03372 /* #define  IMAGE_SCN_TYPE_OVER     0x00000400 - Reserved */
03373 #define IMAGE_SCN_LNK_REMOVE            0x00000800
03374 #define IMAGE_SCN_LNK_COMDAT            0x00001000
03375
03376 /*                      0x00002000 - Reserved */
03377 /* #define IMAGE_SCN_MEM_PROTECTED      0x00004000 - Obsolete */
03378 #define IMAGE_SCN_MEM_FARDATA           0x00008000
03379
03380 /* #define IMAGE_SCN_MEM_SYSHEAP        0x00010000 - Obsolete */
03381 #define IMAGE_SCN_MEM_PURGEABLE         0x00020000
03382 #define IMAGE_SCN_MEM_16BIT         0x00020000
03383 #define IMAGE_SCN_MEM_LOCKED            0x00040000
03384 #define IMAGE_SCN_MEM_PRELOAD           0x00080000
03385
03386 #define IMAGE_SCN_ALIGN_1BYTES          0x00100000
03387 #define IMAGE_SCN_ALIGN_2BYTES          0x00200000
03388 #define IMAGE_SCN_ALIGN_4BYTES          0x00300000
03389 #define IMAGE_SCN_ALIGN_8BYTES          0x00400000
03390 #define IMAGE_SCN_ALIGN_16BYTES         0x00500000  /* Default */
03391 #define IMAGE_SCN_ALIGN_32BYTES         0x00600000
03392 #define IMAGE_SCN_ALIGN_64BYTES         0x00700000
03393 /*                      0x00800000 - Unused */
03394
03395 #define IMAGE_SCN_LNK_NRELOC_OVFL       0x01000000
03396
03397
03398 #define IMAGE_SCN_MEM_DISCARDABLE       0x02000000
03399 #define IMAGE_SCN_MEM_NOT_CACHED        0x04000000
03400 #define IMAGE_SCN_MEM_NOT_PAGED         0x08000000
03401 #define IMAGE_SCN_MEM_SHARED            0x10000000
03402 #define IMAGE_SCN_MEM_EXECUTE           0x20000000
03403 #define IMAGE_SCN_MEM_READ          0x40000000
03404 #define IMAGE_SCN_MEM_WRITE         0x80000000
03405
03406 #include "pshpack2.h"
03407
03408 typedef struct _IMAGE_SYMBOL {
03409     union {
03410         BYTE    ShortName[8];
03411         struct {
03412             DWORD   Short;
03413             DWORD   Long;
03414         } Name;
```

```
03415         DWORD   LongName[2];
03416     } N;
03417     DWORD   Value;
03418     SHORT   SectionNumber;
03419     WORD    Type;
03420     BYTE    StorageClass;
03421     BYTE    NumberOfAuxSymbols;
03422 } IMAGE_SYMBOL;
03423 typedef IMAGE_SYMBOL *PIMAGE_SYMBOL;
03424
03425 #define IMAGE_SIZEOF_SYMBOL 18
03426
03427 typedef struct _IMAGE_LINENUMBER {
03428     union {
03429         DWORD   SymbolTableIndex;
03430         DWORD   VirtualAddress;
03431     } Type;
03432     WORD    Linenumber;
03433 } IMAGE_LINENUMBER;
03434 typedef IMAGE_LINENUMBER *PIMAGE_LINENUMBER;
03435
03436 #define IMAGE_SIZEOF_LINENUMBER  6
03437
03438 typedef union _IMAGE_AUX_SYMBOL {
03439     struct {
03440         DWORD    TagIndex;
03441         union {
03442             struct {
03443                 WORD    Linenumber;
03444                 WORD    Size;
03445             } LnSz;
03446            DWORD    TotalSize;
03447         } Misc;
03448         union {
03449             struct {
03450                 DWORD    PointerToLinenumber;
03451                 DWORD    PointerToNextFunction;
03452             } Function;
03453             struct {
03454                 WORD     Dimension[4];
03455             } Array;
03456         } FcnAry;
03457         WORD    TvIndex;
03458     } Sym;
03459     struct {
03460         BYTE    Name[IMAGE_SIZEOF_SYMBOL];
03461     } File;
03462     struct {
03463         DWORD   Length;
03464         WORD    NumberOfRelocations;
03465         WORD    NumberOfLinenumbers;
03466         DWORD   CheckSum;
03467         SHORT   Number;
03468         BYTE    Selection;
03469     } Section;
03470 } IMAGE_AUX_SYMBOL;
03471 typedef IMAGE_AUX_SYMBOL *PIMAGE_AUX_SYMBOL;
03472
03473 #define IMAGE_SIZEOF_AUX_SYMBOL 18
03474
03475 #include "poppack.h"
03476
03477 #define IMAGE_SYM_UNDEFINED           (SHORT)0
03478 #define IMAGE_SYM_ABSOLUTE            (SHORT)-1
03479 #define IMAGE_SYM_DEBUG               (SHORT)-2
03480
03481 #define IMAGE_SYM_TYPE_NULL                 0x0000
03482 #define IMAGE_SYM_TYPE_VOID                 0x0001
03483 #define IMAGE_SYM_TYPE_CHAR                 0x0002
03484 #define IMAGE_SYM_TYPE_SHORT                0x0003
03485 #define IMAGE_SYM_TYPE_INT                  0x0004
03486 #define IMAGE_SYM_TYPE_LONG                 0x0005
03487 #define IMAGE_SYM_TYPE_FLOAT                0x0006
03488 #define IMAGE_SYM_TYPE_DOUBLE               0x0007
03489 #define IMAGE_SYM_TYPE_STRUCT               0x0008
03490 #define IMAGE_SYM_TYPE_UNION                0x0009
03491 #define IMAGE_SYM_TYPE_ENUM                 0x000A
03492 #define IMAGE_SYM_TYPE_MOE                  0x000B
03493 #define IMAGE_SYM_TYPE_BYTE                 0x000C
03494 #define IMAGE_SYM_TYPE_WORD                 0x000D
03495 #define IMAGE_SYM_TYPE_UINT                 0x000E
03496 #define IMAGE_SYM_TYPE_DWORD                0x000F
03497 #define IMAGE_SYM_TYPE_PCODE                0x8000
03498
03499 #define IMAGE_SYM_DTYPE_NULL                0
03500 #define IMAGE_SYM_DTYPE_POINTER             1
03501 #define IMAGE_SYM_DTYPE_FUNCTION            2
```

```
03502 #define IMAGE_SYM_DTYPE_ARRAY               3
03503
03504 #define IMAGE_SYM_CLASS_END_OF_FUNCTION     (BYTE )-1
03505 #define IMAGE_SYM_CLASS_NULL                0x0000
03506 #define IMAGE_SYM_CLASS_AUTOMATIC           0x0001
03507 #define IMAGE_SYM_CLASS_EXTERNAL            0x0002
03508 #define IMAGE_SYM_CLASS_STATIC              0x0003
03509 #define IMAGE_SYM_CLASS_REGISTER            0x0004
03510 #define IMAGE_SYM_CLASS_EXTERNAL_DEF        0x0005
03511 #define IMAGE_SYM_CLASS_LABEL               0x0006
03512 #define IMAGE_SYM_CLASS_UNDEFINED_LABEL     0x0007
03513 #define IMAGE_SYM_CLASS_MEMBER_OF_STRUCT    0x0008
03514 #define IMAGE_SYM_CLASS_ARGUMENT            0x0009
03515 #define IMAGE_SYM_CLASS_STRUCT_TAG          0x000A
03516 #define IMAGE_SYM_CLASS_MEMBER_OF_UNION     0x000B
03517 #define IMAGE_SYM_CLASS_UNION_TAG           0x000C
03518 #define IMAGE_SYM_CLASS_TYPE_DEFINITION     0x000D
03519 #define IMAGE_SYM_CLASS_UNDEFINED_STATIC    0x000E
03520 #define IMAGE_SYM_CLASS_ENUM_TAG            0x000F
03521 #define IMAGE_SYM_CLASS_MEMBER_OF_ENUM      0x0010
03522 #define IMAGE_SYM_CLASS_REGISTER_PARAM      0x0011
03523 #define IMAGE_SYM_CLASS_BIT_FIELD           0x0012
03524
03525 #define IMAGE_SYM_CLASS_FAR_EXTERNAL        0x0044
03526 #define IMAGE_SYM_CLASS_BLOCK               0x0064
03527 #define IMAGE_SYM_CLASS_FUNCTION            0x0065
03528 #define IMAGE_SYM_CLASS_END_OF_STRUCT       0x0066
03529 #define IMAGE_SYM_CLASS_FILE                0x0067
03530 #define IMAGE_SYM_CLASS_SECTION             0x0068
03531 #define IMAGE_SYM_CLASS_WEAK_EXTERNAL       0x0069
03532
03533 #define N_BTMASK                            0x000F
03534 #define N_TMASK                             0x0030
03535 #define N_TMASK1                            0x00C0
03536 #define N_TMASK2                            0x00F0
03537 #define N_BTSHFT                            4
03538 #define N_TSHIFT                            2
03539
03540 #define BTYPE(x) ((x) & N_BTMASK)
03541
03542 #ifndef ISPTR
03543 #define ISPTR(x) (((x) & N_TMASK) == (IMAGE_SYM_DTYPE_POINTER « N_BTSHFT))
03544 #endif
03545
03546 #ifndef ISFCN
03547 #define ISFCN(x) (((x) & N_TMASK) == (IMAGE_SYM_DTYPE_FUNCTION « N_BTSHFT))
03548 #endif
03549
03550 #ifndef ISARY
03551 #define ISARY(x) (((x) & N_TMASK) == (IMAGE_SYM_DTYPE_ARRAY « N_BTSHFT))
03552 #endif
03553
03554 #ifndef ISTAG
03555 #define ISTAG(x) ((x)==IMAGE_SYM_CLASS_STRUCT_TAG || (x)==IMAGE_SYM_CLASS_UNION_TAG ||
     (x)==IMAGE_SYM_CLASS_ENUM_TAG)
03556 #endif
03557
03558 #ifndef INCREF
03559 #define INCREF(x) ((((x)&~N_BTMASK)«N_TSHIFT)|(IMAGE_SYM_DTYPE_POINTER«N_BTSHFT)|((x)&N_BTMASK))
03560 #endif
03561 #ifndef DECREF
03562 #define DECREF(x) ((((x)»N_TSHIFT)&~N_BTMASK)|((x)&N_BTMASK))
03563 #endif
03564
03565 #define IMAGE_COMDAT_SELECT_NODUPLICATES    1
03566 #define IMAGE_COMDAT_SELECT_ANY             2
03567 #define IMAGE_COMDAT_SELECT_SAME_SIZE       3
03568 #define IMAGE_COMDAT_SELECT_EXACT_MATCH     4
03569 #define IMAGE_COMDAT_SELECT_ASSOCIATIVE     5
03570 #define IMAGE_COMDAT_SELECT_LARGEST         6
03571 #define IMAGE_COMDAT_SELECT_NEWEST          7
03572
03573 #define IMAGE_WEAK_EXTERN_SEARCH_NOLIBRARY  1
03574 #define IMAGE_WEAK_EXTERN_SEARCH_LIBRARY    2
03575 #define IMAGE_WEAK_EXTERN_SEARCH_ALIAS      3
03576
03577 /* Export module directory */
03578
03579 typedef struct _IMAGE_EXPORT_DIRECTORY {
03580     DWORD   Characteristics;
03581     DWORD   TimeDateStamp;
03582     WORD    MajorVersion;
03583     WORD    MinorVersion;
03584     DWORD   Name;
03585     DWORD   Base;
03586     DWORD   NumberOfFunctions;
03587     DWORD   NumberOfNames;
```

```
03588     DWORD   AddressOfFunctions;
03589     DWORD   AddressOfNames;
03590     DWORD   AddressOfNameOrdinals;
03591 } IMAGE_EXPORT_DIRECTORY,*PIMAGE_EXPORT_DIRECTORY;
03592
03593 /* Import name entry */
03594 typedef struct _IMAGE_IMPORT_BY_NAME {
03595     WORD    Hint;
03596     BYTE    Name[1];
03597 } IMAGE_IMPORT_BY_NAME,*PIMAGE_IMPORT_BY_NAME;
03598
03599 /* Import thunk */
03600 typedef struct _IMAGE_THUNK_DATA {
03601     union {
03602         LPBYTE    ForwarderString;
03603         PDWORD    Function;
03604         DWORD     Ordinal;
03605         PIMAGE_IMPORT_BY_NAME   AddressOfData;
03606     } u1;
03607 } IMAGE_THUNK_DATA,*PIMAGE_THUNK_DATA;
03608
03609 /* Import module directory */
03610
03611 typedef struct _IMAGE_IMPORT_DESCRIPTOR {
03612     union {
03613         DWORD   Characteristics; /* 0 for terminating null import descriptor  */
03614         PIMAGE_THUNK_DATA OriginalFirstThunk;   /* RVA to original unbound IAT */
03615     } u;
03616     DWORD   TimeDateStamp;  /* 0 if not bound,
03617                  * -1 if bound, and real date\time stamp
03618                  *    in IMAGE_DIRECTORY_ENTRY_BOUND_IMPORT
03619                  * (new BIND)
03620                  * otherwise date/time stamp of DLL bound to
03621                  * (Old BIND)
03622                  */
03623     DWORD   ForwarderChain; /* -1 if no forwarders */
03624     DWORD   Name;
03625     /* RVA to IAT (if bound this IAT has actual addresses) */
03626     PIMAGE_THUNK_DATA FirstThunk;
03627 } IMAGE_IMPORT_DESCRIPTOR,*PIMAGE_IMPORT_DESCRIPTOR;
03628
03629 #define IMAGE_ORDINAL_FLAG      0x80000000
03630 #define IMAGE_SNAP_BY_ORDINAL(Ordinal)  ((Ordinal & IMAGE_ORDINAL_FLAG) != 0)
03631 #define IMAGE_ORDINAL(Ordinal)      (Ordinal & 0xffff)
03632
03633 typedef struct _IMAGE_BOUND_IMPORT_DESCRIPTOR
03634 {
03635     DWORD   TimeDateStamp;
03636     WORD    OffsetModuleName;
03637     WORD    NumberOfModuleForwarderRefs;
03638 /* Array of zero or more IMAGE_BOUND_FORWARDER_REF follows */
03639 } IMAGE_BOUND_IMPORT_DESCRIPTOR,  *PIMAGE_BOUND_IMPORT_DESCRIPTOR;
03640
03641 typedef struct _IMAGE_BOUND_FORWARDER_REF
03642 {
03643     DWORD   TimeDateStamp;
03644     WORD    OffsetModuleName;
03645     WORD    Reserved;
03646 } IMAGE_BOUND_FORWARDER_REF, *PIMAGE_BOUND_FORWARDER_REF;
03647
03648 #include "pshpack2.h"
03649
03650 typedef struct _IMAGE_BASE_RELOCATION
03651 {
03652     DWORD   VirtualAddress;
03653     DWORD   SizeOfBlock;
03654     /* WORD TypeOffset[1]; */
03655 } IMAGE_BASE_RELOCATION,*PIMAGE_BASE_RELOCATION;
03656
03657 typedef struct _IMAGE_RELOCATION
03658 {
03659     union {
03660         DWORD   VirtualAddress;
03661         DWORD   RelocCount;
03662     } u;
03663     DWORD   SymbolTableIndex;
03664     WORD    Type;
03665 } IMAGE_RELOCATION;
03666 typedef IMAGE_RELOCATION *PIMAGE_RELOCATION;
03667
03668 #include "poppack.h"
03669
03670 #define IMAGE_SIZEOF_RELOCATION 10
03671
03672 /* generic relocation types */
03673 #define IMAGE_REL_BASED_ABSOLUTE        0
03674 #define IMAGE_REL_BASED_HIGH            1
```

```
03675 #define IMAGE_REL_BASED_LOW         2
03676 #define IMAGE_REL_BASED_HIGHLOW         3
03677 #define IMAGE_REL_BASED_HIGHADJ         4
03678 #define IMAGE_REL_BASED_MIPS_JMPADDR        5
03679 #define IMAGE_REL_BASED_SECTION         6
03680 #define IMAGE_REL_BASED_REL         7
03681 #define IMAGE_REL_BASED_MIPS_JMPADDR16      9
03682 #define IMAGE_REL_BASED_IA64_IMM64      9 /* yes, 9 too */
03683 #define IMAGE_REL_BASED_DIR64           10
03684 #define IMAGE_REL_BASED_HIGH3ADJ        11
03685
03686 /* I386 relocation types */
03687 #define IMAGE_REL_I386_ABSOLUTE         0
03688 #define IMAGE_REL_I386_DIR16            1
03689 #define IMAGE_REL_I386_REL16            2
03690 #define IMAGE_REL_I386_DIR32            6
03691 #define IMAGE_REL_I386_DIR32NB          7
03692 #define IMAGE_REL_I386_SEG12            9
03693 #define IMAGE_REL_I386_SECTION          10
03694 #define IMAGE_REL_I386_SECREL           11
03695 #define IMAGE_REL_I386_REL32            20
03696
03697 /* MIPS relocation types */
03698 #define IMAGE_REL_MIPS_ABSOLUTE     0x0000
03699 #define IMAGE_REL_MIPS_REFHALF      0x0001
03700 #define IMAGE_REL_MIPS_REFWORD      0x0002
03701 #define IMAGE_REL_MIPS_JMPADDR      0x0003
03702 #define IMAGE_REL_MIPS_REFHI        0x0004
03703 #define IMAGE_REL_MIPS_REFLO        0x0005
03704 #define IMAGE_REL_MIPS_GPREL        0x0006
03705 #define IMAGE_REL_MIPS_LITERAL      0x0007
03706 #define IMAGE_REL_MIPS_SECTION      0x000A
03707 #define IMAGE_REL_MIPS_SECREL       0x000B
03708 #define IMAGE_REL_MIPS_SECRELLO     0x000C
03709 #define IMAGE_REL_MIPS_SECRELHI     0x000D
03710 #define IMAGE_REL_MIPS_JMPADDR16    0x0010
03711 #define IMAGE_REL_MIPS_REFWORDNB    0x0022
03712 #define IMAGE_REL_MIPS_PAIR     0x0025
03713
03714 /* ALPHA relocation types */
03715 #define IMAGE_REL_ALPHA_ABSOLUTE    0x0000
03716 #define IMAGE_REL_ALPHA_REFLONG     0x0001
03717 #define IMAGE_REL_ALPHA_REFQUAD     0x0002
03718 #define IMAGE_REL_ALPHA_GPREL       0x0003
03719 #define IMAGE_REL_ALPHA_LITERAL     0x0004
03720 #define IMAGE_REL_ALPHA_LITUSE      0x0005
03721 #define IMAGE_REL_ALPHA_GPDISP      0x0006
03722 #define IMAGE_REL_ALPHA_BRADDR      0x0007
03723 #define IMAGE_REL_ALPHA_HINT        0x0008
03724 #define IMAGE_REL_ALPHA_INLINE_REFLONG  0x0009
03725 #define IMAGE_REL_ALPHA_REFHI       0x000A
03726 #define IMAGE_REL_ALPHA_REFLO       0x000B
03727 #define IMAGE_REL_ALPHA_PAIR        0x000C
03728 #define IMAGE_REL_ALPHA_MATCH       0x000D
03729 #define IMAGE_REL_ALPHA_SECTION     0x000E
03730 #define IMAGE_REL_ALPHA_SECREL      0x000F
03731 #define IMAGE_REL_ALPHA_REFLONGNB   0x0010
03732 #define IMAGE_REL_ALPHA_SECRELLO    0x0011
03733 #define IMAGE_REL_ALPHA_SECRELHI    0x0012
03734 #define IMAGE_REL_ALPHA_REFQ3       0x0013
03735 #define IMAGE_REL_ALPHA_REFQ2       0x0014
03736 #define IMAGE_REL_ALPHA_REFQ1       0x0015
03737 #define IMAGE_REL_ALPHA_GPRELLO     0x0016
03738 #define IMAGE_REL_ALPHA_GPRELHI     0x0017
03739
03740 /* PowerPC relocation types */
03741 #define IMAGE_REL_PPC_ABSOLUTE          0x0000
03742 #define IMAGE_REL_PPC_ADDR64            0x0001
03743 #define IMAGE_REL_PPC_ADDR            0x0002
03744 #define IMAGE_REL_PPC_ADDR24            0x0003
03745 #define IMAGE_REL_PPC_ADDR16            0x0004
03746 #define IMAGE_REL_PPC_ADDR14            0x0005
03747 #define IMAGE_REL_PPC_REL24             0x0006
03748 #define IMAGE_REL_PPC_REL14             0x0007
03749 #define IMAGE_REL_PPC_TOCREL16          0x0008
03750 #define IMAGE_REL_PPC_TOCREL14          0x0009
03751 #define IMAGE_REL_PPC_ADDR32NB          0x000A
03752 #define IMAGE_REL_PPC_SECREL            0x000B
03753 #define IMAGE_REL_PPC_SECTION           0x000C
03754 #define IMAGE_REL_PPC_IFGLUE            0x000D
03755 #define IMAGE_REL_PPC_IMGLUE            0x000E
03756 #define IMAGE_REL_PPC_SECREL16          0x000F
03757 #define IMAGE_REL_PPC_REFHI             0x0010
03758 #define IMAGE_REL_PPC_REFLO             0x0011
03759 #define IMAGE_REL_PPC_PAIR              0x0012
03760 #define IMAGE_REL_PPC_SECRELLO          0x0013
03761 #define IMAGE_REL_PPC_SECRELHI          0x0014
```

```
03762 #define IMAGE_REL_PPC_GPREL     0x0015
03763 #define IMAGE_REL_PPC_TYPEMASK          0x00FF
03764 /* modifier bits */
03765 #define IMAGE_REL_PPC_NEG               0x0100
03766 #define IMAGE_REL_PPC_BRTAKEN           0x0200
03767 #define IMAGE_REL_PPC_BRNTAKEN          0x0400
03768 #define IMAGE_REL_PPC_TOCDEFN           0x0800
03769
03770 /* SH3 ? relocation type */
03771 #define IMAGE_REL_SH3_ABSOLUTE          0x0000
03772 #define IMAGE_REL_SH3_DIRECT16          0x0001
03773 #define IMAGE_REL_SH3_DIRECT          0x0002
03774 #define IMAGE_REL_SH3_DIRECT8           0x0003
03775 #define IMAGE_REL_SH3_DIRECT8_WORD      0x0004
03776 #define IMAGE_REL_SH3_DIRECT8_LONG      0x0005
03777 #define IMAGE_REL_SH3_DIRECT4           0x0006
03778 #define IMAGE_REL_SH3_DIRECT4_WORD      0x0007
03779 #define IMAGE_REL_SH3_DIRECT4_LONG      0x0008
03780 #define IMAGE_REL_SH3_PCREL8_WORD       0x0009
03781 #define IMAGE_REL_SH3_PCREL8_LONG       0x000A
03782 #define IMAGE_REL_SH3_PCREL12_WORD      0x000B
03783 #define IMAGE_REL_SH3_STARTOF_SECTION   0x000C
03784 #define IMAGE_REL_SH3_SIZEOF_SECTION    0x000D
03785 #define IMAGE_REL_SH3_SECTION           0x000E
03786 #define IMAGE_REL_SH3_SECREL            0x000F
03787 #define IMAGE_REL_SH3_DIRECT32_NB       0x0010
03788
03789 /* ARM (Archimedes?) relocation types */
03790 #define IMAGE_REL_ARM_ABSOLUTE      0x0000
03791 #define IMAGE_REL_ARM_ADDR      0x0001
03792 #define IMAGE_REL_ARM_ADDR32NB      0x0002
03793 #define IMAGE_REL_ARM_BRANCH24      0x0003
03794 #define IMAGE_REL_ARM_BRANCH11      0x0004
03795 #define IMAGE_REL_ARM_SECTION       0x000E
03796 #define IMAGE_REL_ARM_SECREL        0x000F
03797
03798 /* IA64 relocation types */
03799 #define IMAGE_REL_IA64_ABSOLUTE     0x0000
03800 #define IMAGE_REL_IA64_IMM14        0x0001
03801 #define IMAGE_REL_IA64_IMM22        0x0002
03802 #define IMAGE_REL_IA64_IMM64        0x0003
03803 #define IMAGE_REL_IA64_DIR      0x0004
03804 #define IMAGE_REL_IA64_DIR64        0x0005
03805 #define IMAGE_REL_IA64_PCREL21B     0x0006
03806 #define IMAGE_REL_IA64_PCREL21M     0x0007
03807 #define IMAGE_REL_IA64_PCREL21F     0x0008
03808 #define IMAGE_REL_IA64_GPREL22      0x0009
03809 #define IMAGE_REL_IA64_LTOFF22      0x000A
03810 #define IMAGE_REL_IA64_SECTION      0x000B
03811 #define IMAGE_REL_IA64_SECREL22     0x000C
03812 #define IMAGE_REL_IA64_SECREL64I    0x000D
03813 #define IMAGE_REL_IA64_SECREL       0x000E
03814 #define IMAGE_REL_IA64_LTOFF64      0x000F
03815 #define IMAGE_REL_IA64_DIR32NB      0x0010
03816 #define IMAGE_REL_IA64_RESERVED_11  0x0011
03817 #define IMAGE_REL_IA64_RESERVED_12  0x0012
03818 #define IMAGE_REL_IA64_RESERVED_13  0x0013
03819 #define IMAGE_REL_IA64_RESERVED_14  0x0014
03820 #define IMAGE_REL_IA64_RESERVED_15  0x0015
03821 #define IMAGE_REL_IA64_RESERVED_16  0x0016
03822 #define IMAGE_REL_IA64_ADDEND       0x001F
03823
03824 /* archive format */
03825
03826 #define IMAGE_ARCHIVE_START_SIZE            8
03827 #define IMAGE_ARCHIVE_START                 "!<arch>\n"
03828 #define IMAGE_ARCHIVE_END                   "`\n"
03829 #define IMAGE_ARCHIVE_PAD                   "\n"
03830 #define IMAGE_ARCHIVE_LINKER_MEMBER         "/               "
03831 #define IMAGE_ARCHIVE_LONGNAMES_MEMBER      "//              "
03832
03833 typedef struct _IMAGE_ARCHIVE_MEMBER_HEADER
03834 {
03835     BYTE     Name[16];
03836     BYTE     Date[12];
03837     BYTE     UserID[6];
03838     BYTE     GroupID[6];
03839     BYTE     Mode[8];
03840     BYTE     Size[10];
03841     BYTE     EndHeader[2];
03842 } IMAGE_ARCHIVE_MEMBER_HEADER, *PIMAGE_ARCHIVE_MEMBER_HEADER;
03843
03844 #define IMAGE_SIZEOF_ARCHIVE_MEMBER_HDR 60
03845
03846 /*
03847  * Resource directory stuff
03848  */
```

```
03849 typedef struct _IMAGE_RESOURCE_DIRECTORY {
03850     DWORD   Characteristics;
03851     DWORD   TimeDateStamp;
03852     WORD    MajorVersion;
03853     WORD    MinorVersion;
03854     WORD    NumberOfNamedEntries;
03855     WORD    NumberOfIdEntries;
03856     /*  IMAGE_RESOURCE_DIRECTORY_ENTRY DirectoryEntries[]; */
03857 } IMAGE_RESOURCE_DIRECTORY,*PIMAGE_RESOURCE_DIRECTORY;
03858
03859 #define IMAGE_RESOURCE_NAME_IS_STRING       0x80000000
03860 #define IMAGE_RESOURCE_DATA_IS_DIRECTORY    0x80000000
03861
03862 typedef struct _IMAGE_RESOURCE_DIRECTORY_ENTRY {
03863     union u1 {
03864         struct fleegle {
03865 #ifdef BITFIELDS_BIGENDIAN
03866             unsigned NameIsString:1;
03867             unsigned NameOffset:31;
03868 #else
03869             unsigned NameOffset:31;
03870             unsigned NameIsString:1;
03871 #endif
03872         } DUMMYSTRUCTNAME1;
03873         DWORD   Name;
03874                 struct sneegle {
03875 #ifdef WORDS_BIGENDIAN
03876             WORD    __pad;
03877             WORD    Id;
03878 #else
03879             WORD    Id;
03880             WORD    __pad;
03881 #endif
03882         } DUMMYSTRUCTNAME2;
03883     } DUMMYUNIONNAME1;
03884     union u2 {
03885         DWORD   OffsetToData;
03886         struct drooper {
03887 #ifdef BITFIELDS_BIGENDIAN
03888             unsigned DataIsDirectory:1;
03889             unsigned OffsetToDirectory:31;
03890 #else
03891             unsigned OffsetToDirectory:31;
03892             unsigned DataIsDirectory:1;
03893 #endif
03894         } DUMMYSTRUCTNAME3;
03895     } DUMMYUNIONNAME2;
03896 } IMAGE_RESOURCE_DIRECTORY_ENTRY,*PIMAGE_RESOURCE_DIRECTORY_ENTRY;
03897
03898
03899 typedef struct _IMAGE_RESOURCE_DIRECTORY_STRING {
03900     WORD    Length;
03901     CHAR    NameString[ 1 ];
03902 } IMAGE_RESOURCE_DIRECTORY_STRING,*PIMAGE_RESOURCE_DIRECTORY_STRING;
03903
03904 typedef struct _IMAGE_RESOURCE_DIR_STRING_U {
03905     WORD    Length;
03906     WCHAR   NameString[ 1 ];
03907 } IMAGE_RESOURCE_DIR_STRING_U,*PIMAGE_RESOURCE_DIR_STRING_U;
03908
03909 typedef struct _IMAGE_RESOURCE_DATA_ENTRY {
03910     DWORD   OffsetToData;
03911     DWORD   Size;
03912     DWORD   CodePage;
03913     DWORD   ResourceHandle;
03914 } IMAGE_RESOURCE_DATA_ENTRY,*PIMAGE_RESOURCE_DATA_ENTRY;
03915
03916
03917 typedef VOID CALLBACK (*PIMAGE_TLS_CALLBACK)(
03918     LPVOID DllHandle,DWORD Reason,LPVOID Reserved
03919 );
03920
03921 typedef struct _IMAGE_TLS_DIRECTORY {
03922     DWORD   StartAddressOfRawData;
03923     DWORD   EndAddressOfRawData;
03924     LPDWORD AddressOfIndex;
03925     PIMAGE_TLS_CALLBACK *AddressOfCallBacks;
03926     DWORD   SizeOfZeroFill;
03927     DWORD   Characteristics;
03928 } IMAGE_TLS_DIRECTORY,*PIMAGE_TLS_DIRECTORY;
03929
03930 typedef struct _IMAGE_DEBUG_DIRECTORY {
03931   DWORD Characteristics;
03932   DWORD TimeDateStamp;
03933   WORD  MajorVersion;
03934   WORD  MinorVersion;
03935   DWORD Type;
```

```
03936   DWORD SizeOfData;
03937   DWORD AddressOfRawData;
03938   DWORD PointerToRawData;
03939 } IMAGE_DEBUG_DIRECTORY, *PIMAGE_DEBUG_DIRECTORY;
03940
03941 #define IMAGE_DEBUG_TYPE_UNKNOWN        0
03942 #define IMAGE_DEBUG_TYPE_COFF           1
03943 #define IMAGE_DEBUG_TYPE_CODEVIEW       2
03944 #define IMAGE_DEBUG_TYPE_FPO            3
03945 #define IMAGE_DEBUG_TYPE_MISC           4
03946 #define IMAGE_DEBUG_TYPE_EXCEPTION      5
03947 #define IMAGE_DEBUG_TYPE_FIXUP          6
03948 #define IMAGE_DEBUG_TYPE_OMAP_TO_SRC    7
03949 #define IMAGE_DEBUG_TYPE_OMAP_FROM_SRC  8
03950 #define IMAGE_DEBUG_TYPE_BORLAND        9
03951 #define IMAGE_DEBUG_TYPE_RESERVED10    10
03952
03953 typedef struct _IMAGE_COFF_SYMBOLS_HEADER {
03954   DWORD NumberOfSymbols;
03955   DWORD LvaToFirstSymbol;
03956   DWORD NumberOfLinenumbers;
03957   DWORD LvaToFirstLinenumber;
03958   DWORD RvaToFirstByteOfCode;
03959   DWORD RvaToLastByteOfCode;
03960   DWORD RvaToFirstByteOfData;
03961   DWORD RvaToLastByteOfData;
03962 } IMAGE_COFF_SYMBOLS_HEADER, *PIMAGE_COFF_SYMBOLS_HEADER;
03963
03964 #define FRAME_FPO       0
03965 #define FRAME_TRAP      1
03966 #define FRAME_TSS       2
03967 #define FRAME_NONFPO    3
03968
03969 typedef struct _FPO_DATA {
03970   DWORD ulOffStart;
03971   DWORD cbProcSize;
03972   DWORD cdwLocals;
03973   WORD  cdwParams;
03974   unsigned cbProlog : 8;
03975   unsigned cbRegs   : 3;
03976   unsigned fHasSEH  : 1;
03977   unsigned fUseBP   : 1;
03978   unsigned reserved : 1;
03979   unsigned cbFrame  : 2;
03980 } FPO_DATA, *PFPO_DATA;
03981
03982 typedef struct _IMAGE_LOAD_CONFIG_DIRECTORY {
03983   DWORD Characteristics;
03984   DWORD TimeDateStamp;
03985   WORD  MajorVersion;
03986   WORD  MinorVersion;
03987   DWORD GlobalFlagsClear;
03988   DWORD GlobalFlagsSet;
03989   DWORD CriticalSectionDefaultTimeout;
03990   DWORD DeCommitFreeBlockThreshold;
03991   DWORD DeCommitTotalFreeThreshold;
03992   PVOID LockPrefixTable;
03993   DWORD MaximumAllocationSize;
03994   DWORD VirtualMemoryThreshold;
03995   DWORD ProcessHeapFlags;
03996   DWORD ProcessAffinityMask;
03997   WORD  CSDVersion;
03998   WORD  Reserved1;
03999   PVOID EditList;
04000   DWORD Reserved[1];
04001 } IMAGE_LOAD_CONFIG_DIRECTORY, *PIMAGE_LOAD_CONFIG_DIRECTORY;
04002
04003 typedef struct _IMAGE_FUNCTION_ENTRY {
04004   DWORD StartingAddress;
04005   DWORD EndingAddress;
04006   DWORD EndOfPrologue;
04007 } IMAGE_FUNCTION_ENTRY, *PIMAGE_FUNCTION_ENTRY;
04008
04009 #define IMAGE_DEBUG_MISC_EXENAME    1
04010
04011 typedef struct _IMAGE_DEBUG_MISC {
04012     DWORD       DataType;
04013     DWORD       Length;
04014     BYTE        Unicode;
04015     BYTE        Reserved[ 3 ];
04016     BYTE        Data[ 1 ];
04017 } IMAGE_DEBUG_MISC, *PIMAGE_DEBUG_MISC;
04018
04019 /* This is the structure that appears at the very start of a .DBG file. */
04020
04021 typedef struct _IMAGE_SEPARATE_DEBUG_HEADER {
04022     WORD    Signature;
```

```
04023     WORD    Flags;
04024     WORD    Machine;
04025     WORD    Characteristics;
04026     DWORD   TimeDateStamp;
04027     DWORD   CheckSum;
04028     DWORD   ImageBase;
04029     DWORD   SizeOfImage;
04030     DWORD   NumberOfSections;
04031     DWORD   ExportedNamesSize;
04032     DWORD   DebugDirectorySize;
04033     DWORD   SectionAlignment;
04034     DWORD   Reserved[ 2 ];
04035 } IMAGE_SEPARATE_DEBUG_HEADER,*PIMAGE_SEPARATE_DEBUG_HEADER;
04036
04037 #define IMAGE_SEPARATE_DEBUG_SIGNATURE 0x4944
04038
04039
04040 typedef struct tagMESSAGE_RESOURCE_ENTRY {
04041     WORD    Length;
04042     WORD    Flags;
04043     BYTE    Text[1];
04044 } MESSAGE_RESOURCE_ENTRY,*PMESSAGE_RESOURCE_ENTRY;
04045 #define MESSAGE_RESOURCE_UNICODE    0x0001
04046
04047 typedef struct tagMESSAGE_RESOURCE_BLOCK {
04048     DWORD   LowId;
04049     DWORD   HighId;
04050     DWORD   OffsetToEntries;
04051 } MESSAGE_RESOURCE_BLOCK,*PMESSAGE_RESOURCE_BLOCK;
04052
04053 typedef struct tagMESSAGE_RESOURCE_DATA {
04054     DWORD           NumberOfBlocks;
04055     MESSAGE_RESOURCE_BLOCK  Blocks[ 1 ];
04056 } MESSAGE_RESOURCE_DATA,*PMESSAGE_RESOURCE_DATA;
04057
04058 /*
04059  * Here follows typedefs for security and tokens.
04060  */
04061
04062 /*
04063  * First a constant for the following typdefs.
04064  */
04065
04066 #define ANYSIZE_ARRAY   1
04067
04068 /* FIXME:  Orphan.  What does it point to? */
04069 typedef PVOID PACCESS_TOKEN;
04070
04071 /*
04072  * TOKEN_INFORMATION_CLASS
04073  */
04074
04075 typedef enum _TOKEN_INFORMATION_CLASS {
04076   TokenUser = 1,
04077   TokenGroups,
04078   TokenPrivileges,
04079   TokenOwner,
04080   TokenPrimaryGroup,
04081   TokenDefaultDacl,
04082   TokenSource,
04083   TokenType,
04084   TokenImpersonationLevel,
04085   TokenStatistics
04086 } TOKEN_INFORMATION_CLASS;
04087
04088 #define TOKEN_TOKEN_ADJUST_DEFAULT   0x0080
04089 #define TOKEN_ADJUST_GROUPS          0x0040
04090 #define TOKEN_ADJUST_PRIVILEGES      0x0020
04091 #define TOKEN_ADJUST_SESSIONID       0x0100
04092 #define TOKEN_ASSIGN_PRIMARY         0x0001
04093 #define TOKEN_DUPLICATE              0x0002
04094 #define TOKEN_EXECUTE                STANDARD_RIGHTS_EXECUTE
04095 #define TOKEN_IMPERSONATE            0x0004
04096 #define TOKEN_QUERY                  0x0008
04097 #define TOKEN_QUERY_SOURCE           0x0010
04098 #define TOKEN_ADJUST_DEFAULT         0x0080
04099 #define TOKEN_READ                   (STANDARD_RIGHTS_READ|TOKEN_QUERY)
04100 #define TOKEN_WRITE                  (STANDARD_RIGHTS_WRITE     | \
04101                     TOKEN_ADJUST_PRIVILEGES | \
04102                     TOKEN_ADJUST_GROUPS | \
04103                     TOKEN_ADJUST_DEFAULT )
04104 #define TOKEN_ALL_ACCESS             (STANDARD_RIGHTS_REQUIRED | \
04105                     TOKEN_ASSIGN_PRIMARY | \
04106                     TOKEN_DUPLICATE | \
04107                     TOKEN_IMPERSONATE | \
04108                     TOKEN_QUERY | \
04109                     TOKEN_QUERY_SOURCE | \
```

```
04110                     TOKEN_ADJUST_PRIVILEGES | \
04111                     TOKEN_ADJUST_GROUPS | \
04112                     TOKEN_ADJUST_SESSIONID | \
04113                     TOKEN_ADJUST_DEFAULT )
04114
04115 #ifndef _SECURITY_DEFINED
04116 #define _SECURITY_DEFINED
04117
04118
04119 typedef DWORD ACCESS_MASK, *PACCESS_MASK;
04120
04121 typedef struct _GENERIC_MAPPING {
04122     ACCESS_MASK GenericRead;
04123     ACCESS_MASK GenericWrite;
04124     ACCESS_MASK GenericExecute;
04125     ACCESS_MASK GenericAll;
04126 } GENERIC_MAPPING, *PGENERIC_MAPPING;
04127
04128 #ifndef SID_IDENTIFIER_AUTHORITY_DEFINED
04129 #define SID_IDENTIFIER_AUTHORITY_DEFINED
04130 typedef struct {
04131     BYTE Value[6];
04132 } SID_IDENTIFIER_AUTHORITY,*PSID_IDENTIFIER_AUTHORITY,*LPSID_IDENTIFIER_AUTHORITY;
04133 #endif /* !defined(SID_IDENTIFIER_AUTHORITY_DEFINED) */
04134
04135 #ifndef SID_DEFINED
04136 #define SID_DEFINED
04137 typedef struct _SID {
04138     BYTE Revision;
04139     BYTE SubAuthorityCount;
04140     SID_IDENTIFIER_AUTHORITY IdentifierAuthority;
04141     DWORD SubAuthority[1];
04142 } SID,*PSID;
04143 #endif /* !defined(SID_DEFINED) */
04144
04145 #define SID_REVISION            (1) /* Current revision */
04146 #define SID_MAX_SUB_AUTHORITIES     (15)    /* current max subauths */
04147 #define SID_RECOMMENDED_SUB_AUTHORITIES (1) /* recommended subauths */
04148
04149
04150 /*
04151  * ACL
04152  */
04153
04154 #define ACL_REVISION1 1
04155 #define ACL_REVISION2 2
04156 #define ACL_REVISION3 3
04157 #define ACL_REVISION4 4
04158
04159 #define MIN_ACL_REVISION ACL_REVISION2
04160 #define MAX_ACL_REVISION ACL_REVISION4
04161
04162 typedef struct _ACL {
04163     BYTE AclRevision;
04164     BYTE Sbz1;
04165     WORD AclSize;
04166     WORD AceCount;
04167     WORD Sbz2;
04168 } ACL, *PACL;
04169
04170 /* SECURITY_DESCRIPTOR */
04171 #define SECURITY_DESCRIPTOR_REVISION    1
04172 #define SECURITY_DESCRIPTOR_REVISION1   1
04173
04174
04175 #define SE_OWNER_DEFAULTED  0x0001
04176 #define SE_GROUP_DEFAULTED  0x0002
04177 #define SE_DACL_PRESENT     0x0004
04178 #define SE_DACL_DEFAULTED   0x0008
04179 #define SE_SACL_PRESENT     0x0010
04180 #define SE_SACL_DEFAULTED   0x0020
04181 #define SE_SELF_RELATIVE    0x8000
04182
04183 typedef DWORD SECURITY_INFORMATION, *PSECURITY_INFORMATION;
04184 typedef WORD SECURITY_DESCRIPTOR_CONTROL, *PSECURITY_DESCRIPTOR_CONTROL;
04185
04186 /* The security descriptor structure */
04187 typedef struct {
04188     BYTE Revision;
04189     BYTE Sbz1;
04190     SECURITY_DESCRIPTOR_CONTROL Control;
04191     DWORD Owner;
04192     DWORD Group;
04193     DWORD Sacl;
04194     DWORD Dacl;
04195 } SECURITY_DESCRIPTOR_RELATIVE, *PISECURITY_DESCRIPTOR_RELATIVE;
04196
```

```
04197 typedef struct {
04198     BYTE Revision;
04199     BYTE Sbz1;
04200     SECURITY_DESCRIPTOR_CONTROL Control;
04201     PSID Owner;
04202     PSID Group;
04203     PACL Sacl;
04204     PACL Dacl;
04205 } SECURITY_DESCRIPTOR, *PSECURITY_DESCRIPTOR;
04206
04207 #define SECURITY_DESCRIPTOR_MIN_LENGTH   (sizeof(SECURITY_DESCRIPTOR))
04208
04209 #endif /* _SECURITY_DEFINED */
04210
04211 /*
04212  * SID_AND_ATTRIBUTES
04213  */
04214
04215 typedef struct _SID_AND_ATTRIBUTES {
04216   PSID  Sid;
04217   DWORD Attributes;
04218 } SID_AND_ATTRIBUTES ;
04219
04220 /* security entities */
04221 #define SECURITY_NULL_RID           (0x00000000L)
04222 #define SECURITY_WORLD_RID          (0x00000000L)
04223 #define SECURITY_LOCAL_RID          (0X00000000L)
04224
04225 #define SECURITY_NULL_SID_AUTHORITY     {0,0,0,0,0,0}
04226
04227 /* S-1-1 */
04228 #define SECURITY_WORLD_SID_AUTHORITY        {0,0,0,0,0,1}
04229
04230 /* S-1-2 */
04231 #define SECURITY_LOCAL_SID_AUTHORITY        {0,0,0,0,0,2}
04232
04233 /* S-1-3 */
04234 #define SECURITY_CREATOR_SID_AUTHORITY      {0,0,0,0,0,3}
04235 #define SECURITY_CREATOR_OWNER_RID      (0x00000000L)
04236 #define SECURITY_CREATOR_GROUP_RID      (0x00000001L)
04237 #define SECURITY_CREATOR_OWNER_SERVER_RID   (0x00000002L)
04238 #define SECURITY_CREATOR_GROUP_SERVER_RID   (0x00000003L)
04239
04240 /* S-1-4 */
04241 #define SECURITY_NON_UNIQUE_AUTHORITY       {0,0,0,0,0,4}
04242
04243 /* S-1-5 */
04244 #define SECURITY_NT_AUTHORITY           {0,0,0,0,0,5}
04245 #define SECURITY_DIALUP_RID                     0x00000001L
04246 #define SECURITY_NETWORK_RID                    0x00000002L
04247 #define SECURITY_BATCH_RID                      0x00000003L
04248 #define SECURITY_INTERACTIVE_RID                0x00000004L
04249 #define SECURITY_LOGON_IDS_RID                  0x00000005L
04250 #define SECURITY_SERVICE_RID                    0x00000006L
04251 #define SECURITY_ANONYMOUS_LOGON_RID            0x00000007L
04252 #define SECURITY_PROXY_RID                      0x00000008L
04253 #define SECURITY_ENTERPRISE_CONTROLLERS_RID     0x00000009L
04254 #define SECURITY_PRINCIPAL_SELF_RID             0x0000000AL
04255 #define SECURITY_AUTHENTICATED_USER_RID         0x0000000BL
04256 #define SECURITY_RESTRICTED_CODE_RID            0x0000000CL
04257 #define SECURITY_TERMINAL_SERVER_RID            0x0000000DL
04258 #define SECURITY_LOCAL_SYSTEM_RID               0x00000012L
04259 #define SECURITY_NT_NON_UNIQUE                  0x00000015L
04260 #define SECURITY_BUILTIN_DOMAIN_RID             0x00000020L
04261
04262 #define DOMAIN_GROUP_RID_ADMINS                 0x00000200L
04263 #define DOMAIN_GROUP_RID_USERS                  0x00000201L
04264 #define DOMAIN_GROUP_RID_GUESTS                 0x00000202L
04265
04266 #define DOMAIN_ALIAS_RID_ADMINS                 0x00000220L
04267 #define DOMAIN_ALIAS_RID_USERS                  0x00000221L
04268 #define DOMAIN_ALIAS_RID_GUESTS                 0x00000222L
04269
04270 #define SECURITY_SERVER_LOGON_RID       SECURITY_ENTERPRISE_CONTROLLERS_RID
04271
04272 #define SECURITY_LOGON_IDS_RID_COUNT        (3L)
04273
04274 /*
04275  * TOKEN_USER
04276  */
04277
04278 typedef struct _TOKEN_USER {
04279   SID_AND_ATTRIBUTES User;
04280 } TOKEN_USER;
04281
04282 /*
04283  * TOKEN_GROUPS
```

```
04284  */
04285
04286 typedef struct _TOKEN_GROUPS  {
04287   DWORD GroupCount;
04288   SID_AND_ATTRIBUTES Groups[ANYSIZE_ARRAY];
04289 } TOKEN_GROUPS;
04290
04291 /*
04292  * LUID_AND_ATTRIBUTES
04293  */
04294
04295 typedef union _LARGE_INTEGER {
04296     struct dorp {
04297         DWORD    LowPart;
04298         LONG     HighPart;
04299     } DUMMYSTRUCTNAME;
04300     LONGLONG QuadPart;
04301 } LARGE_INTEGER, *LPLARGE_INTEGER, *PLARGE_INTEGER;
04302
04303 typedef union _ULARGE_INTEGER {
04304     struct banana {
04305         DWORD    LowPart;
04306         DWORD    HighPart;
04307     } DUMMYSTRUCTNAME;
04308     ULONGLONG QuadPart;
04309 } ULARGE_INTEGER, *LPULARGE_INTEGER, *PULARGE_INTEGER;
04310
04311 /*
04312  * Locally Unique Identifier
04313  */
04314
04315 typedef struct _LUID {
04316     DWORD LowPart;
04317     LONG HighPart;
04318 } LUID, *PLUID;
04319
04320 #include "pshpack4.h"
04321 typedef struct _LUID_AND_ATTRIBUTES {
04322   LUID   Luid;
04323   DWORD  Attributes;
04324 } LUID_AND_ATTRIBUTES;
04325 #include "poppack.h"
04326
04327 /*
04328  * PRIVILEGE_SET
04329  */
04330
04331 typedef struct _PRIVILEGE_SET {
04332     DWORD PrivilegeCount;
04333     DWORD Control;
04334     LUID_AND_ATTRIBUTES Privilege[ANYSIZE_ARRAY];
04335 } PRIVILEGE_SET, *PPRIVILEGE_SET;
04336
04337 /*
04338  * TOKEN_PRIVILEGES
04339  */
04340
04341 typedef struct _TOKEN_PRIVILEGES {
04342   DWORD PrivilegeCount;
04343   LUID_AND_ATTRIBUTES Privileges[ANYSIZE_ARRAY];
04344 } TOKEN_PRIVILEGES, *PTOKEN_PRIVILEGES;
04345
04346 /*
04347  * TOKEN_OWNER
04348  */
04349
04350 typedef struct _TOKEN_OWNER {
04351   PSID Owner;
04352 } TOKEN_OWNER;
04353
04354 /*
04355  * TOKEN_PRIMARY_GROUP
04356  */
04357
04358 typedef struct _TOKEN_PRIMARY_GROUP {
04359   PSID PrimaryGroup;
04360 } TOKEN_PRIMARY_GROUP;
04361
04362
04363 /*
04364  * TOKEN_DEFAULT_DACL
04365  */
04366
04367 typedef struct _TOKEN_DEFAULT_DACL {
04368   PACL DefaultDacl;
04369 } TOKEN_DEFAULT_DACL;
04370
```

```
04371 /*
04372  * TOKEN_SOURCEL
04373  */
04374
04375 typedef struct _TOKEN_SOURCE {
04376   char Sourcename[8];
04377   LUID SourceIdentifier;
04378 } TOKEN_SOURCE;
04379
04380 /*
04381  * TOKEN_TYPE
04382  */
04383
04384 typedef enum tagTOKEN_TYPE {
04385   TokenPrimary = 1,
04386   TokenImpersonation
04387 } TOKEN_TYPE;
04388
04389 /*
04390  * SECURITY_IMPERSONATION_LEVEL
04391  */
04392
04393 typedef enum _SECURITY_IMPERSONATION_LEVEL {
04394   SecurityAnonymous,
04395   SecurityIdentification,
04396   SecurityImpersonation,
04397   SecurityDelegation
04398 } SECURITY_IMPERSONATION_LEVEL, *PSECURITY_IMPERSONATION_LEVEL;
04399
04400
04401 typedef BOOLEAN SECURITY_CONTEXT_TRACKING_MODE,
04402     * PSECURITY_CONTEXT_TRACKING_MODE;
04403 /*
04404  *  Quality of Service
04405  */
04406
04407 typedef struct _SECURITY_QUALITY_OF_SERVICE {
04408   DWORD             Length;
04409   SECURITY_IMPERSONATION_LEVEL  ImpersonationLevel;
04410   SECURITY_CONTEXT_TRACKING_MODE ContextTrackingMode;
04411   BOOLEAN           EffectiveOnly;
04412 } SECURITY_QUALITY_OF_SERVICE, *PSECURITY_QUALITY_OF_SERVICE;
04413
04414 /*
04415  * TOKEN_STATISTICS
04416  */
04417
04418 typedef struct _TOKEN_STATISTICS {
04419   LUID  TokenId;
04420   LUID  AuthenticationId;
04421   LARGE_INTEGER ExpirationTime;
04422   TOKEN_TYPE    TokenType;
04423   SECURITY_IMPERSONATION_LEVEL ImpersonationLevel;
04424   DWORD DynamicCharged;
04425   DWORD DynamicAvailable;
04426   DWORD GroupCount;
04427   DWORD PrivilegeCount;
04428   LUID  ModifiedId;
04429 } TOKEN_STATISTICS;
04430
04431 /*
04432  *  ACLs of NT
04433  */
04434
04435 #define ACL_REVISION    2
04436
04437 #define ACL_REVISION1   1
04438 #define ACL_REVISION2   2
04439
04440 /* ACEs, directly starting after an ACL */
04441 typedef struct _ACE_HEADER {
04442     BYTE    AceType;
04443     BYTE    AceFlags;
04444     WORD    AceSize;
04445 } ACE_HEADER,*PACE_HEADER;
04446
04447 /* AceType */
04448 #define ACCESS_ALLOWED_ACE_TYPE     0
04449 #define ACCESS_DENIED_ACE_TYPE      1
04450 #define SYSTEM_AUDIT_ACE_TYPE       2
04451 #define SYSTEM_ALARM_ACE_TYPE       3
04452
04453 /* inherit AceFlags */
04454 #define OBJECT_INHERIT_ACE      0x01
04455 #define CONTAINER_INHERIT_ACE       0x02
04456 #define NO_PROPAGATE_INHERIT_ACE    0x04
04457 #define INHERIT_ONLY_ACE        0x08
```

```
04458 #define VALID_INHERIT_FLAGS     0x0F
04459
04460 /* AceFlags mask for what events we (should) audit */
04461 #define SUCCESSFUL_ACCESS_ACE_FLAG  0x40
04462 #define FAILED_ACCESS_ACE_FLAG      0x80
04463
04464 /* different ACEs depending on AceType
04465  * SidStart marks the begin of a SID
04466  * so the thing finally looks like this:
04467  * 0: ACE_HEADER
04468  * 4: ACCESS_MASK
04469  * 8... : SID
04470  */
04471 typedef struct _ACCESS_ALLOWED_ACE {
04472     ACE_HEADER  Header;
04473     DWORD       Mask;
04474     DWORD       SidStart;
04475 } ACCESS_ALLOWED_ACE,*PACCESS_ALLOWED_ACE;
04476
04477 typedef struct _ACCESS_DENIED_ACE {
04478     ACE_HEADER  Header;
04479     DWORD       Mask;
04480     DWORD       SidStart;
04481 } ACCESS_DENIED_ACE,*PACCESS_DENIED_ACE;
04482
04483 typedef struct _SYSTEM_AUDIT_ACE {
04484     ACE_HEADER  Header;
04485     DWORD       Mask;
04486     DWORD       SidStart;
04487 } SYSTEM_AUDIT_ACE,*PSYSTEM_AUDIT_ACE;
04488
04489 typedef struct _SYSTEM_ALARM_ACE {
04490     ACE_HEADER  Header;
04491     DWORD       Mask;
04492     DWORD       SidStart;
04493 } SYSTEM_ALARM_ACE,*PSYSTEM_ALARM_ACE;
04494
04495 typedef enum tagSID_NAME_USE {
04496     SidTypeUser = 1,
04497     SidTypeGroup,
04498     SidTypeDomain,
04499     SidTypeAlias,
04500     SidTypeWellKnownGroup,
04501     SidTypeDeletedAccount,
04502     SidTypeInvalid,
04503     SidTypeUnknown
04504 } SID_NAME_USE,*PSID_NAME_USE;
04505
04506 /* Access rights */
04507
04508 /* DELETE may be already defined via /usr/include/arpa/nameser_compat.h */
04509 #undef  DELETE
04510 #define DELETE                      0x00010000
04511 #define READ_CONTROL                0x00020000
04512 #define WRITE_DAC                   0x00040000
04513 #define WRITE_OWNER                 0x00080000
04514 #define SYNCHRONIZE                 0x00100000
04515 #define STANDARD_RIGHTS_REQUIRED    0x000f0000
04516
04517 #define STANDARD_RIGHTS_READ        READ_CONTROL
04518 #define STANDARD_RIGHTS_WRITE       READ_CONTROL
04519 #define STANDARD_RIGHTS_EXECUTE     READ_CONTROL
04520
04521 #define STANDARD_RIGHTS_ALL         0x001f0000
04522
04523 #define SPECIFIC_RIGHTS_ALL         0x0000ffff
04524
04525 #define GENERIC_READ                0x80000000
04526 #define GENERIC_WRITE               0x40000000
04527 #define GENERIC_EXECUTE             0x20000000
04528 #define GENERIC_ALL                 0x10000000
04529
04530 #define MAXIMUM_ALLOWED             0x02000000
04531 #define ACCESS_SYSTEM_SECURITY      0x01000000
04532
04533 #define EVENT_MODIFY_STATE          0x0002
04534 #define EVENT_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x3)
04535
04536 #define SEMAPHORE_MODIFY_STATE      0x0002
04537 #define SEMAPHORE_ALL_ACCESS        (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x3)
04538
04539 #define MUTEX_MODIFY_STATE          0x0001
04540 #define MUTEX_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x1)
04541
04542 #define TIMER_QUERY_STATE           0x0001
04543 #define TIMER_MODIFY_STATE          0x0002
04544 #define TIMER_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x3)
```

```
04545
04546 #define PROCESS_TERMINATE          0x0001
04547 #define PROCESS_CREATE_THREAD      0x0002
04548 #define PROCESS_VM_OPERATION       0x0008
04549 #define PROCESS_VM_READ            0x0010
04550 #define PROCESS_VM_WRITE           0x0020
04551 #define PROCESS_DUP_HANDLE         0x0040
04552 #define PROCESS_CREATE_PROCESS     0x0080
04553 #define PROCESS_SET_QUOTA          0x0100
04554 #define PROCESS_SET_INFORMATION    0x0200
04555 #define PROCESS_QUERY_INFORMATION  0x0400
04556 #define PROCESS_ALL_ACCESS         (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0xfff)
04557
04558 #define THREAD_TERMINATE           0x0001
04559 #define THREAD_SUSPEND_RESUME      0x0002
04560 #define THREAD_GET_CONTEXT         0x0008
04561 #define THREAD_SET_CONTEXT         0x0010
04562 #define THREAD_SET_INFORMATION     0x0020
04563 #define THREAD_QUERY_INFORMATION   0x0040
04564 #define THREAD_SET_THREAD_TOKEN    0x0080
04565 #define THREAD_IMPERSONATE         0x0100
04566 #define THREAD_DIRECT_IMPERSONATION 0x0200
04567 #define THREAD_ALL_ACCESS          (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x3ff)
04568
04569 #define THREAD_BASE_PRIORITY_LOWRT  15
04570 #define THREAD_BASE_PRIORITY_MAX    2
04571 #define THREAD_BASE_PRIORITY_MIN   -2
04572 #define THREAD_BASE_PRIORITY_IDLE  -15
04573
04574 #define FILE_READ_DATA             0x0001    /* file & pipe */
04575 #define FILE_LIST_DIRECTORY        0x0001    /* directory */
04576 #define FILE_WRITE_DATA            0x0002    /* file & pipe */
04577 #define FILE_ADD_FILE              0x0002    /* directory */
04578 #define FILE_APPEND_DATA           0x0004    /* file */
04579 #define FILE_ADD_SUBDIRECTORY      0x0004    /* directory */
04580 #define FILE_CREATE_PIPE_INSTANCE 0x0004    /* named pipe */
04581 #define FILE_READ_EA               0x0008    /* file & directory */
04582 #define FILE_READ_PROPERTIES       FILE_READ_EA
04583 #define FILE_WRITE_EA              0x0010    /* file & directory */
04584 #define FILE_WRITE_PROPERTIES      FILE_WRITE_EA
04585 #define FILE_EXECUTE               0x0020    /* file */
04586 #define FILE_TRAVERSE              0x0020    /* directory */
04587 #define FILE_DELETE_CHILD          0x0040    /* directory */
04588 #define FILE_READ_ATTRIBUTES       0x0080    /* all */
04589 #define FILE_WRITE_ATTRIBUTES      0x0100    /* all */
04590 #define FILE_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED|SYNCHRONIZE|0x1ff)
04591
04592 #define FILE_GENERIC_READ          (STANDARD_RIGHTS_READ | FILE_READ_DATA | \
04593                                     FILE_READ_ATTRIBUTES | FILE_READ_EA | \
04594                                     SYNCHRONIZE)
04595 #define FILE_GENERIC_WRITE         (STANDARD_RIGHTS_WRITE | FILE_WRITE_DATA | \
04596                                     FILE_WRITE_ATTRIBUTES | FILE_WRITE_EA | \
04597                                     FILE_APPEND_DATA | SYNCHRONIZE)
04598 #define FILE_GENERIC_EXECUTE       (STANDARD_RIGHTS_EXECUTE | FILE_EXECUTE | \
04599                                     FILE_READ_ATTRIBUTES | SYNCHRONIZE)
04600
04601
04602 /* File attribute flags */
04603 #define FILE_SHARE_READ          0x00000001L
04604 #define FILE_SHARE_WRITE         0x00000002L
04605 #define FILE_SHARE_DELETE        0x00000004L
04606 #define FILE_ATTRIBUTE_READONLY          0x00000001L
04607 #define FILE_ATTRIBUTE_HIDDEN            0x00000002L
04608 #define FILE_ATTRIBUTE_SYSTEM            0x00000004L
04609 #define FILE_ATTRIBUTE_LABEL             0x00000008L  /* Not in Windows API */
04610 #define FILE_ATTRIBUTE_DIRECTORY         0x00000010L
04611 #define FILE_ATTRIBUTE_ARCHIVE           0x00000020L
04612 #define FILE_ATTRIBUTE_NORMAL            0x00000080L
04613 #define FILE_ATTRIBUTE_TEMPORARY         0x00000100L
04614 #define FILE_ATTRIBUTE_ATOMIC_WRITE      0x00000200L
04615 #define FILE_ATTRIBUTE_XACTION_WRITE     0x00000400L
04616 #define FILE_ATTRIBUTE_COMPRESSED        0x00000800L
04617 #define FILE_ATTRIBUTE_OFFLINE       0x00001000L
04618 #define FILE_ATTRIBUTE_SYMLINK       0x80000000L  /* Not in Windows API */
04619
04620 /* File notification flags */
04621 #define FILE_NOTIFY_CHANGE_FILE_NAME     0x00000001
04622 #define FILE_NOTIFY_CHANGE_DIR_NAME      0x00000002
04623 #define FILE_NOTIFY_CHANGE_ATTRIBUTES    0x00000004
04624 #define FILE_NOTIFY_CHANGE_SIZE          0x00000008
04625 #define FILE_NOTIFY_CHANGE_LAST_WRITE    0x00000010
04626 #define FILE_NOTIFY_CHANGE_LAST_ACCESS   0x00000020
04627 #define FILE_NOTIFY_CHANGE_CREATION      0x00000040
04628 #define FILE_NOTIFY_CHANGE_SECURITY      0x00000100
04629
04630 #define FILE_ACTION_ADDED                0x00000001
04631 #define FILE_ACTION_REMOVED              0x00000002
```

```
04632 #define FILE_ACTION_MODIFIED            0x00000003
04633 #define FILE_ACTION_RENAMED_OLD_NAME    0x00000004
04634 #define FILE_ACTION_RENAMED_NEW_NAME    0x00000005
04635
04636
04637 #define FILE_CASE_SENSITIVE_SEARCH      0x00000001
04638 #define FILE_CASE_PRESERVED_NAMES       0x00000002
04639 #define FILE_UNICODE_ON_DISK            0x00000004
04640 #define FILE_PERSISTENT_ACLS            0x00000008
04641 #define FILE_FILE_COMPRESSION           0x00000010
04642 #define FILE_VOLUME_IS_COMPRESSED       0x00008000
04643
04644 /* File alignments (NT) */
04645 #define FILE_BYTE_ALIGNMENT     0x00000000
04646 #define FILE_WORD_ALIGNMENT     0x00000001
04647 #define FILE_LONG_ALIGNMENT     0x00000003
04648 #define FILE_QUAD_ALIGNMENT     0x00000007
04649 #define FILE_OCTA_ALIGNMENT     0x0000000f
04650 #define FILE_32_BYTE_ALIGNMENT      0x0000001f
04651 #define FILE_64_BYTE_ALIGNMENT      0x0000003f
04652 #define FILE_128_BYTE_ALIGNMENT     0x0000007f
04653 #define FILE_256_BYTE_ALIGNMENT     0x000000ff
04654 #define FILE_512_BYTE_ALIGNMENT     0x000001ff
04655
04656 #define REG_NONE        0   /* no type */
04657 #define REG_SZ          1   /* string type (ASCII) */
04658 #define REG_EXPAND_SZ       2   /* string, includes %ENVVAR% (expanded by caller) (ASCII) */
04659 #define REG_BINARY      3   /* binary format, callerspecific */
04660 /* YES, REG_DWORD == REG_DWORD_LITTLE_ENDIAN */
04661 #define REG_DWORD       4   /* DWORD in little endian format */
04662 #define REG_DWORD_LITTLE_ENDIAN 4   /* DWORD in little endian format */
04663 #define REG_DWORD_BIG_ENDIAN    5   /* DWORD in big endian format  */
04664 #define REG_LINK        6   /* symbolic link (UNICODE) */
04665 #define REG_MULTI_SZ        7   /* multiple strings, delimited by \0, terminated by \0\0 (ASCII) */
04666 #define REG_RESOURCE_LIST   8   /* resource list? huh? */
04667 #define REG_FULL_RESOURCE_DESCRIPTOR    9   /* full resource descriptor? huh? */
04668 #define REG_RESOURCE_REQUIREMENTS_LIST  10
04669
04670 /* ---------------------------- begin registry ---------------------------- */
04671
04672 /* Registry security values */
04673 #define OWNER_SECURITY_INFORMATION  0x00000001
04674 #define GROUP_SECURITY_INFORMATION  0x00000002
04675 #define DACL_SECURITY_INFORMATION   0x00000004
04676 #define SACL_SECURITY_INFORMATION   0x00000008
04677
04678 #define REG_OPTION_RESERVED     0x00000000
04679 #define REG_OPTION_NON_VOLATILE     0x00000000
04680 #define REG_OPTION_VOLATILE     0x00000001
04681 #define REG_OPTION_CREATE_LINK      0x00000002
04682 #define REG_OPTION_BACKUP_RESTORE   0x00000004 /* FIXME */
04683 #define REG_OPTION_OPEN_LINK        0x00000008
04684 #define REG_LEGAL_OPTION            (REG_OPTION_RESERVED|  \
04685                      REG_OPTION_NON_VOLATILE|  \
04686                      REG_OPTION_VOLATILE|  \
04687                      REG_OPTION_CREATE_LINK|  \
04688                      REG_OPTION_BACKUP_RESTORE|  \
04689                      REG_OPTION_OPEN_LINK)
04690
04691
04692 #define REG_CREATED_NEW_KEY 0x00000001
04693 #define REG_OPENED_EXISTING_KEY 0x00000002
04694
04695 /* For RegNotifyChangeKeyValue */
04696 #define REG_NOTIFY_CHANGE_NAME  0x1
04697
04698 #define KEY_QUERY_VALUE     0x00000001
04699 #define KEY_SET_VALUE       0x00000002
04700 #define KEY_CREATE_SUB_KEY  0x00000004
04701 #define KEY_ENUMERATE_SUB_KEYS  0x00000008
04702 #define KEY_NOTIFY      0x00000010
04703 #define KEY_CREATE_LINK     0x00000020
04704
04705 #define KEY_READ          ((STANDARD_RIGHTS_READ|  \
04706                 KEY_QUERY_VALUE|  \
04707                 KEY_ENUMERATE_SUB_KEYS|  \
04708                 KEY_NOTIFY)  \
04709                 & (~SYNCHRONIZE)  \
04710                   )
04711 #define KEY_WRITE         ((STANDARD_RIGHTS_WRITE|  \
04712                 KEY_SET_VALUE|  \
04713                 KEY_CREATE_SUB_KEY)  \
04714                 & (~SYNCHRONIZE)  \
04715                   )
04716 #define KEY_EXECUTE       ((KEY_READ)  \
04717                 & (~SYNCHRONIZE))  \
04718                   )
```

```
04719 #define KEY_ALL_ACCESS        ((STANDARD_RIGHTS_ALL|  \
04720                 KEY_QUERY_VALUE|  \
04721                 KEY_SET_VALUE|  \
04722                 KEY_CREATE_SUB_KEY|  \
04723                 KEY_ENUMERATE_SUB_KEYS|  \
04724                 KEY_NOTIFY|  \
04725                 KEY_CREATE_LINK)  \
04726                 & (~SYNCHRONIZE)  \
04727                   )
04728 /* ------------------------------ end registry ------------------------------ */
04729
04730
04731 #define EVENTLOG_SUCCESS                0x0000
04732 #define EVENTLOG_ERROR_TYPE             0x0001
04733 #define EVENTLOG_WARNING_TYPE           0x0002
04734 #define EVENTLOG_INFORMATION_TYPE       0x0004
04735 #define EVENTLOG_AUDIT_SUCCESS          0x0008
04736 #define EVENTLOG_AUDIT_FAILURE          0x0010
04737
04738 #define SERVICE_BOOT_START   0x00000000
04739 #define SERVICE_SYSTEM_START 0x00000001
04740 #define SERVICE_AUTO_START   0x00000002
04741 #define SERVICE_DEMAND_START 0x00000003
04742 #define SERVICE_DISABLED     0x00000004
04743
04744 #define SERVICE_ERROR_IGNORE   0x00000000
04745 #define SERVICE_ERROR_NORMAL   0x00000001
04746 #define SERVICE_ERROR_SEVERE   0x00000002
04747 #define SERVICE_ERROR_CRITICAL 0x00000003
04748
04749 /* Service types */
04750 #define SERVICE_KERNEL_DRIVER      0x00000001
04751 #define SERVICE_FILE_SYSTEM_DRIVER 0x00000002
04752 #define SERVICE_ADAPTER            0x00000004
04753 #define SERVICE_RECOGNIZER_DRIVER  0x00000008
04754
04755 #define SERVICE_DRIVER ( SERVICE_KERNEL_DRIVER | SERVICE_FILE_SYSTEM_DRIVER | \
04756                          SERVICE_RECOGNIZER_DRIVER )
04757
04758 #define SERVICE_WIN32_OWN_PROCESS   0x00000010
04759 #define SERVICE_WIN32_SHARE_PROCESS 0x00000020
04760 #define SERVICE_WIN32  (SERVICE_WIN32_OWN_PROCESS | SERVICE_WIN32_SHARE_PROCESS)
04761
04762 #define SERVICE_INTERACTIVE_PROCESS 0x00000100
04763
04764 #define SERVICE_TYPE_ALL ( SERVICE_WIN32 | SERVICE_ADAPTER | \
04765                            SERVICE_DRIVER | SERVICE_INTERACTIVE_PROCESS )
04766
04767
04768 typedef enum _CM_SERVICE_NODE_TYPE
04769 {
04770   DriverType               = SERVICE_KERNEL_DRIVER,
04771   FileSystemType           = SERVICE_FILE_SYSTEM_DRIVER,
04772   Win32ServiceOwnProcess   = SERVICE_WIN32_OWN_PROCESS,
04773   Win32ServiceShareProcess = SERVICE_WIN32_SHARE_PROCESS,
04774   AdapterType              = SERVICE_ADAPTER,
04775   RecognizerType           = SERVICE_RECOGNIZER_DRIVER
04776 } SERVICE_NODE_TYPE;
04777
04778 typedef enum _CM_SERVICE_LOAD_TYPE
04779 {
04780   BootLoad    = SERVICE_BOOT_START,
04781   SystemLoad  = SERVICE_SYSTEM_START,
04782   AutoLoad    = SERVICE_AUTO_START,
04783   DemandLoad  = SERVICE_DEMAND_START,
04784   DisableLoad = SERVICE_DISABLED
04785 } SERVICE_LOAD_TYPE;
04786
04787 typedef enum _CM_ERROR_CONTROL_TYPE
04788 {
04789   IgnoreError   = SERVICE_ERROR_IGNORE,
04790   NormalError   = SERVICE_ERROR_NORMAL,
04791   SevereError   = SERVICE_ERROR_SEVERE,
04792   CriticalError = SERVICE_ERROR_CRITICAL
04793 } SERVICE_ERROR_TYPE;
04794
04795
04796
04797 #define RtlEqualMemory(Destination, Source, Length) (!memcmp((Destination),(Source),(Length)))
04798 #define RtlMoveMemory(Destination, Source, Length) memmove((Destination),(Source),(Length))
04799 #define RtlCopyMemory(Destination, Source, Length) memcpy((Destination),(Source),(Length))
04800 #define RtlFillMemory(Destination, Length, Fill) memset((Destination),(Fill),(Length))
04801 #define RtlZeroMemory(Destination, Length) memset((Destination),0,(Length))
04802
04803 #include "guiddef.h"
04804
04805 typedef struct _RTL_CRITICAL_SECTION_DEBUG
```

```
04806 {
04807   WORD   Type;
04808   WORD   CreatorBackTraceIndex;
04809   struct _RTL_CRITICAL_SECTION *CriticalSection;
04810   LIST_ENTRY ProcessLocksList;
04811   DWORD EntryCount;
04812   DWORD ContentionCount;
04813   DWORD Spare[ 2 ];
04814 } RTL_CRITICAL_SECTION_DEBUG, *PRTL_CRITICAL_SECTION_DEBUG, RTL_RESOURCE_DEBUG, *PRTL_RESOURCE_DEBUG;
04815
04816 typedef struct _RTL_CRITICAL_SECTION {
04817     PRTL_CRITICAL_SECTION_DEBUG DebugInfo;
04818     LONG LockCount;
04819     LONG RecursionCount;
04820     HANDLE OwningThread;
04821     HANDLE LockSemaphore;
04822     ULONG_PTR SpinCount;
04823 }  RTL_CRITICAL_SECTION, *PRTL_CRITICAL_SECTION;
04824
04825 #endif  /* __WINE_WINNT_H */
```

5.13 winuser.h

```
00001 #ifndef _WINUSER_
00002 #define _WINUSER_
00003
00004 #ifndef RC_INVOKED
00005 #include <stdarg.h>
00006 #endif
00007
00008 #ifdef __cplusplus
00009 extern "C" {
00010 #endif
00011
00012 /* Define a bunch of callback types */
00013
00014 #if defined(STRICT) || defined(__WINE__)
00015 typedef BOOL    CALLBACK (*DLGPROC)(HWND,UINT,WPARAM,LPARAM);
00016 typedef BOOL    CALLBACK (*DRAWSTATEPROC)(HDC,LPARAM,WPARAM,int,int);
00017 typedef INT     CALLBACK (*EDITWORDBREAKPROCA)(LPSTR,INT,INT,INT);
00018 typedef INT     CALLBACK (*EDITWORDBREAKPROCW)(LPWSTR,INT,INT,INT);
00019 typedef BOOL    CALLBACK (*GRAYSTRINGPROC)(HDC,LPARAM,INT);
00020 typedef LRESULT CALLBACK (*HOOKPROC)(INT,WPARAM,LPARAM);
00021 typedef BOOL    CALLBACK (*NAMEENUMPROCA)(LPSTR,LPARAM);
00022 typedef BOOL    CALLBACK (*NAMEENUMPROCW)(LPWSTR,LPARAM);
00023 typedef BOOL    CALLBACK (*PROPENUMPROCA)(HWND,LPCSTR,HANDLE);
00024 typedef BOOL    CALLBACK (*PROPENUMPROCW)(HWND,LPCWSTR,HANDLE);
00025 typedef BOOL    CALLBACK (*PROPENUMPROCEXA)(HWND,LPCSTR,HANDLE,ULONG_PTR);
00026 typedef BOOL    CALLBACK (*PROPENUMPROCEXW)(HWND,LPCWSTR,HANDLE,ULONG_PTR);
00027 typedef VOID    CALLBACK (*SENDASYNCPROC)(HWND,UINT,ULONG_PTR,LRESULT);
00028 typedef VOID    CALLBACK (*TIMERPROC)(HWND,UINT,UINT,DWORD);
00029 typedef BOOL    CALLBACK (*WNDENUMPROC)(HWND,LPARAM);
00030 #else
00031 typedef FARPROC DLGPROC;
00032 typedef FARPROC DRAWSTATEPROC;
00033 typedef FARPROC EDITWORDBREAKPROCA;
00034 typedef FARPROC EDITWORDBREAKPROCW;
00035 typedef FARPROC GRAYSTRINGPROC;
00036 typedef FARPROC HOOKPROC;
00037 typedef FARPROC NAMEENUMPROCA;
00038 typedef FARPROC NAMEENUMPROCW;
00039 typedef FARPROC PROPENUMPROCA;
00040 typedef FARPROC PROPENUMPROCW;
00041 typedef FARPROC PROPENUMPROCEXA;
00042 typedef FARPROC PROPENUMPROCEXW;
00043 typedef FARPROC SENDASYNCPROC;
00044 typedef FARPROC TIMERPROC;
00045 typedef FARPROC WNDENUMPROC;
00046 #endif /* STRICT || __WINE__ */
00047
00048 typedef NAMEENUMPROCA WINSTAENUMPROCA;
00049 typedef NAMEENUMPROCA DESKTOPENUMPROCA;
00050 typedef NAMEENUMPROCW WINSTAENUMPROCW;
00051 typedef NAMEENUMPROCW DESKTOPENUMPROCW;
00052
00053 typedef LRESULT CALLBACK (*WNDPROC)(HWND,UINT,WPARAM,LPARAM);
00054
00055 DECL_WINELIB_TYPE_AW(DESKTOPENUMPROC)
00056 DECL_WINELIB_TYPE_AW(EDITWORDBREAKPROC)
00057 DECL_WINELIB_TYPE_AW(NAMEENUMPROC)
00058 DECL_WINELIB_TYPE_AW(PROPENUMPROC)
00059 DECL_WINELIB_TYPE_AW(PROPENUMPROCEX)
00060 DECL_WINELIB_TYPE_AW(WINSTAENUMPROC)
00061
```

```
00062
00063 typedef HANDLE HDWP;
00064
00065 /* flags for FILTERKEYS dwFlags field */
00066 #define FKF_AVAILABLE       0x00000002
00067 #define FKF_CLICKON         0x00000040
00068 #define FKF_FILTERKEYSON    0x00000001
00069 #define FKF_HOTKEYACTIVE    0x00000004
00070 #define FKF_HOTKEYSOUND     0x00000010
00071 #define FKF_CONFIRMHOTKEY   0x00000008
00072 #define FKF_INDICATOR       0x00000020
00073
00074 typedef struct tagFILTERKEYS
00075 {
00076     UINT   cbSize;
00077     DWORD  dwFlags;
00078     DWORD  iWaitMSec;
00079     DWORD  iDelayMSec;
00080     DWORD  iRepeatMSec;
00081     DWORD  iBounceMSec;
00082 } FILTERKEYS, *PFILTERKEYS, *LPFILTERKEYS;
00083
00084 /* flags for TOGGLEKEYS dwFlags field */
00085 #define TKF_AVAILABLE       0x00000002
00086 #define TKF_CONFIRMHOTKEY   0x00000008
00087 #define TKF_HOTKEYACTIVE    0x00000004
00088 #define TKF_HOTKEYSOUND     0x00000010
00089 #define TKF_TOGGLEKEYSON    0x00000001
00090
00091 typedef struct tagTOGGLEKEYS
00092 {
00093     DWORD   cbSize;
00094     DWORD   dwFlags;
00095 } TOGGLEKEYS, *PTOGGLEKEYS, *LPTOGGLEKEYS;
00096
00097 /* flags for MOUSEKEYS dwFlags field */
00098 #define MKF_AVAILABLE       0x00000002
00099 #define MKF_CONFIRMHOTKEY   0x00000008
00100 #define MKF_HOTKEYACTIVE    0x00000004
00101 #define MKF_HOTKEYSOUND     0x00000010
00102 #define MKF_INDICATOR       0x00000020
00103 #define MKF_MOUSEKEYSON     0x00000001
00104 #define MKF_MODIFIERS       0x00000040
00105 #define MKF_REPLACENUMBERS  0x00000080
00106
00107 typedef struct tagMOUSEKEYS
00108 {
00109     UINT    cbSize;
00110     DWORD   dwFlags;
00111     DWORD   iMaxSpeed;
00112     DWORD   iTimeToMaxSpeed;
00113     DWORD   iCtrlSpeed;
00114     DWORD   dwReserved1;
00115     DWORD   dwReserved2;
00116 } MOUSEKEYS, *PMOUSEKEYS, *LPMOUSEKEYS;
00117
00118 /* flags for STICKYKEYS dwFlags field */
00119 #define SKF_AUDIBLEFEEDBACK 0x00000040
00120 #define SKF_AVAILABLE       0x00000002
00121 #define SKF_CONFIRMHOTKEY   0x00000008
00122 #define SKF_HOTKEYACTIVE    0x00000004
00123 #define SKF_HOTKEYSOUND     0x00000010
00124 #define SKF_INDICATOR       0x00000020
00125 #define SKF_STICKYKEYSON    0x00000001
00126 #define SKF_TRISTATE        0x00000080
00127 #define SKF_TWOKEYSOFF      0x00000100
00128
00129 typedef struct tagSTICKYKEYS
00130 {
00131     DWORD   cbSize;
00132     DWORD   dwFlags;
00133 } STICKYKEYS, *PSTICKYKEYS, *LPSTICKYKEYS;
00134
00135 /* flags for ACCESSTIMEOUT dwFlags field */
00136 #define ATF_ONOFFFEEDBACK   0x00000002
00137 #define ATF_AVAILABLE       0x00000004
00138 #define ATF_TIMEOUTON       0x00000001
00139
00140 typedef struct tagACCESSTIMEOUT
00141 {
00142     UINT    cbSize;
00143     DWORD   dwFlags;
00144     DWORD   iTimeOutMSec;
00145 } ACCESSTIMEOUT, *PACCESSTIMEOUT, *LPACCESSTIMEOUT;
00146
00147 /* flags for SERIALKEYS dwFlags field */
00148 #define SERKF_ACTIVE        0x00000008
```

```
00149 #define SERKF_AVAILABLE     0x00000002
00150 #define SERKF_INDICATOR     0x00000004
00151 #define SERKF_SERIALKEYSON  0x00000001
00152
00153 typedef struct tagSERIALKEYSA
00154 {
00155     UINT  cbSize;
00156     DWORD  dwFlags;
00157     LPSTR  lpszActivePort;
00158     LPSTR  lpszPort;
00159     UINT  iBaudRate;
00160     UINT  iPortState;
00161     UINT  iActive;
00162 } SERIALKEYSA, *LPSERIALKEYSA;
00163
00164 typedef struct tagSERIALKEYSW {
00165     UINT  cbSize;
00166     DWORD   dwFlags;
00167     LPWSTR  lpszActivePort;
00168     LPWSTR  lpszPort;
00169     UINT   iBaudRate;
00170     UINT   iPortState;
00171     UINT   iActive;
00172 } SERIALKEYSW,*LPSERIALKEYSW;
00173
00174 DECL_WINELIB_TYPE_AW(SERIALKEYS)
00175 DECL_WINELIB_TYPE_AW(LPSERIALKEYS)
00176
00177 /* flags for SOUNDSENTRY dwFlags field */
00178 #define SSF_AVAILABLE       0x00000002
00179 #define SSF_SOUNDSENTRYON   0x00000001
00180
00181 #define SSTF_BORDER         0x00000002
00182 #define SSTF_CHARS          0x00000001
00183 #define SSTF_DISPLAY        0x00000003
00184 #define SSTF_NONE           0x00000000
00185
00186 #define SSGF_DISPLAY        0x00000003
00187 #define SSGF_NONE           0x00000000
00188
00189 #define SSWF_DISPLAY        0x00000003
00190 #define SSWF_NONE           0x00000000
00191 #define SSWF_TITLE          0x00000001
00192 #define SSWF_WINDOW         0x00000002
00193
00194 typedef struct tagSOUNDSENTRYA
00195 {
00196     UINT  cbSize;
00197     DWORD  dwFlags;
00198     DWORD  iFSTextEffect;
00199     DWORD  iFSTextEffectMSec;
00200     DWORD  iFSTextEffectColorBits;
00201     DWORD  iFSGrafEffect;
00202     DWORD  iFSGrafEffectMSec;
00203     DWORD  iFSGrafEffectColor;
00204     DWORD  iWindowsEffect;
00205     DWORD  iWindowsEffectMSec;
00206     LPSTR  lpszWindowsEffectDLL;
00207     DWORD  iWindowsEffectOrdinal;
00208 } SOUNDSENTRYA, *LPSOUNDSENTRYA;
00209
00210 typedef struct tagSOUNDSENTRYW
00211 {
00212     UINT  cbSize;
00213     DWORD  dwFlags;
00214     DWORD  iFSTextEffect;
00215     DWORD  iFSTextEffectMSec;
00216     DWORD  iFSTextEffectColorBits;
00217     DWORD  iFSGrafEffect;
00218     DWORD  iFSGrafEffectMSec;
00219     DWORD  iFSGrafEffectColor;
00220     DWORD  iWindowsEffect;
00221     DWORD  iWindowsEffectMSec;
00222     LPWSTR  lpszWindowsEffectDLL;
00223     DWORD  iWindowsEffectOrdinal;
00224 } SOUNDSENTRYW, *LPSOUNDSENTRYW;
00225
00226 DECL_WINELIB_TYPE_AW(SOUNDSENTRY)
00227 DECL_WINELIB_TYPE_AW(LPSOUNDSENTRY)
00228
00229 /* flags for HIGHCONTRAST dwFlags field */
00230 #define HCF_HIGHCONTRASTON  0x00000001
00231 #define HCF_AVAILABLE       0x00000002
00232 #define HCF_HOTKEYACTIVE    0x00000004
00233 #define HCF_CONFIRMHOTKEY   0x00000008
00234 #define HCF_HOTKEYSOUND     0x00000010
00235 #define HCF_INDICATOR       0x00000020
```

```
00236 #define HCF_HOTKEYAVAILABLE 0x00000040
00237
00238 typedef struct tagHIGHCONTRASTA
00239 {
00240     UINT  cbSize;
00241     DWORD   dwFlags;
00242     LPSTR   lpszDefaultScheme;
00243 } HIGHCONTRASTA, *LPHIGHCONTRASTA;
00244
00245 typedef struct tagHIGHCONTRASTW
00246 {
00247     UINT  cbSize;
00248     DWORD   dwFlags;
00249     LPWSTR  lpszDefaultScheme;
00250 } HIGHCONTRASTW, *LPHIGHCONTRASTW;
00251
00252 DECL_WINELIB_TYPE_AW(HIGHCONTRAST)
00253 DECL_WINELIB_TYPE_AW(LPHIGHCONTRAST)
00254
00255 typedef struct
00256 {
00257     UINT  message;
00258     UINT  paramL;
00259     UINT  paramH;
00260     DWORD   time;
00261     HWND  hwnd;
00262 } EVENTMSG, *PEVENTMSG, *LPEVENTMSG;
00263
00264 /* WH_KEYBOARD_LL structure */
00265 typedef struct tagKBDLLHOOKSTRUCT
00266 {
00267     DWORD   vkCode;
00268     DWORD   scanCode;
00269     DWORD   flags;
00270     DWORD   time;
00271     ULONG_PTR dwExtraInfo;
00272 } KBDLLHOOKSTRUCT, *LPKBDLLHOOKSTRUCT, *PKBDLLHOOKSTRUCT;
00273
00274 #define LLKHF_EXTENDED   (KF_EXTENDED » 8)
00275 #define LLKHF_INJECTED   0x00000010
00276 #define LLKHF_ALTDOWN    (KF_ALTDOWN » 8)
00277 #define LLKHF_UP         (KF_UP » 8)
00278
00279 /* WH_MOUSE_LL structure */
00280 typedef struct tagMSLLHOOKSTRUCT
00281 {
00282     POINT   pt;
00283     DWORD   mouseData;
00284     DWORD   flags;
00285     DWORD   time;
00286     ULONG_PTR dwExtraInfo;
00287 } MSLLHOOKSTRUCT, *LPMSLLHOOKSTRUCT, *PMSLLHOOKSTRUCT;
00288
00289 #define LLMHF_INJECTED  0x00000001
00290
00291     /* Mouse hook structure */
00292
00293 typedef struct
00294 {
00295     POINT pt;
00296     HWND  hwnd;
00297     UINT  wHitTestCode;
00298     DWORD   dwExtraInfo;
00299 } MOUSEHOOKSTRUCT, *PMOUSEHOOKSTRUCT, *LPMOUSEHOOKSTRUCT;
00300
00301
00302     /* Hardware hook structure */
00303
00304 typedef struct
00305 {
00306     HWND    hWnd;
00307     UINT    wMessage;
00308     WPARAM  wParam;
00309     LPARAM    lParam;
00310 } HARDWAREHOOKSTRUCT, *PHARDWAREHOOKSTRUCT, *LPHARDWAREHOOKSTRUCT;
00311
00312
00313   /* Debug hook structure */
00314
00315 typedef struct
00316 {
00317     DWORD       idThread;
00318     DWORD       idThreadInstaller;
00319     LPARAM      lParam;
00320     WPARAM    wParam;
00321     INT       code;
00322 } DEBUGHOOKINFO, *PDEBUGHOOKINFO, *LPDEBUGHOOKINFO;
```

```
00323
00324 #define HKL_PREV   0
00325 #define HKL_NEXT   1
00326
00327 #define KLF_ACTIVATE       0x00000001
00328 #define KLF_SUBSTITUTE_OK  0x00000002
00329 #define KLF_UNLOADPREVIOUS 0x00000004
00330 #define KLF_REORDER        0x00000008
00331 #define KLF_REPLACELANG    0x00000010
00332 #define KLF_NOTELLSHELL    0x00000080
00333
00334 #define KL_NAMELENGTH      9
00335
00336 typedef struct tagMOUSEINPUT
00337 {
00338     LONG    dx;
00339     LONG    dy;
00340     DWORD   mouseData;
00341     DWORD   dwFlags;
00342     DWORD   time;
00343     ULONG_PTR dwExtraInfo;
00344 } MOUSEINPUT, *PMOUSEINPUT, *LPMOUSEINPUT;
00345
00346 typedef struct tagKEYBDINPUT
00347 {
00348     WORD    wVk;
00349     WORD    wScan;
00350     DWORD   dwFlags;
00351     DWORD   time;
00352     ULONG_PTR dwExtraInfo;
00353 } KEYBDINPUT, *PKEYBDINPUT, *LPKEYBDINPUT;
00354
00355 typedef struct tagHARDWAREINPUT
00356 {
00357     DWORD   uMsg;
00358     WORD    wParamL;
00359     WORD    wParamH;
00360 } HARDWAREINPUT, *PHARDWAREINPUT, *LPHARDWAREINPUT;
00361
00362 #define INPUT_MOUSE     0
00363 #define INPUT_KEYBOARD  1
00364 #define INPUT_HARDWARE  2
00365
00366 typedef struct tagINPUT
00367 {
00368     DWORD type;
00369     union
00370     {
00371         MOUSEINPUT      mi;
00372         KEYBDINPUT      ki;
00373         HARDWAREINPUT   hi;
00374     } DUMMYUNIONNAME;
00375 } INPUT, *PINPUT, *LPINPUT;
00376
00377
00378 /***** Dialogs *****/
00379
00380 /* Gcc on Solaris has a version of this that we don't care about */
00381 #undef FSHIFT
00382
00383 #define FVIRTKEY    TRUE          /* Assumed to be == TRUE */
00384 #define FNOINVERT   0x02
00385 #define FSHIFT      0x04
00386 #define FCONTROL    0x08
00387 #define FALT        0x10
00388
00389
00390 typedef struct tagANIMATIONINFO
00391 {
00392       UINT          cbSize;
00393       INT           iMinAnimate;
00394 } ANIMATIONINFO, *LPANIMATIONINFO;
00395
00396 typedef struct tagNMHDR
00397 {
00398     HWND  hwndFrom;
00399     UINT  idFrom;
00400     UINT  code;
00401 } NMHDR, *LPNMHDR;
00402
00403 typedef struct
00404 {
00405     UINT    cbSize;
00406     INT iTabLength;
00407     INT iLeftMargin;
00408     INT iRightMargin;
00409     UINT    uiLengthDrawn;
```

```
00410 } DRAWTEXTPARAMS,*LPDRAWTEXTPARAMS;
00411
00412 #define WM_USER             0x0400
00413
00414 #define DT_EDITCONTROL      0x00002000
00415 #define DT_PATH_ELLIPSIS    0x00004000
00416 #define DT_END_ELLIPSIS     0x00008000
00417 #define DT_MODIFYSTRING     0x00010000
00418 #define DT_RTLREADING       0x00020000
00419 #define DT_WORD_ELLIPSIS    0x00040000
00420
00421 typedef struct
00422 {
00423   LPARAM        lParam;
00424   WPARAM      wParam;
00425   UINT        message;
00426   HWND        hwnd;
00427 } CWPSTRUCT, *PCWPSTRUCT, *LPCWPSTRUCT;
00428
00429 typedef struct
00430 {
00431   LRESULT       lResult;
00432   LPARAM        lParam;
00433   WPARAM      wParam;
00434   DWORD         message;
00435   HWND        hwnd;
00436 } CWPRETSTRUCT, *PCWPRETSTRUCT, *LPCWPRETSTRUCT;
00437
00438 typedef struct
00439 {
00440     UINT   length;
00441     UINT   flags;
00442     UINT   showCmd;
00443     POINT  ptMinPosition WINE_PACKED;
00444     POINT  ptMaxPosition WINE_PACKED;
00445     RECT   rcNormalPosition WINE_PACKED;
00446 } WINDOWPLACEMENT, *PWINDOWPLACEMENT, *LPWINDOWPLACEMENT;
00447
00448
00449   /* WINDOWPLACEMENT flags */
00450 #define WPF_SETMINPOSITION      0x0001
00451 #define WPF_RESTORETOMAXIMIZED  0x0002
00452
00453 /***** Dialogs *****/
00454
00455 #define MAKEINTRESOURCEA(i) (LPSTR)((DWORD)((WORD)(i)))
00456 #define MAKEINTRESOURCEW(i) (LPWSTR)((DWORD)((WORD)(i)))
00457 #define MAKEINTRESOURCE WINELIB_NAME_AW(MAKEINTRESOURCE)
00458
00459 /* Predefined resource types */
00460 #define RT_CURSORA          MAKEINTRESOURCEA(1)
00461 #define RT_CURSORW          MAKEINTRESOURCEW(1)
00462 #define RT_CURSOR             WINELIB_NAME_AW(RT_CURSOR)
00463 #define RT_BITMAPA          MAKEINTRESOURCEA(2)
00464 #define RT_BITMAPW          MAKEINTRESOURCEW(2)
00465 #define RT_BITMAP             WINELIB_NAME_AW(RT_BITMAP)
00466 #define RT_ICONA            MAKEINTRESOURCEA(3)
00467 #define RT_ICONW            MAKEINTRESOURCEW(3)
00468 #define RT_ICON               WINELIB_NAME_AW(RT_ICON)
00469 #define RT_MENUA            MAKEINTRESOURCEA(4)
00470 #define RT_MENUW            MAKEINTRESOURCEW(4)
00471 #define RT_MENU               WINELIB_NAME_AW(RT_MENU)
00472 #define RT_DIALOGA          MAKEINTRESOURCEA(5)
00473 #define RT_DIALOGW          MAKEINTRESOURCEW(5)
00474 #define RT_DIALOG             WINELIB_NAME_AW(RT_DIALOG)
00475 #define RT_STRINGA          MAKEINTRESOURCEA(6)
00476 #define RT_STRINGW          MAKEINTRESOURCEW(6)
00477 #define RT_STRING             WINELIB_NAME_AW(RT_STRING)
00478 #define RT_FONTDIRA         MAKEINTRESOURCEA(7)
00479 #define RT_FONTDIRW         MAKEINTRESOURCEW(7)
00480 #define RT_FONTDIR            WINELIB_NAME_AW(RT_FONTDIR)
00481 #define RT_FONTA            MAKEINTRESOURCEA(8)
00482 #define RT_FONTW            MAKEINTRESOURCEW(8)
00483 #define RT_FONT               WINELIB_NAME_AW(RT_FONT)
00484 #define RT_ACCELERATORA     MAKEINTRESOURCEA(9)
00485 #define RT_ACCELERATORW     MAKEINTRESOURCEW(9)
00486 #define RT_ACCELERATOR        WINELIB_NAME_AW(RT_ACCELERATOR)
00487 #define RT_RCDATAA          MAKEINTRESOURCEA(10)
00488 #define RT_RCDATAW          MAKEINTRESOURCEW(10)
00489 #define RT_RCDATA             WINELIB_NAME_AW(RT_RCDATA)
00490 #define RT_MESSAGETABLEA    MAKEINTRESOURCEA(11)
00491 #define RT_MESSAGETABLEW    MAKEINTRESOURCEW(11)
00492 #define RT_MESSAGETABLE       WINELIB_NAME_AW(RT_MESSAGETABLE)
00493 #define RT_GROUP_CURSORA    MAKEINTRESOURCEA(12)
00494 #define RT_GROUP_CURSORW    MAKEINTRESOURCEW(12)
00495 #define RT_GROUP_CURSOR       WINELIB_NAME_AW(RT_GROUP_CURSOR)
00496 #define RT_GROUP_ICONA      MAKEINTRESOURCEA(14)
```

```
00497 #define RT_GROUP_ICONW     MAKEINTRESOURCEW(14)
00498 #define RT_GROUP_ICON        WINELIB_NAME_AW(RT_GROUP_ICON)
00499 #define RT_VERSIONA        MAKEINTRESOURCEA(16)
00500 #define RT_VERSIONW        MAKEINTRESOURCEW(16)
00501 #define RT_VERSION           WINELIB_NAME_AW(RT_VERSION)
00502 #define RT_DLGINCLUDEA     MAKEINTRESOURCEA(17)
00503 #define RT_DLGINCLUDEW     MAKEINTRESOURCEW(17)
00504 #define RT_DLGINCLUDE        WINELIB_NAME_AW(RT_DLGINCLUDE)
00505 #define RT_PLUGPLAYA       MAKEINTRESOURCEA(19)
00506 #define RT_PLUGPLAYW       MAKEINTRESOURCEW(19)
00507 #define RT_PLUGPLAY          WINELIB_NAME_AW(RT_PLUGPLAY)
00508 #define RT_VXDA            MAKEINTRESOURCEA(20)
00509 #define RT_VXDW            MAKEINTRESOURCEW(20)
00510 #define RT_VXD               WINELIB_NAME_AW(RT_VXD)
00511 #define RT_ANICURSORA      MAKEINTRESOURCEA(21)
00512 #define RT_ANICURSORW      MAKEINTRESOURCEW(21)
00513 #define RT_ANICURSOR         WINELIB_NAME_AW(RT_ANICURSOR)
00514 #define RT_ANIICONA        MAKEINTRESOURCEA(22)
00515 #define RT_ANIICONW        MAKEINTRESOURCEW(22)
00516 #define RT_ANIICON           WINELIB_NAME_AW(RT_ANIICON)
00517 #define RT_HTMLA           MAKEINTRESOURCEA(23)
00518 #define RT_HTMLW           MAKEINTRESOURCEW(23)
00519 #define RT_HTML              WINELIB_NAME_AW(RT_HTML)
00520
00521
00522   /* cbWndExtra bytes for dialog class */
00523 #define DLGWINDOWEXTRA      30
00524
00525 /* Button control styles */
00526 #define BS_PUSHBUTTON           0x00000000L
00527 #define BS_DEFPUSHBUTTON        0x00000001L
00528 #define BS_CHECKBOX             0x00000002L
00529 #define BS_AUTOCHECKBOX         0x00000003L
00530 #define BS_RADIOBUTTON          0x00000004L
00531 #define BS_3STATE               0x00000005L
00532 #define BS_AUTO3STATE           0x00000006L
00533 #define BS_GROUPBOX             0x00000007L
00534 #define BS_USERBUTTON           0x00000008L
00535 #define BS_AUTORADIOBUTTON      0x00000009L
00536 #define BS_OWNERDRAW            0x0000000BL
00537 #define BS_LEFTTEXT             0x00000020L
00538 #define BS_RIGHTBUTTON          BS_LEFTTEXT
00539
00540 #define BS_TEXT                 0x00000000L
00541 #define BS_ICON                 0x00000040L
00542 #define BS_BITMAP               0x00000080L
00543 #define BS_LEFT                 0x00000100L
00544 #define BS_RIGHT                0x00000200L
00545 #define BS_CENTER               0x00000300L
00546 #define BS_TOP                  0x00000400L
00547 #define BS_BOTTOM               0x00000800L
00548 #define BS_VCENTER              0x00000C00L
00549 #define BS_PUSHLIKE             0x00001000L
00550 #define BS_MULTILINE            0x00002000L
00551 #define BS_NOTIFY               0x00004000L
00552 #define BS_FLAT                 0x00008000L
00553
00554   /* Dialog styles */
00555 #define DS_ABSALIGN     0x0001
00556 #define DS_SYSMODAL     0x0002
00557 #define DS_3DLOOK       0x0004  /* win95 */
00558 #define DS_FIXEDSYS     0x0008  /* win95 */
00559 #define DS_NOFAILCREATE     0x0010  /* win95 */
00560 #define DS_LOCALEDIT        0x0020
00561 #define DS_SETFONT      0x0040
00562 #define DS_MODALFRAME       0x0080
00563 #define DS_NOIDLEMSG        0x0100
00564 #define DS_SETFOREGROUND    0x0200  /* win95 */
00565 #define DS_CONTROL      0x0400  /* win95 */
00566 #define DS_CENTER       0x0800  /* win95 */
00567 #define DS_CENTERMOUSE      0x1000  /* win95 */
00568 #define DS_CONTEXTHELP      0x2000  /* win95 */
00569
00570
00571   /* Dialog messages */
00572 #define DM_GETDEFID         (WM_USER+0)
00573 #define DM_SETDEFID         (WM_USER+1)
00574 #define DM_REPOSITION       (WM_USER+2)
00575
00576 #define DC_HASDEFID         0x534b
00577
00578 /* Owner draw control types */
00579 #define ODT_MENU        1
00580 #define ODT_LISTBOX     2
00581 #define ODT_COMBOBOX    3
00582 #define ODT_BUTTON      4
00583 #define ODT_STATIC      5
```

```
00584
00585 /* Owner draw actions */
00586 #define ODA_DRAWENTIRE  0x0001
00587 #define ODA_SELECT      0x0002
00588 #define ODA_FOCUS       0x0004
00589
00590 /* Owner draw state */
00591 #define ODS_SELECTED    0x0001
00592 #define ODS_GRAYED      0x0002
00593 #define ODS_DISABLED    0x0004
00594 #define ODS_CHECKED     0x0008
00595 #define ODS_FOCUS       0x0010
00596 #define ODS_COMBOBOXEDIT 0x1000
00597 #define ODS_HOTLIGHT    0x0040
00598 #define ODS_INACTIVE    0x0080
00599
00600 /* Edit control styles */
00601 #define ES_LEFT         0x00000000
00602 #define ES_CENTER       0x00000001
00603 #define ES_RIGHT        0x00000002
00604 #define ES_MULTILINE    0x00000004
00605 #define ES_UPPERCASE    0x00000008
00606 #define ES_LOWERCASE    0x00000010
00607 #define ES_PASSWORD     0x00000020
00608 #define ES_AUTOVSCROLL  0x00000040
00609 #define ES_AUTOHSCROLL  0x00000080
00610 #define ES_NOHIDESEL    0x00000100
00611 #define ES_COMBO        0x00000200   /* Undocumented. Parent is a combobox */
00612 #define ES_OEMCONVERT   0x00000400
00613 #define ES_READONLY     0x00000800
00614 #define ES_WANTRETURN   0x00001000
00615 #define ES_NUMBER       0x00002000
00616
00617 /* OEM Resource Ordinal Numbers */
00618 #define OBM_CLOSED          32731
00619 #define OBM_TRTYPE          32732
00620 #define OBM_LFARROWI        32734
00621 #define OBM_RGARROWI        32735
00622 #define OBM_DNARROWI        32736
00623 #define OBM_UPARROWI        32737
00624 #define OBM_COMBO           32738
00625 #define OBM_MNARROW         32739
00626 #define OBM_LFARROWD        32740
00627 #define OBM_RGARROWD        32741
00628 #define OBM_DNARROWD        32742
00629 #define OBM_UPARROWD        32743
00630 #define OBM_RESTORED        32744
00631 #define OBM_ZOOMD           32745
00632 #define OBM_REDUCED         32746
00633 #define OBM_RESTORE         32747
00634 #define OBM_ZOOM            32748
00635 #define OBM_REDUCE          32749
00636 #define OBM_LFARROW         32750
00637 #define OBM_RGARROW         32751
00638 #define OBM_DNARROW         32752
00639 #define OBM_UPARROW         32753
00640 #define OBM_CLOSE           32754
00641 #define OBM_OLD_RESTORE     32755
00642 #define OBM_OLD_ZOOM        32756
00643 #define OBM_OLD_REDUCE      32757
00644 #define OBM_BTNCORNERS      32758
00645 #define OBM_CHECKBOXES      32759
00646 #define OBM_CHECK           32760
00647 #define OBM_BTSIZE          32761
00648 #define OBM_OLD_LFARROW     32762
00649 #define OBM_OLD_RGARROW     32763
00650 #define OBM_OLD_DNARROW     32764
00651 #define OBM_OLD_UPARROW     32765
00652 #define OBM_SIZE            32766
00653 #define OBM_OLD_CLOSE       32767
00654
00655 #define OCR_NORMAL          32512
00656 #define OCR_IBEAM           32513
00657 #define OCR_WAIT            32514
00658 #define OCR_CROSS           32515
00659 #define OCR_UP              32516
00660 #define OCR_SIZE            32640
00661 #define OCR_ICON            32641
00662 #define OCR_SIZENWSE        32642
00663 #define OCR_SIZENESW        32643
00664 #define OCR_SIZEWE          32644
00665 #define OCR_SIZENS          32645
00666 #define OCR_SIZEALL         32646
00667 #define OCR_ICOCUR          32647
00668 #define OCR_NO              32648
00669 #define OCR_HAND            32649
00670 #define OCR_APPSTARTING     32650
```

```
00671 #define OCR_HELP            32651
00672
00673 /* only defined in wine (FIXME) */
00674 #define OCR_DRAGOBJECT      32653
00675
00676 #define OIC_SAMPLE          32512
00677 #define OIC_HAND            32513
00678 #define OIC_QUES            32514
00679 #define OIC_BANG            32515
00680 #define OIC_NOTE            32516
00681 #define OIC_WINLOGO         32517
00682 #define OIC_WARNING         OIC_BANG
00683 #define OIC_ERROR           OIC_HAND
00684 #define OIC_INFORMATION     OIC_NOTE
00685
00686 #ifndef NOCOLOR
00687
00688 #define COLOR_SCROLLBAR         0
00689 #define COLOR_BACKGROUND        1
00690 #define COLOR_ACTIVECAPTION     2
00691 #define COLOR_INACTIVECAPTION       3
00692 #define COLOR_MENU          4
00693 #define COLOR_WINDOW            5
00694 #define COLOR_WINDOWFRAME       6
00695 #define COLOR_MENUTEXT          7
00696 #define COLOR_WINDOWTEXT        8
00697 #define COLOR_CAPTIONTEXT       9
00698 #define COLOR_ACTIVEBORDER     10
00699 #define COLOR_INACTIVEBORDER       11
00700 #define COLOR_APPWORKSPACE     12
00701 #define COLOR_HIGHLIGHT        13
00702 #define COLOR_HIGHLIGHTTEXT    14
00703 #define COLOR_BTNFACE              15
00704 #define COLOR_BTNSHADOW            16
00705 #define COLOR_GRAYTEXT             17
00706 #define COLOR_BTNTEXT          18
00707 #define COLOR_INACTIVECAPTIONTEXT  19
00708 #define COLOR_BTNHIGHLIGHT         20
00709 /* win95 colors */
00710 #define COLOR_3DDKSHADOW           21
00711 #define COLOR_3DLIGHT              22
00712 #define COLOR_INFOTEXT             23
00713 #define COLOR_INFOBK               24
00714 #define COLOR_DESKTOP              COLOR_BACKGROUND
00715 #define COLOR_3DFACE               COLOR_BTNFACE
00716 #define COLOR_3DSHADOW             COLOR_BTNSHADOW
00717 #define COLOR_3DHIGHLIGHT          COLOR_BTNHIGHLIGHT
00718 #define COLOR_3DHILIGHT            COLOR_BTNHIGHLIGHT
00719 #define COLOR_BTNHILIGHT           COLOR_BTNHIGHLIGHT
00720 /* win98 colors */
00721 #define COLOR_ALTERNATEBTNFACE         25  /* undocumented, constant's name unknown */
00722 #define COLOR_HOTLIGHT                 26
00723 #define COLOR_GRADIENTACTIVECAPTION    27
00724 #define COLOR_GRADIENTINACTIVECAPTION  28
00725
00726   /* WM_CTLCOLOR values */
00727 #define CTLCOLOR_MSGBOX             0
00728 #define CTLCOLOR_EDIT               1
00729 #define CTLCOLOR_LISTBOX            2
00730 #define CTLCOLOR_BTN                3
00731 #define CTLCOLOR_DLG                4
00732 #define CTLCOLOR_SCROLLBAR          5
00733 #define CTLCOLOR_STATIC             6
00734
00735 COLORREF    WINAPI GetSysColor(INT);
00736 BOOL        WINAPI SetSysColors(INT,const INT*,const COLORREF*);
00737
00738 #endif /* NOCOLOR */
00739
00740 /* Edit control messages */
00741 #define EM_GETSEL               0x00b0
00742 #define EM_SETSEL               0x00b1
00743 #define EM_GETRECT              0x00b2
00744 #define EM_SETRECT              0x00b3
00745 #define EM_SETRECTNP            0x00b4
00746 #define EM_SCROLL               0x00b5
00747 #define EM_LINESCROLL           0x00b6
00748 #define EM_SCROLLCARET          0x00b7
00749 #define EM_GETMODIFY            0x00b8
00750 #define EM_SETMODIFY            0x00b9
00751 #define EM_GETLINECOUNT         0x00ba
00752 #define EM_LINEINDEX            0x00bb
00753 #define EM_SETHANDLE            0x00bc
00754 #define EM_GETHANDLE            0x00bd
00755 #define EM_GETTHUMB             0x00be
00756 /* FIXME : missing from specs 0x00bf and 0x00c0 */
00757 #define EM_LINELENGTH           0x00c1
```

```
00758 #define EM_REPLACESEL           0x00c2
00759 /* FIXME : missing from specs 0x00c3 */
00760 #define EM_GETLINE              0x00c4
00761 #define EM_LIMITTEXT            0x00c5
00762 #define EM_CANUNDO              0x00c6
00763 #define EM_UNDO                 0x00c7
00764 #define EM_FMTLINES             0x00c8
00765 #define EM_LINEFROMCHAR         0x00c9
00766 /* FIXME : missing from specs 0x00ca */
00767 #define EM_SETTABSTOPS          0x00cb
00768 #define EM_SETPASSWORDCHAR      0x00cc
00769 #define EM_EMPTYUNDOBUFFER      0x00cd
00770 #define EM_GETFIRSTVISIBLELINE  0x00ce
00771 #define EM_SETREADONLY          0x00cf
00772 #define EM_SETWORDBREAKPROC     0x00d0
00773 #define EM_GETWORDBREAKPROC     0x00d1
00774 #define EM_GETPASSWORDCHAR      0x00d2
00775 #define EM_SETMARGINS           0x00d3
00776 #define EM_GETMARGINS           0x00d4
00777 #define EM_GETLIMITTEXT         0x00d5
00778 #define EM_POSFROMCHAR          0x00d6
00779 #define EM_CHARFROMPOS          0x00d7
00780 /* a name change since win95 */
00781 #define EM_SETLIMITTEXT         EM_LIMITTEXT
00782
00783 /* EDITWORDBREAKPROC code values */
00784 #define WB_LEFT         0
00785 #define WB_RIGHT        1
00786 #define WB_ISDELIMITER  2
00787
00788 /* Edit control notification codes */
00789 #define EN_SETFOCUS     0x0100
00790 #define EN_KILLFOCUS    0x0200
00791 #define EN_CHANGE       0x0300
00792 #define EN_UPDATE       0x0400
00793 #define EN_ERRSPACE     0x0500
00794 #define EN_MAXTEXT      0x0501
00795 #define EN_HSCROLL      0x0601
00796 #define EN_VSCROLL      0x0602
00797
00798 /* New since win95 : EM_SETMARGIN parameters */
00799 #define EC_LEFTMARGIN   0x0001
00800 #define EC_RIGHTMARGIN  0x0002
00801 #define EC_USEFONTINFO  0xffff
00802
00803
00804   /* GetSystemMetrics() codes */
00805 #define SM_CXSCREEN        0
00806 #define SM_CYSCREEN            1
00807 #define SM_CXVSCROLL           2
00808 #define SM_CYHSCROLL           3
00809 #define SM_CYCAPTION           4
00810 #define SM_CXBORDER        5
00811 #define SM_CYBORDER        6
00812 #define SM_CXDLGFRAME          7
00813 #define SM_CYDLGFRAME          8
00814 #define SM_CYVTHUMB        9
00815 #define SM_CXHTHUMB       10
00816 #define SM_CXICON         11
00817 #define SM_CYICON         12
00818 #define SM_CXCURSOR       13
00819 #define SM_CYCURSOR       14
00820 #define SM_CYMENU         15
00821 #define SM_CXFULLSCREEN       16
00822 #define SM_CYFULLSCREEN       17
00823 #define SM_CYKANJIWINDOW      18
00824 #define SM_MOUSEPRESENT       19
00825 #define SM_CYVSCROLL          20
00826 #define SM_CXHSCROLL          21
00827 #define SM_DEBUG          22
00828 #define SM_SWAPBUTTON         23
00829 #define SM_RESERVED1          24
00830 #define SM_RESERVED2          25
00831 #define SM_RESERVED3          26
00832 #define SM_RESERVED4          27
00833 #define SM_CXMIN          28
00834 #define SM_CYMIN          29
00835 #define SM_CXSIZE         30
00836 #define SM_CYSIZE         31
00837 #define SM_CXFRAME        32
00838 #define SM_CYFRAME        33
00839 #define SM_CXMINTRACK         34
00840 #define SM_CYMINTRACK         35
00841 #define SM_CXDOUBLECLK        36
00842 #define SM_CYDOUBLECLK        37
00843 #define SM_CXICONSPACING      38
00844 #define SM_CYICONSPACING      39
```

```
00845 #define SM_MENUDROPALIGNMENT  40
00846 #define SM_PENWINDOWS         41
00847 #define SM_DBCSENABLED        42
00848 #define SM_CMOUSEBUTTONS      43
00849 #define SM_CXFIXEDFRAME       SM_CXDLGFRAME
00850 #define SM_CYFIXEDFRAME       SM_CYDLGFRAME
00851 #define SM_CXSIZEFRAME        SM_CXFRAME
00852 #define SM_CYSIZEFRAME        SM_CYFRAME
00853 #define SM_SECURE         44
00854 #define SM_CXEDGE         45
00855 #define SM_CYEDGE         46
00856 #define SM_CXMINSPACING       47
00857 #define SM_CYMINSPACING       48
00858 #define SM_CXSMICON       49
00859 #define SM_CYSMICON       50
00860 #define SM_CYSMCAPTION        51
00861 #define SM_CXSMSIZE       52
00862 #define SM_CYSMSIZE       53
00863 #define SM_CXMENUSIZE         54
00864 #define SM_CYMENUSIZE         55
00865 #define SM_ARRANGE        56
00866 #define SM_CXMINIMIZED        57
00867 #define SM_CYMINIMIZED        58
00868 #define SM_CXMAXTRACK         59
00869 #define SM_CYMAXTRACK         60
00870 #define SM_CXMAXIMIZED        61
00871 #define SM_CYMAXIMIZED        62
00872 #define SM_NETWORK        63
00873 #define SM_CLEANBOOT          67
00874 #define SM_CXDRAG         68
00875 #define SM_CYDRAG         69
00876 #define SM_SHOWSOUNDS         70
00877 #define SM_CXMENUCHECK        71
00878 #define SM_CYMENUCHECK        72
00879 #define SM_SLOWMACHINE        73
00880 #define SM_MIDEASTENABLED     74
00881 #define SM_MOUSEWHEELPRESENT  75
00882 #define SM_XVIRTUALSCREEN     76
00883 #define SM_YVIRTUALSCREEN     77
00884 #define SM_CXVIRTUALSCREEN    78
00885 #define SM_CYVIRTUALSCREEN    79
00886 #define SM_CMONITORS          80
00887 #define SM_SAMEDISPLAYFORMAT  81
00888 #define SM_CMETRICS           83
00889
00890
00891 /* Messages */
00892
00893   /* WM_GETDLGCODE values */
00894
00895
00896 #define WM_NULL                 0x0000
00897 #define WM_CREATE               0x0001
00898 #define WM_DESTROY              0x0002
00899 #define WM_MOVE                 0x0003
00900 #define WM_SIZEWAIT             0x0004
00901 #define WM_SIZE                 0x0005
00902 #define WM_ACTIVATE             0x0006
00903 #define WM_SETFOCUS             0x0007
00904 #define WM_KILLFOCUS            0x0008
00905 #define WM_SETVISIBLE           0x0009
00906 #define WM_ENABLE               0x000a
00907 #define WM_SETREDRAW            0x000b
00908 #define WM_SETTEXT              0x000c
00909 #define WM_GETTEXT              0x000d
00910 #define WM_GETTEXTLENGTH        0x000e
00911 #define WM_PAINT                0x000f
00912 #define WM_CLOSE                0x0010
00913 #define WM_QUERYENDSESSION      0x0011
00914 #define WM_QUIT                 0x0012
00915 #define WM_QUERYOPEN            0x0013
00916 #define WM_ERASEBKGND           0x0014
00917 #define WM_SYSCOLORCHANGE       0x0015
00918 #define WM_ENDSESSION           0x0016
00919 #define WM_SYSTEMERROR          0x0017
00920 #define WM_SHOWWINDOW           0x0018
00921 #define WM_CTLCOLOR             0x0019
00922 #define WM_WININICHANGE         0x001a
00923 #define WM_SETTINGCHANGE        WM_WININICHANGE
00924 #define WM_DEVMODECHANGE        0x001b
00925 #define WM_ACTIVATEAPP          0x001c
00926 #define WM_FONTCHANGE           0x001d
00927 #define WM_TIMECHANGE           0x001e
00928 #define WM_CANCELMODE           0x001f
00929 #define WM_SETCURSOR            0x0020
00930 #define WM_MOUSEACTIVATE        0x0021
00931 #define WM_CHILDACTIVATE        0x0022
```

```
00932 #define WM_QUEUESYNC            0x0023
00933 #define WM_GETMINMAXINFO        0x0024
00934
00935 #define WM_PAINTICON            0x0026
00936 #define WM_ICONERASEBKGND       0x0027
00937 #define WM_NEXTDLGCTL           0x0028
00938 #define WM_ALTTABACTIVE         0x0029
00939 #define WM_SPOOLERSTATUS        0x002a
00940 #define WM_DRAWITEM             0x002b
00941 #define WM_MEASUREITEM          0x002c
00942 #define WM_DELETEITEM           0x002d
00943 #define WM_VKEYTOITEM           0x002e
00944 #define WM_CHARTOITEM           0x002f
00945 #define WM_SETFONT              0x0030
00946 #define WM_GETFONT              0x0031
00947 #define WM_SETHOTKEY            0x0032
00948 #define WM_GETHOTKEY            0x0033
00949 #define WM_FILESYSCHANGE        0x0034
00950 #define WM_ISACTIVEICON         0x0035
00951 #define WM_QUERYPARKICON        0x0036
00952 #define WM_QUERYDRAGICON        0x0037
00953 #define WM_QUERYSAVESTATE       0x0038
00954 #define WM_COMPAREITEM          0x0039
00955 #define WM_TESTING              0x003a
00956
00957 #define WM_OTHERWINDOWCREATED   0x003c
00958 #define WM_OTHERWINDOWDESTROYED 0x003d
00959 #define WM_ACTIVATESHELLWINDOW  0x003e
00960
00961 #define WM_COMPACTING       0x0041
00962
00963 #define WM_COMMNOTIFY       0x0044
00964 #define WM_WINDOWPOSCHANGING    0x0046
00965 #define WM_WINDOWPOSCHANGED     0x0047
00966 #define WM_POWER        0x0048
00967
00968   /* Win32 4.0 messages */
00969 #define WM_COPYDATA     0x004a
00970 #define WM_CANCELJOURNAL    0x004b
00971 #define WM_NOTIFY       0x004e
00972 #define WM_INPUTLANGCHANGEREQUEST       0x0050
00973 #define WM_INPUTLANGCHANGE              0x0051
00974 #define WM_TCARD                0x0052
00975 #define WM_HELP         0x0053
00976 #define WM_USERCHANGED      0x0054
00977 #define WM_NOTIFYFORMAT     0x0055
00978
00979 #define WM_CONTEXTMENU      0x007b
00980 #define WM_STYLECHANGING    0x007c
00981 #define WM_STYLECHANGED     0x007d
00982 #define WM_DISPLAYCHANGE        0x007e
00983 #define WM_GETICON      0x007f
00984 #define WM_SETICON      0x0080
00985
00986   /* Non-client system messages */
00987 #define WM_NCCREATE         0x0081
00988 #define WM_NCDESTROY        0x0082
00989 #define WM_NCCALCSIZE       0x0083
00990 #define WM_NCHITTEST        0x0084
00991 #define WM_NCPAINT          0x0085
00992 #define WM_NCACTIVATE       0x0086
00993
00994 #define WM_GETDLGCODE       0x0087
00995 #define WM_SYNCPAINT        0x0088
00996 #define WM_SYNCTASK     0x0089
00997
00998   /* Non-client mouse messages */
00999 #define WM_NCMOUSEMOVE      0x00a0
01000 #define WM_NCLBUTTONDOWN    0x00a1
01001 #define WM_NCLBUTTONUP      0x00a2
01002 #define WM_NCLBUTTONDBLCLK  0x00a3
01003 #define WM_NCRBUTTONDOWN    0x00a4
01004 #define WM_NCRBUTTONUP      0x00a5
01005 #define WM_NCRBUTTONDBLCLK  0x00a6
01006 #define WM_NCMBUTTONDOWN    0x00a7
01007 #define WM_NCMBUTTONUP      0x00a8
01008 #define WM_NCMBUTTONDBLCLK  0x00a9
01009
01010 #define WM_NCXBUTTONDOWN    0x00ab
01011 #define WM_NCXBUTTONUP      0x00ac
01012 #define WM_NCXBUTTONDBLCLK  0x00ad
01013
01014   /* Keyboard messages */
01015 #define WM_KEYDOWN          0x0100
01016 #define WM_KEYUP            0x0101
01017 #define WM_CHAR             0x0102
01018 #define WM_DEADCHAR         0x0103
```

```
01019 #define WM_SYSKEYDOWN       0x0104
01020 #define WM_SYSKEYUP         0x0105
01021 #define WM_SYSCHAR          0x0106
01022 #define WM_SYSDEADCHAR      0x0107
01023 #define WM_KEYFIRST         WM_KEYDOWN
01024 #define WM_KEYLAST          0x0108
01025
01026 /* Win32 4.0 messages for IME */
01027 #define WM_IME_STARTCOMPOSITION     0x010d
01028 #define WM_IME_ENDCOMPOSITION       0x010e
01029 #define WM_IME_COMPOSITION          0x010f
01030 #define WM_IME_KEYLAST              0x010f
01031
01032 #define WM_INITDIALOG       0x0110
01033 #define WM_COMMAND          0x0111
01034 #define WM_SYSCOMMAND       0x0112
01035 #define WM_TIMER        0x0113
01036 #define WM_SYSTIMER     0x0118
01037
01038   /* scroll messages */
01039 #define WM_HSCROLL          0x0114
01040 #define WM_VSCROLL          0x0115
01041
01042 /* Menu messages */
01043 #define WM_INITMENU         0x0116
01044 #define WM_INITMENUPOPUP    0x0117
01045
01046 #define WM_MENUSELECT       0x011F
01047 #define WM_MENUCHAR         0x0120
01048 #define WM_ENTERIDLE        0x0121
01049
01050 #define WM_LBTRACKPOINT     0x0131
01051
01052   /* Win32 CTLCOLOR messages */
01053 #define WM_CTLCOLORMSGBOX    0x0132
01054 #define WM_CTLCOLOREDIT      0x0133
01055 #define WM_CTLCOLORLISTBOX   0x0134
01056 #define WM_CTLCOLORBTN       0x0135
01057 #define WM_CTLCOLORDLG       0x0136
01058 #define WM_CTLCOLORSCROLLBAR 0x0137
01059 #define WM_CTLCOLORSTATIC    0x0138
01060
01061   /* Mouse messages */
01062 #define WM_MOUSEMOVE        0x0200
01063 #define WM_LBUTTONDOWN      0x0201
01064 #define WM_LBUTTONUP        0x0202
01065 #define WM_LBUTTONDBLCLK    0x0203
01066 #define WM_RBUTTONDOWN      0x0204
01067 #define WM_RBUTTONUP        0x0205
01068 #define WM_RBUTTONDBLCLK    0x0206
01069 #define WM_MBUTTONDOWN      0x0207
01070 #define WM_MBUTTONUP        0x0208
01071 #define WM_MBUTTONDBLCLK    0x0209
01072 #define WM_MOUSEWHEEL       0x020A
01073 #define WM_XBUTTONDOWN      0x020B
01074 #define WM_XBUTTONUP        0x020C
01075 #define WM_XBUTTONDBLCLK    0x020D
01076
01077 #define WM_MOUSEFIRST       0x0200
01078 #define WM_MOUSELAST        0x020D
01079
01080 #define WHEEL_DELTA      120
01081 #define WHEEL_PAGESCROLL  (UINT_MAX)
01082 #define WM_PARENTNOTIFY     0x0210
01083 #define WM_ENTERMENULOOP    0x0211
01084 #define WM_EXITMENULOOP     0x0212
01085 #define WM_NEXTMENU     0x0213
01086
01087   /* Win32 4.0 messages */
01088 #define WM_SIZING       0x0214
01089 #define WM_CAPTURECHANGED   0x0215
01090 #define WM_MOVING       0x0216
01091 #define WM_POWERBROADCAST   0x0218
01092 #define WM_DEVICECHANGE     0x0219
01093
01094 /* wParam for WM_SIZING message */
01095 #define WMSZ_LEFT           1
01096 #define WMSZ_RIGHT          2
01097 #define WMSZ_TOP            3
01098 #define WMSZ_TOPLEFT        4
01099 #define WMSZ_TOPRIGHT       5
01100 #define WMSZ_BOTTOM         6
01101 #define WMSZ_BOTTOMLEFT     7
01102 #define WMSZ_BOTTOMRIGHT    8
01103
01104   /* MDI messages */
01105 #define WM_MDICREATE        0x0220
```

```
01106 #define WM_MDIDESTROY       0x0221
01107 #define WM_MDIACTIVATE      0x0222
01108 #define WM_MDIRESTORE       0x0223
01109 #define WM_MDINEXT      0x0224
01110 #define WM_MDIMAXIMIZE      0x0225
01111 #define WM_MDITILE      0x0226
01112 #define WM_MDICASCADE       0x0227
01113 #define WM_MDIICONARRANGE   0x0228
01114 #define WM_MDIGETACTIVE     0x0229
01115 #define WM_MDIREFRESHMENU   0x0234
01116
01117   /* D&D messages */
01118 #define WM_DROPOBJECT       0x022A
01119 #define WM_QUERYDROPOBJECT  0x022B
01120 #define WM_BEGINDRAG        0x022C
01121 #define WM_DRAGLOOP     0x022D
01122 #define WM_DRAGSELECT       0x022E
01123 #define WM_DRAGMOVE     0x022F
01124 #define WM_MDISETMENU       0x0230
01125
01126 #define WM_ENTERSIZEMOVE    0x0231
01127 #define WM_EXITSIZEMOVE     0x0232
01128 #define WM_DROPFILES        0x0233
01129
01130
01131 /* Win32 4.0 messages for IME */
01132 #define WM_IME_SETCONTEXT           0x0281
01133 #define WM_IME_NOTIFY               0x0282
01134 #define WM_IME_CONTROL              0x0283
01135 #define WM_IME_COMPOSITIONFULL      0x0284
01136 #define WM_IME_SELECT               0x0285
01137 #define WM_IME_CHAR                 0x0286
01138 /* Win32 5.0 messages for IME */
01139 #define WM_IME_REQUEST              0x0288
01140
01141 /* Win32 4.0 messages for IME */
01142 #define WM_IME_KEYDOWN              0x0290
01143 #define WM_IME_KEYUP                0x0291
01144
01145 /* Clipboard command messages */
01146 #define WM_CUT              0x0300
01147 #define WM_COPY             0x0301
01148 #define WM_PASTE            0x0302
01149 #define WM_CLEAR            0x0303
01150 #define WM_UNDO             0x0304
01151
01152 /* Clipboard owner messages */
01153 #define WM_RENDERFORMAT     0x0305
01154 #define WM_RENDERALLFORMATS  0x0306
01155 #define WM_DESTROYCLIPBOARD  0x0307
01156
01157 /* Clipboard viewer messages */
01158 #define WM_DRAWCLIPBOARD    0x0308
01159 #define WM_PAINTCLIPBOARD    0x0309
01160 #define WM_VSCROLLCLIPBOARD  0x030A
01161 #define WM_SIZECLIPBOARD    0x030B
01162 #define WM_ASKCBFORMATNAME   0x030C
01163 #define WM_CHANGECBCHAIN    0x030D
01164 #define WM_HSCROLLCLIPBOARD  0x030E
01165
01166 #define WM_QUERYNEWPALETTE   0x030F
01167 #define WM_PALETTEISCHANGING 0x0310
01168 #define WM_PALETTECHANGED    0x0311
01169 #define WM_HOTKEY       0x0312
01170
01171 #define WM_PRINT            0x0317
01172 #define WM_PRINTCLIENT      0x0318
01173
01174 #define WM_PENWINFIRST      0x0380
01175 #define WM_PENWINLAST       0x038F
01176
01177
01178 #define WM_APP              0x8000
01179
01180 /* MsgWaitForMultipleObjectsEx flags */
01181 #define MWMO_WAITALL        0x0001
01182 #define MWMO_ALERTABLE      0x0002
01183 #define MWMO_INPUTAVAILABLE  0x0004
01184
01185 #define DLGC_WANTARROWS     0x0001
01186 #define DLGC_WANTTAB        0x0002
01187 #define DLGC_WANTALLKEYS    0x0004
01188 #define DLGC_WANTMESSAGE    0x0004
01189 #define DLGC_HASSETSEL      0x0008
01190 #define DLGC_DEFPUSHBUTTON   0x0010
01191 #define DLGC_UNDEFPUSHBUTTON 0x0020
01192 #define DLGC_RADIOBUTTON    0x0040
```

```
01193 #define DLGC_WANTCHARS       0x0080
01194 #define DLGC_STATIC          0x0100
01195 #define DLGC_BUTTON          0x2000
01196
01197 /* Standard dialog button IDs */
01198 #define IDOK                1
01199 #define IDCANCEL            2
01200 #define IDABORT             3
01201 #define IDRETRY             4
01202 #define IDIGNORE            5
01203 #define IDYES               6
01204 #define IDNO                7
01205 #define IDCLOSE             8
01206 #define IDHELP              9
01207
01208 /****** Window classes ******/
01209
01210 typedef struct tagCREATESTRUCTA
01211 {
01212     LPVOID      lpCreateParams;
01213     HINSTANCE hInstance;
01214     HMENU     hMenu;
01215     HWND      hwndParent;
01216     INT       cy;
01217     INT       cx;
01218     INT       y;
01219     INT       x;
01220     LONG        style;
01221     LPCSTR      lpszName;
01222     LPCSTR      lpszClass;
01223     DWORD       dwExStyle;
01224 } CREATESTRUCTA, *LPCREATESTRUCTA;
01225
01226 typedef struct
01227 {
01228     LPVOID      lpCreateParams;
01229     HINSTANCE hInstance;
01230     HMENU     hMenu;
01231     HWND      hwndParent;
01232     INT       cy;
01233     INT       cx;
01234     INT       y;
01235     INT       x;
01236     LONG        style;
01237     LPCWSTR     lpszName;
01238     LPCWSTR     lpszClass;
01239     DWORD       dwExStyle;
01240 } CREATESTRUCTW, *LPCREATESTRUCTW;
01241
01242 DECL_WINELIB_TYPE_AW(CREATESTRUCT)
01243 DECL_WINELIB_TYPE_AW(LPCREATESTRUCT)
01244
01245 typedef struct
01246 {
01247     HDC   hdc;
01248     BOOL  fErase;
01249     RECT  rcPaint;
01250     BOOL  fRestore;
01251     BOOL  fIncUpdate;
01252     BYTE    rgbReserved[32];
01253 } PAINTSTRUCT, *PPAINTSTRUCT, *LPPAINTSTRUCT;
01254
01255 typedef struct
01256 {
01257     HMENU   hWindowMenu;
01258     UINT    idFirstChild;
01259 } CLIENTCREATESTRUCT, *LPCLIENTCREATESTRUCT;
01260
01261
01262 typedef struct
01263 {
01264     LPCSTR       szClass;
01265     LPCSTR       szTitle;
01266     HINSTANCE  hOwner;
01267     INT        x;
01268     INT        y;
01269     INT        cx;
01270     INT        cy;
01271     DWORD        style;
01272     LPARAM       lParam;
01273 } MDICREATESTRUCTA, *LPMDICREATESTRUCTA;
01274
01275 typedef struct
01276 {
01277     LPCWSTR      szClass;
01278     LPCWSTR      szTitle;
01279     HINSTANCE  hOwner;
```

```
01280     INT         x;
01281     INT         y;
01282     INT         cx;
01283     INT         cy;
01284     DWORD         style;
01285     LPARAM        lParam;
01286 } MDICREATESTRUCTW, *LPMDICREATESTRUCTW;
01287
01288 DECL_WINELIB_TYPE_AW(MDICREATESTRUCT)
01289 DECL_WINELIB_TYPE_AW(LPMDICREATESTRUCT)
01290
01291 #define MDITILE_VERTICAL     0x0000
01292 #define MDITILE_HORIZONTAL   0x0001
01293 #define MDITILE_SKIPDISABLED 0x0002
01294
01295 #define MDIS_ALLCHILDSTYLES  0x0001
01296
01297 typedef struct {
01298     DWORD   styleOld;
01299     DWORD   styleNew;
01300 } STYLESTRUCT, *LPSTYLESTRUCT;
01301
01302 #define WC_DIALOGA MAKEINTATOMA(0x8002)
01303 #define WC_DIALOGW MAKEINTATOMW(0x8002)
01304 #define WC_DIALOG  WINELIB_NAME_AW(WC_DIALOG)
01305
01306   /* Offsets for GetWindowLong() and GetWindowWord() */
01307 #define GWL_USERDATA        (-21)
01308 #define GWL_EXSTYLE         (-20)
01309 #define GWL_STYLE           (-16)
01310 #define GWL_ID              (-12)
01311 #define GWL_HWNDPARENT      (-8)
01312 #define GWL_HINSTANCE       (-6)
01313 #define GWL_WNDPROC         (-4)
01314 #define DWL_MSGRESULT       0
01315 #define DWL_DLGPROC     4
01316 #define DWL_USER        8
01317
01318   /* GetWindow() constants */
01319 #define GW_HWNDFIRST    0
01320 #define GW_HWNDLAST 1
01321 #define GW_HWNDNEXT 2
01322 #define GW_HWNDPREV 3
01323 #define GW_OWNER    4
01324 #define GW_CHILD    5
01325
01326 /* GetAncestor() constants */
01327 #define GA_PARENT       1
01328 #define GA_ROOT         2
01329 #define GA_ROOTOWNER    3
01330
01331   /* WM_GETMINMAXINFO struct */
01332 typedef struct
01333 {
01334     POINT   ptReserved;
01335     POINT   ptMaxSize;
01336     POINT   ptMaxPosition;
01337     POINT   ptMinTrackSize;
01338     POINT   ptMaxTrackSize;
01339 } MINMAXINFO, *PMINMAXINFO, *LPMINMAXINFO;
01340
01341
01342   /* RedrawWindow() flags */
01343 #define RDW_INVALIDATE       0x0001
01344 #define RDW_INTERNALPAINT    0x0002
01345 #define RDW_ERASE            0x0004
01346 #define RDW_VALIDATE         0x0008
01347 #define RDW_NOINTERNALPAINT  0x0010
01348 #define RDW_NOERASE          0x0020
01349 #define RDW_NOCHILDREN       0x0040
01350 #define RDW_ALLCHILDREN      0x0080
01351 #define RDW_UPDATENOW        0x0100
01352 #define RDW_ERASENOW         0x0200
01353 #define RDW_FRAME            0x0400
01354 #define RDW_NOFRAME          0x0800
01355
01356 /* debug flags */
01357 #define DBGFILL_ALLOC  0xfd
01358 #define DBGFILL_FREE   0xfb
01359 #define DBGFILL_BUFFER 0xf9
01360 #define DBGFILL_STACK  0xf7
01361
01362   /* WM_WINDOWPOSCHANGING/CHANGED struct */
01363 typedef struct tagWINDOWPOS
01364 {
01365     HWND  hwnd;
01366     HWND  hwndInsertAfter;
```

```
01367     INT   x;
01368     INT   y;
01369     INT   cx;
01370     INT   cy;
01371     UINT  flags;
01372 } WINDOWPOS, *PWINDOWPOS, *LPWINDOWPOS;
01373
01374
01375   /* WM_MOUSEACTIVATE return values */
01376 #define MA_ACTIVATE             1
01377 #define MA_ACTIVATEANDEAT       2
01378 #define MA_NOACTIVATE           3
01379 #define MA_NOACTIVATEANDEAT     4
01380
01381   /* WM_ACTIVATE wParam values */
01382 #define WA_INACTIVE             0
01383 #define WA_ACTIVE               1
01384 #define WA_CLICKACTIVE          2
01385
01386 /* WM_GETICON/WM_SETICON params values */
01387 #define ICON_SMALL              0
01388 #define ICON_BIG                1
01389
01390   /* WM_NCCALCSIZE parameter structure */
01391 typedef struct
01392 {
01393     RECT       rgrc[3];
01394     WINDOWPOS *lppos;
01395 } NCCALCSIZE_PARAMS, *LPNCCALCSIZE_PARAMS;
01396
01397
01398   /* WM_NCCALCSIZE return flags */
01399 #define WVR_ALIGNTOP        0x0010
01400 #define WVR_ALIGNLEFT       0x0020
01401 #define WVR_ALIGNBOTTOM     0x0040
01402 #define WVR_ALIGNRIGHT      0x0080
01403 #define WVR_HREDRAW         0x0100
01404 #define WVR_VREDRAW         0x0200
01405 #define WVR_REDRAW          (WVR_HREDRAW | WVR_VREDRAW)
01406 #define WVR_VALIDRECTS      0x0400
01407
01408   /* WM_NCHITTEST return codes */
01409 #define HTERROR             (-2)
01410 #define HTTRANSPARENT       (-1)
01411 #define HTNOWHERE           0
01412 #define HTCLIENT            1
01413 #define HTCAPTION           2
01414 #define HTSYSMENU           3
01415 #define HTSIZE              4
01416 #define HTMENU              5
01417 #define HTHSCROLL           6
01418 #define HTVSCROLL           7
01419 #define HTMINBUTTON         8
01420 #define HTMAXBUTTON         9
01421 #define HTLEFT              10
01422 #define HTRIGHT             11
01423 #define HTTOP               12
01424 #define HTTOPLEFT           13
01425 #define HTTOPRIGHT          14
01426 #define HTBOTTOM            15
01427 #define HTBOTTOMLEFT        16
01428 #define HTBOTTOMRIGHT       17
01429 #define HTBORDER            18
01430 #define HTGROWBOX           HTSIZE
01431 #define HTREDUCE            HTMINBUTTON
01432 #define HTZOOM              HTMAXBUTTON
01433 #define HTOBJECT            19
01434 #define HTCLOSE             20
01435 #define HTHELP              21
01436 #define HTSIZEFIRST         HTLEFT
01437 #define HTSIZELAST          HTBOTTOMRIGHT
01438
01439 /* SendMessageTimeout flags */
01440 #define SMTO_NORMAL             0x0000
01441 #define SMTO_BLOCK              0x0001
01442 #define SMTO_ABORTIFHUNG        0x0002
01443 #define SMTO_NOTIMEOUTIFNOTHUNG  0x0008
01444
01445   /* WM_SYSCOMMAND parameters */
01446 #ifdef SC_SIZE /* at least HP-UX: already defined in /usr/include/sys/signal.h */
01447 #undef SC_SIZE
01448 #endif
01449 #define SC_SIZE         0xf000
01450 #define SC_MOVE         0xf010
01451 #define SC_MINIMIZE     0xf020
01452 #define SC_MAXIMIZE     0xf030
01453 #define SC_NEXTWINDOW   0xf040
```

```
01454 #define SC_PREVWINDOW   0xf050
01455 #define SC_CLOSE        0xf060
01456 #define SC_VSCROLL      0xf070
01457 #define SC_HSCROLL      0xf080
01458 #define SC_MOUSEMENU    0xf090
01459 #define SC_KEYMENU      0xf100
01460 #define SC_ARRANGE      0xf110
01461 #define SC_RESTORE      0xf120
01462 #define SC_TASKLIST     0xf130
01463 #define SC_SCREENSAVE   0xf140
01464 #define SC_HOTKEY       0xf150
01465   /* Win32 4.0 */
01466 #define SC_DEFAULT      0xf160
01467 #define SC_MONITORPOWER 0xf170
01468 #define SC_CONTEXTHELP  0xf180
01469 #define SC_SEPARATOR    0xf00f
01470
01471 /* obsolete names(SC_ICON and SC_ZOOM) */
01472 #define SC_ICON   SC_MINIMIZE
01473 #define SC_ZOOM   SC_MAXIMIZE
01474
01475
01476 #define CS_VREDRAW          0x0001
01477 #define CS_HREDRAW          0x0002
01478 #define CS_KEYCVTWINDOW     0x0004
01479 #define CS_DBLCLKS          0x0008
01480 #define CS_OWNDC            0x0020
01481 #define CS_CLASSDC          0x0040
01482 #define CS_PARENTDC         0x0080
01483 #define CS_NOKEYCVT         0x0100
01484 #define CS_NOCLOSE          0x0200
01485 #define CS_SAVEBITS         0x0800
01486 #define CS_BYTEALIGNCLIENT  0x1000
01487 #define CS_BYTEALIGNWINDOW  0x2000
01488 #define CS_GLOBALCLASS      0x4000
01489 #define CS_IME              0x00010000
01490
01491 #define PRF_CHECKVISIBLE    0x00000001L
01492 #define PRF_NONCLIENT       0x00000002L
01493 #define PRF_CLIENT          0x00000004L
01494 #define PRF_ERASEBKGND      0x00000008L
01495 #define PRF_CHILDREN        0x00000010L
01496 #define PRF_OWNED           0x00000020L
01497
01498   /* Offsets for GetClassLong() and GetClassWord() */
01499 #define GCL_MENUNAME        (-8)
01500 #define GCL_HBRBACKGROUND   (-10)
01501 #define GCL_HCURSOR         (-12)
01502 #define GCL_HICON           (-14)
01503 #define GCL_HMODULE         (-16)
01504 #define GCL_CBWNDEXTRA      (-18)
01505 #define GCL_CBCLSEXTRA      (-20)
01506 #define GCL_WNDPROC         (-24)
01507 #define GCL_STYLE           (-26)
01508 #define GCW_ATOM            (-32)
01509 #define GCL_HICONSM         (-34)
01510
01511
01512 /***** Window hooks *****/
01513
01514   /* Hook values */
01515 #define WH_MIN          (-1)
01516 #define WH_MSGFILTER        (-1)
01517 #define WH_JOURNALRECORD    0
01518 #define WH_JOURNALPLAYBACK  1
01519 #define WH_KEYBOARD     2
01520 #define WH_GETMESSAGE       3
01521 #define WH_CALLWNDPROC      4
01522 #define WH_CBT          5
01523 #define WH_SYSMSGFILTER     6
01524 #define WH_MOUSE        7
01525 #define WH_HARDWARE     8
01526 #define WH_DEBUG        9
01527 #define WH_SHELL            10
01528 #define WH_FOREGROUNDIDLE   11
01529 #define WH_CALLWNDPROCRET   12
01530 #define WH_KEYBOARD_LL      13
01531 #define WH_MOUSE_LL         14
01532 #define WH_MAX              14
01533
01534 #define WH_MINHOOK          WH_MIN
01535 #define WH_MAXHOOK          WH_MAX
01536
01537   /* Hook action codes */
01538 #define HC_ACTION           0
01539 #define HC_GETNEXT          1
01540 #define HC_SKIP             2
```

```
01541 #define HC_NOREMOVE         3
01542 #define HC_NOREM            HC_NOREMOVE
01543 #define HC_SYSMODALON       4
01544 #define HC_SYSMODALOFF      5
01545
01546   /* CallMsgFilter() values */
01547 #define MSGF_DIALOGBOX      0
01548 #define MSGF_MESSAGEBOX     1
01549 #define MSGF_MENU           2
01550 #define MSGF_MOVE           3
01551 #define MSGF_SIZE           4
01552 #define MSGF_SCROLLBAR      5
01553 #define MSGF_NEXTWINDOW     6
01554 #define MSGF_MAX            8
01555 #define MSGF_USER           0x1000
01556 #define MSGF_DDEMGR         0x8001
01557
01558 typedef struct
01559 {
01560     UINT      style;
01561     WNDPROC   lpfnWndProc;
01562     INT       cbClsExtra;
01563     INT       cbWndExtra;
01564     HINSTANCE hInstance;
01565     HICON     hIcon;
01566     HCURSOR   hCursor;
01567     HBRUSH    hbrBackground;
01568     LPCSTR      lpszMenuName;
01569     LPCSTR      lpszClassName;
01570 } WNDCLASSA, *PWNDCLASSA, *LPWNDCLASSA;
01571
01572 typedef struct
01573 {
01574     UINT      style;
01575     WNDPROC   lpfnWndProc;
01576     INT       cbClsExtra;
01577     INT       cbWndExtra;
01578     HINSTANCE hInstance;
01579     HICON     hIcon;
01580     HCURSOR   hCursor;
01581     HBRUSH    hbrBackground;
01582     LPCWSTR     lpszMenuName;
01583     LPCWSTR     lpszClassName;
01584 } WNDCLASSW, *PWNDCLASSW, *LPWNDCLASSW;
01585
01586 DECL_WINELIB_TYPE_AW(WNDCLASS)
01587 DECL_WINELIB_TYPE_AW(PWNDCLASS)
01588 DECL_WINELIB_TYPE_AW(LPWNDCLASS)
01589
01590 typedef struct {
01591     DWORD dwData;
01592     DWORD cbData;
01593     LPVOID lpData;
01594 } COPYDATASTRUCT, *PCOPYDATASTRUCT;
01595
01596 typedef struct {
01597     HMENU hmenuIn;
01598     HMENU hmenuNext;
01599     HWND  hwndNext;
01600 } MDINEXTMENU, *PMDINEXTMENU, *LPMDINEXTMENU;
01601
01602 typedef struct
01603 {
01604     DWORD   mkSize;
01605     CHAR    mkKeyList;
01606     CHAR    szKeyphrase[1];
01607 } MULTIKEYHELPA, *PMULTIKEYHELPA, *LPMULTIKEYHELPA;
01608
01609 typedef struct
01610 {
01611     DWORD   mkSize;
01612     WCHAR   mkKeyList;
01613     WCHAR   szKeyphrase[1];
01614 } MULTIKEYHELPW, *PMULTIKEYHELPW, *LPMULTIKEYHELPW;
01615
01616 DECL_WINELIB_TYPE_AW(MULTIKEYHELP)
01617 DECL_WINELIB_TYPE_AW(PMULTIKEYHELP)
01618 DECL_WINELIB_TYPE_AW(LPMULTIKEYHELP)
01619
01620 typedef struct {
01621     int wStructSize;
01622     int x;
01623     int y;
01624     int dx;
01625     int dy;
01626     int wMax;
01627     CHAR rgchMember[2];
```

```
01628 } HELPWININFOA, *PHELPWININFOA, *LPHELPWININFOA;
01629
01630 typedef struct {
01631     int wStructSize;
01632     int x;
01633     int y;
01634     int dx;
01635     int dy;
01636     int wMax;
01637     WCHAR rgchMember[2];
01638 } HELPWININFOW, *PHELPWININFOW, *LPHELPWININFOW;
01639
01640 DECL_WINELIB_TYPE_AW(HELPWININFO)
01641 DECL_WINELIB_TYPE_AW(PHELPWININFO)
01642 DECL_WINELIB_TYPE_AW(LPHELPWININFO)
01643
01644 #define HELP_CONTEXT        0x0001
01645 #define HELP_QUIT           0x0002
01646 #define HELP_INDEX          0x0003
01647 #define HELP_CONTENTS       0x0003
01648 #define HELP_HELPONHELP     0x0004
01649 #define HELP_SETINDEX       0x0005
01650 #define HELP_SETCONTENTS    0x0005
01651 #define HELP_CONTEXTPOPUP   0x0008
01652 #define HELP_FORCEFILE      0x0009
01653 #define HELP_KEY            0x0101
01654 #define HELP_COMMAND        0x0102
01655 #define HELP_PARTIALKEY     0x0105
01656 #define HELP_MULTIKEY       0x0201
01657 #define HELP_SETWINPOS      0x0203
01658 #define HELP_CONTEXTMENU    0x000a
01659 #define HELP_FINDER     0x000b
01660 #define HELP_WM_HELP        0x000c
01661 #define HELP_SETPOPUP_POS   0x000d
01662
01663 #define HELP_TCARD      0x8000
01664 #define HELP_TCARD_DATA     0x0010
01665 #define HELP_TCARD_OTHER_CALLER 0x0011
01666
01667
01668      /* ChangeDisplaySettings return codes */
01669
01670 #define DISP_CHANGE_SUCCESSFUL 0
01671 #define DISP_CHANGE_RESTART    1
01672 #define DISP_CHANGE_FAILED     (-1)
01673 #define DISP_CHANGE_BADMODE    (-2)
01674 #define DISP_CHANGE_NOTUPDATED (-3)
01675 #define DISP_CHANGE_BADFLAGS   (-4)
01676 #define DISP_CHANGE_BADPARAM   (-5)
01677
01678 /* ChangeDisplaySettings.dwFlags */
01679 #define CDS_UPDATEREGISTRY  0x00000001
01680 #define CDS_TEST        0x00000002
01681 #define CDS_FULLSCREEN      0x00000004
01682 #define CDS_GLOBAL      0x00000008
01683 #define CDS_SET_PRIMARY     0x00000010
01684 #define CDS_RESET       0x40000000
01685 #define CDS_SETRECT     0x20000000
01686 #define CDS_NORESET     0x10000000
01687
01688 typedef struct
01689 {
01690     UINT      cbSize;
01691     UINT      style;
01692     WNDPROC   lpfnWndProc;
01693     INT       cbClsExtra;
01694     INT       cbWndExtra;
01695     HINSTANCE hInstance;
01696     HICON     hIcon;
01697     HCURSOR   hCursor;
01698     HBRUSH    hbrBackground;
01699     LPCSTR      lpszMenuName;
01700     LPCSTR      lpszClassName;
01701     HICON     hIconSm;
01702 } WNDCLASSEXA, *PWNDCLASSEXA, *LPWNDCLASSEXA;
01703
01704 typedef struct
01705 {
01706     UINT      cbSize;
01707     UINT      style;
01708     WNDPROC   lpfnWndProc;
01709     INT       cbClsExtra;
01710     INT       cbWndExtra;
01711     HINSTANCE hInstance;
01712     HICON     hIcon;
01713     HCURSOR   hCursor;
01714     HBRUSH    hbrBackground;
```

```
01715     LPCWSTR     lpszMenuName;
01716     LPCWSTR     lpszClassName;
01717     HICON     hIconSm;
01718 } WNDCLASSEXW, *PWNDCLASSEXW, *LPWNDCLASSEXW;
01719
01720 DECL_WINELIB_TYPE_AW(WNDCLASSEX)
01721 DECL_WINELIB_TYPE_AW(PWNDCLASSEX)
01722 DECL_WINELIB_TYPE_AW(LPWNDCLASSEX)
01723
01724 typedef struct tagMSG
01725 {
01726     HWND    hwnd;
01727     UINT    message;
01728     WPARAM  wParam;
01729     LPARAM    lParam;
01730     DWORD     time;
01731     POINT   pt;
01732 } MSG, *PMSG, *LPMSG;
01733
01734 #define POINTSTOPOINT(pt, pts)                          \
01735         { (pt).x = (LONG)(SHORT)LOWORD(*(LONG*)&pts);   \
01736           (pt).y = (LONG)(SHORT)HIWORD(*(LONG*)&pts); }
01737
01738 #define POINTTOPOINTS(pt)       (MAKELONG((short)((pt).x), (short)((pt).y)))
01739
01740
01741 /* Cursors / Icons */
01742
01743 typedef struct {
01744     BOOL        fIcon;
01745     DWORD       xHotspot;
01746     DWORD       yHotspot;
01747     HBITMAP hbmMask;
01748     HBITMAP hbmColor;
01749 } ICONINFO, *PICONINFO;
01750
01751
01752 /* this is the 6 byte accel struct used in Win32 when presented to the user */
01753 typedef struct
01754 {
01755     BYTE   fVirt;
01756     BYTE   pad0;
01757     WORD   key;
01758     WORD   cmd;
01759 } ACCEL, *LPACCEL;
01760
01761
01762 /* Flags for TrackPopupMenu */
01763 #define TPM_LEFTBUTTON    0x0000
01764 #define TPM_RIGHTBUTTON   0x0002
01765 #define TPM_LEFTALIGN     0x0000
01766 #define TPM_CENTERALIGN   0x0004
01767 #define TPM_RIGHTALIGN    0x0008
01768 #define TPM_TOPALIGN      0x0000
01769 #define TPM_VCENTERALIGN  0x0010
01770 #define TPM_BOTTOMALIGN   0x0020
01771 #define TPM_HORIZONTAL    0x0000
01772 #define TPM_VERTICAL      0x0040
01773 #define TPM_NONOTIFY      0x0080
01774 #define TPM_RETURNCMD     0x0100
01775
01776 typedef struct
01777 {
01778     UINT   cbSize;
01779     RECT   rcExclude;
01780 } TPMPARAMS, *LPTPMPARAMS;
01781
01782 /* FIXME: not sure this one is correct */
01783 typedef struct {
01784   UINT    cbSize;
01785   UINT    fMask;
01786   UINT    fType;
01787   UINT    fState;
01788   UINT    wID;
01789   HMENU   hSubMenu;
01790   HBITMAP hbmpChecked;
01791   HBITMAP hbmpUnchecked;
01792   DWORD   dwItemData;
01793   LPSTR   dwTypeData;
01794   UINT    cch;
01795   HBITMAP hbmpItem;
01796 } MENUITEMINFOA, *LPMENUITEMINFOA;
01797
01798 typedef struct {
01799   UINT    cbSize;
01800   UINT    fMask;
01801   UINT    fType;
```

```
01802   UINT    fState;
01803   UINT    wID;
01804   HMENU   hSubMenu;
01805   HBITMAP hbmpChecked;
01806   HBITMAP hbmpUnchecked;
01807   DWORD   dwItemData;
01808   LPWSTR  dwTypeData;
01809   UINT    cch;
01810   HBITMAP hbmpItem;
01811 } MENUITEMINFOW, *LPMENUITEMINFOW;
01812
01813 DECL_WINELIB_TYPE_AW(MENUITEMINFO)
01814 DECL_WINELIB_TYPE_AW(LPMENUITEMINFO)
01815 typedef const MENUITEMINFOA *LPCMENUITEMINFOA;
01816 typedef const MENUITEMINFOW *LPCMENUITEMINFOW;
01817 DECL_WINELIB_TYPE_AW(LPCMENUITEMINFO)
01818
01819 typedef struct {
01820   DWORD   cbSize;
01821   DWORD   fMask;
01822   DWORD   dwStyle;
01823   UINT    cyMax;
01824   HBRUSH  hbrBack;
01825   DWORD   dwContextHelpID;
01826   DWORD   dwMenuData;
01827 } MENUINFO, *LPMENUINFO;
01828
01829 typedef const MENUINFO *LPCMENUINFO;
01830
01831 #define MIM_MAXHEIGHT       0x00000001
01832 #define MIM_BACKGROUND      0x00000002
01833 #define MIM_HELPID      0x00000004
01834 #define MIM_MENUDATA        0x00000008
01835 #define MIM_STYLE       0x00000010
01836 #define MIM_APPLYTOSUBMENUS 0x80000000
01837
01838 typedef struct {
01839   WORD versionNumber;
01840   WORD offset;
01841 } MENUITEMTEMPLATEHEADER, *PMENUITEMTEMPLATEHEADER;
01842
01843
01844 typedef struct {
01845   WORD mtOption;
01846   WORD mtID;
01847   WCHAR mtString[1];
01848 } MENUITEMTEMPLATE, *PMENUITEMTEMPLATE;
01849
01850
01851 typedef VOID   MENUTEMPLATE;
01852 typedef PVOID *LPMENUTEMPLATE;
01853
01854 /* Field specifiers for MENUITEMINFO[AW] type.  */
01855 #define MIIM_STATE      0x00000001
01856 #define MIIM_ID         0x00000002
01857 #define MIIM_SUBMENU    0x00000004
01858 #define MIIM_CHECKMARKS 0x00000008
01859 #define MIIM_TYPE       0x00000010
01860 #define MIIM_DATA       0x00000020
01861 #define MIIM_STRING     0x00000040
01862 #define MIIM_BITMAP     0x00000080
01863 #define MIIM_FTYPE      0x00000100
01864
01865 #define HBMMENU_CALLBACK    ((HBITMAP) -1)
01866 #define HBMMENU_SYSTEM      ((HBITMAP)  1)
01867 #define HBMMENU_MBAR_RESTORE    ((HBITMAP)  2)
01868 #define HBMMENU_MBAR_MINIMIZE   ((HBITMAP)  3)
01869 #define HBMMENU_MBAR_CLOSE  ((HBITMAP)  5)
01870 #define HBMMENU_MBAR_CLOSE_D    ((HBITMAP)  6)
01871 #define HBMMENU_MBAR_MINIMIZE_D ((HBITMAP)  7)
01872 #define HBMMENU_POPUP_CLOSE ((HBITMAP)  8)
01873 #define HBMMENU_POPUP_RESTORE   ((HBITMAP)  9)
01874 #define HBMMENU_POPUP_MAXIMIZE  ((HBITMAP) 10)
01875 #define HBMMENU_POPUP_MINIMIZE  ((HBITMAP) 11)
01876
01877 /* WM_H/VSCROLL commands */
01878 #define SB_LINEUP           0
01879 #define SB_LINELEFT         0
01880 #define SB_LINEDOWN         1
01881 #define SB_LINERIGHT        1
01882 #define SB_PAGEUP           2
01883 #define SB_PAGELEFT         2
01884 #define SB_PAGEDOWN         3
01885 #define SB_PAGERIGHT        3
01886 #define SB_THUMBPOSITION    4
01887 #define SB_THUMBTRACK       5
01888 #define SB_TOP              6
```

```
01889 #define SB_LEFT             6
01890 #define SB_BOTTOM           7
01891 #define SB_RIGHT            7
01892 #define SB_ENDSCROLL        8
01893
01894 /* Scroll bar selection constants */
01895 #define SB_HORZ             0
01896 #define SB_VERT             1
01897 #define SB_CTL              2
01898 #define SB_BOTH             3
01899
01900 /* Scrollbar styles */
01901 #define SBS_HORZ                    0x0000L
01902 #define SBS_VERT                    0x0001L
01903 #define SBS_TOPALIGN                0x0002L
01904 #define SBS_LEFTALIGN               0x0002L
01905 #define SBS_BOTTOMALIGN             0x0004L
01906 #define SBS_RIGHTALIGN              0x0004L
01907 #define SBS_SIZEBOXTOPLEFTALIGN     0x0002L
01908 #define SBS_SIZEBOXBOTTOMRIGHTALIGN 0x0004L
01909 #define SBS_SIZEBOX                 0x0008L
01910 #define SBS_SIZEGRIP                0x0010L
01911
01912 /* EnableScrollBar() flags */
01913 #define ESB_ENABLE_BOTH     0x0000
01914 #define ESB_DISABLE_BOTH    0x0003
01915
01916 #define ESB_DISABLE_LEFT    0x0001
01917 #define ESB_DISABLE_RIGHT   0x0002
01918
01919 #define ESB_DISABLE_UP      0x0001
01920 #define ESB_DISABLE_DOWN    0x0002
01921
01922 #define ESB_DISABLE_LTUP    ESB_DISABLE_LEFT
01923 #define ESB_DISABLE_RTDN    ESB_DISABLE_RIGHT
01924
01925 /* Win32 button control messages */
01926 #define BM_GETCHECK          0x00f0
01927 #define BM_SETCHECK          0x00f1
01928 #define BM_GETSTATE          0x00f2
01929 #define BM_SETSTATE          0x00f3
01930 #define BM_SETSTYLE          0x00f4
01931 #define BM_CLICK             0x00f5
01932 #define BM_GETIMAGE          0x00f6
01933 #define BM_SETIMAGE          0x00f7
01934 /* Winelib button control messages */
01935
01936 /* Button notification codes */
01937 #define BN_CLICKED             0
01938 #define BN_PAINT               1
01939 #define BN_HILITE              2
01940 #define BN_UNHILITE            3
01941 #define BN_DISABLE             4
01942 #define BN_DOUBLECLICKED       5
01943 #define BN_DBLCLK              BN_DOUBLECLICKED
01944
01945 /* Button states */
01946 #define BST_UNCHECKED        0x0000
01947 #define BST_CHECKED          0x0001
01948 #define BST_INDETERMINATE    0x0002
01949 #define BST_PUSHED           0x0004
01950 #define BST_FOCUS            0x0008
01951
01952 /* Static Control Styles */
01953 #define SS_LEFT             0x00000000L
01954 #define SS_CENTER           0x00000001L
01955 #define SS_RIGHT            0x00000002L
01956 #define SS_ICON             0x00000003L
01957 #define SS_BLACKRECT        0x00000004L
01958 #define SS_GRAYRECT         0x00000005L
01959 #define SS_WHITERECT        0x00000006L
01960 #define SS_BLACKFRAME       0x00000007L
01961 #define SS_GRAYFRAME        0x00000008L
01962 #define SS_WHITEFRAME       0x00000009L
01963
01964 #define SS_SIMPLE           0x0000000BL
01965 #define SS_LEFTNOWORDWRAP   0x0000000CL
01966
01967 #define SS_OWNERDRAW        0x0000000DL
01968 #define SS_BITMAP           0x0000000EL
01969 #define SS_ENHMETAFILE      0x0000000FL
01970
01971 #define SS_ETCHEDHORZ       0x00000010L
01972 #define SS_ETCHEDVERT       0x00000011L
01973 #define SS_ETCHEDFRAME      0x00000012L
01974 #define SS_TYPEMASK         0x0000001FL
01975
```

```
01976 #define SS_NOPREFIX         0x00000080L
01977 #define SS_NOTIFY           0x00000100L
01978 #define SS_CENTERIMAGE      0x00000200L
01979 #define SS_RIGHTJUST        0x00000400L
01980 #define SS_REALSIZEIMAGE    0x00000800L
01981 #define SS_SUNKEN           0x00001000L
01982
01983 /* Static Control Messages */
01984 #define STM_SETICON       0x0170
01985 #define STM_GETICON       0x0171
01986 #define STM_SETIMAGE        0x0172
01987 #define STM_GETIMAGE        0x0173
01988 #define STM_MSGMAX          0x0174
01989
01990 #define STN_CLICKED         0
01991 #define STN_DBLCLK          1
01992 #define STN_ENABLE          2
01993 #define STN_DISABLE         3
01994
01995 /* Scrollbar messages */
01996 #define SBM_SETPOS              0x00e0
01997 #define SBM_GETPOS              0x00e1
01998 #define SBM_SETRANGE            0x00e2
01999 #define SBM_GETRANGE            0x00e3
02000 #define SBM_ENABLE_ARROWS       0x00e4
02001 #define SBM_SETRANGEREDRAW      0x00e6
02002 #define SBM_SETSCROLLINFO       0x00e9
02003 #define SBM_GETSCROLLINFO       0x00ea
02004
02005 /* Scrollbar info */
02006 typedef struct
02007 {
02008     UINT    cbSize;
02009     UINT    fMask;
02010     INT     nMin;
02011     INT     nMax;
02012     UINT    nPage;
02013     INT     nPos;
02014     INT     nTrackPos;
02015 } SCROLLINFO, *LPSCROLLINFO;
02016
02017 typedef const SCROLLINFO *LPCSCROLLINFO;
02018
02019 /* GetScrollInfo() flags */
02020 #define SIF_RANGE           0x0001
02021 #define SIF_PAGE            0x0002
02022 #define SIF_POS             0x0004
02023 #define SIF_DISABLENOSCROLL 0x0008
02024 #define SIF_TRACKPOS        0x0010
02025 #define SIF_ALL             (SIF_RANGE | SIF_PAGE | SIF_POS | SIF_TRACKPOS)
02026
02027 /* Listbox styles */
02028 #define LBS_NOTIFY              0x0001
02029 #define LBS_SORT                0x0002
02030 #define LBS_NOREDRAW            0x0004
02031 #define LBS_MULTIPLESEL         0x0008
02032 #define LBS_OWNERDRAWFIXED      0x0010
02033 #define LBS_OWNERDRAWVARIABLE   0x0020
02034 #define LBS_HASSTRINGS          0x0040
02035 #define LBS_USETABSTOPS         0x0080
02036 #define LBS_NOINTEGRALHEIGHT    0x0100
02037 #define LBS_MULTICOLUMN         0x0200
02038 #define LBS_WANTKEYBOARDINPUT   0x0400
02039 #define LBS_EXTENDEDSEL         0x0800
02040 #define LBS_DISABLENOSCROLL     0x1000
02041 #define LBS_NODATA              0x2000
02042 #define LBS_NOSEL               0x4000
02043 #define LBS_STANDARD  (LBS_NOTIFY | LBS_SORT | WS_VSCROLL | WS_BORDER)
02044
02045 /* Listbox messages */
02046 #define LB_ADDSTRING            0x0180
02047 #define LB_INSERTSTRING         0x0181
02048 #define LB_DELETESTRING         0x0182
02049 #define LB_SELITEMRANGEEX       0x0183
02050 #define LB_RESETCONTENT         0x0184
02051 #define LB_SETSEL               0x0185
02052 #define LB_SETCURSEL            0x0186
02053 #define LB_GETSEL               0x0187
02054 #define LB_GETCURSEL            0x0188
02055 #define LB_GETTEXT              0x0189
02056 #define LB_GETTEXTLEN           0x018a
02057 #define LB_GETCOUNT             0x018b
02058 #define LB_SELECTSTRING         0x018c
02059 #define LB_DIR                  0x018d
02060 #define LB_GETTOPINDEX          0x018e
02061 #define LB_FINDSTRING           0x018f
02062 #define LB_GETSELCOUNT          0x0190
```

```
02063 #define LB_GETSELITEMS          0x0191
02064 #define LB_SETTABSTOPS          0x0192
02065 #define LB_GETHORIZONTALEXTENT  0x0193
02066 #define LB_SETHORIZONTALEXTENT  0x0194
02067 #define LB_SETCOLUMNWIDTH       0x0195
02068 #define LB_ADDFILE              0x0196
02069 #define LB_SETTOPINDEX          0x0197
02070 #define LB_GETITEMRECT          0x0198
02071 #define LB_GETITEMDATA          0x0199
02072 #define LB_SETITEMDATA          0x019a
02073 #define LB_SELITEMRANGE         0x019b
02074 #define LB_SETANCHORINDEX       0x019c
02075 #define LB_GETANCHORINDEX       0x019d
02076 #define LB_SETCARETINDEX        0x019e
02077 #define LB_GETCARETINDEX        0x019f
02078 #define LB_SETITEMHEIGHT        0x01a0
02079 #define LB_GETITEMHEIGHT        0x01a1
02080 #define LB_FINDSTRINGEXACT      0x01a2
02081 #define LB_CARETON              0x01a3
02082 #define LB_CARETOFF             0x01a4
02083 #define LB_SETLOCALE            0x01a5
02084 #define LB_GETLOCALE            0x01a6
02085 #define LB_SETCOUNT             0x01a7
02086 #define LB_INITSTORAGE          0x01a8
02087 #define LB_ITEMFROMPOINT        0x01a9
02088
02089 /* Listbox notification codes */
02090 #define LBN_ERRSPACE        (-2)
02091 #define LBN_SELCHANGE       1
02092 #define LBN_DBLCLK          2
02093 #define LBN_SELCANCEL       3
02094 #define LBN_SETFOCUS        4
02095 #define LBN_KILLFOCUS       5
02096
02097 /* Listbox message return values */
02098 #define LB_OKAY             0
02099 #define LB_ERR              (-1)
02100 #define LB_ERRSPACE         (-2)
02101
02102 #define LB_CTLCODE          0L
02103
02104 /* Combo box styles */
02105 #define CBS_SIMPLE            0x0001L
02106 #define CBS_DROPDOWN          0x0002L
02107 #define CBS_DROPDOWNLIST      0x0003L
02108 #define CBS_OWNERDRAWFIXED    0x0010L
02109 #define CBS_OWNERDRAWVARIABLE 0x0020L
02110 #define CBS_AUTOHSCROLL       0x0040L
02111 #define CBS_OEMCONVERT        0x0080L
02112 #define CBS_SORT              0x0100L
02113 #define CBS_HASSTRINGS        0x0200L
02114 #define CBS_NOINTEGRALHEIGHT  0x0400L
02115 #define CBS_DISABLENOSCROLL   0x0800L
02116
02117 #define CBS_UPPERCASE         0x2000L
02118 #define CBS_LOWERCASE         0x4000L
02119
02120
02121 /* Combo box messages */
02122 #define CB_GETEDITSEL            0x0140
02123 #define CB_LIMITTEXT             0x0141
02124 #define CB_SETEDITSEL            0x0142
02125 #define CB_ADDSTRING             0x0143
02126 #define CB_DELETESTRING          0x0144
02127 #define CB_DIR                   0x0145
02128 #define CB_GETCOUNT              0x0146
02129 #define CB_GETCURSEL             0x0147
02130 #define CB_GETLBTEXT             0x0148
02131 #define CB_GETLBTEXTLEN          0x0149
02132 #define CB_INSERTSTRING          0x014a
02133 #define CB_RESETCONTENT          0x014b
02134 #define CB_FINDSTRING            0x014c
02135 #define CB_SELECTSTRING          0x014d
02136 #define CB_SETCURSEL             0x014e
02137 #define CB_SHOWDROPDOWN          0x014f
02138 #define CB_GETITEMDATA           0x0150
02139 #define CB_SETITEMDATA           0x0151
02140 #define CB_GETDROPPEDCONTROLRECT 0x0152
02141 #define CB_SETITEMHEIGHT         0x0153
02142 #define CB_GETITEMHEIGHT         0x0154
02143 #define CB_SETEXTENDEDUI         0x0155
02144 #define CB_GETEXTENDEDUI         0x0156
02145 #define CB_GETDROPPEDSTATE       0x0157
02146 #define CB_FINDSTRINGEXACT       0x0158
02147 #define CB_SETLOCALE             0x0159
02148 #define CB_GETLOCALE             0x015a
02149 #define CB_GETTOPINDEX           0x015b
```

```
02150 #define CB_SETTOPINDEX           0x015c
02151 #define CB_GETHORIZONTALEXTENT   0x015d
02152 #define CB_SETHORIZONTALEXTENT   0x015e
02153 #define CB_GETDROPPEDWIDTH       0x015f
02154 #define CB_SETDROPPEDWIDTH       0x0160
02155 #define CB_INITSTORAGE           0x0161
02156
02157 /* Combo box notification codes */
02158 #define CBN_ERRSPACE        (-1)
02159 #define CBN_SELCHANGE       1
02160 #define CBN_DBLCLK          2
02161 #define CBN_SETFOCUS        3
02162 #define CBN_KILLFOCUS       4
02163 #define CBN_EDITCHANGE      5
02164 #define CBN_EDITUPDATE      6
02165 #define CBN_DROPDOWN        7
02166 #define CBN_CLOSEUP         8
02167 #define CBN_SELENDOK        9
02168 #define CBN_SELENDCANCEL    10
02169
02170 /* Combo box message return values */
02171 #define CB_OKAY             0
02172 #define CB_ERR              (-1)
02173 #define CB_ERRSPACE         (-2)
02174
02175 #define MB_OK           0x00000000
02176 #define MB_OKCANCEL     0x00000001
02177 #define MB_ABORTRETRYIGNORE 0x00000002
02178 #define MB_YESNOCANCEL      0x00000003
02179 #define MB_YESNO        0x00000004
02180 #define MB_RETRYCANCEL      0x00000005
02181 #define MB_TYPEMASK     0x0000000F
02182
02183 #define MB_ICONHAND     0x00000010
02184 #define MB_ICONQUESTION     0x00000020
02185 #define MB_ICONEXCLAMATION  0x00000030
02186 #define MB_ICONASTERISK     0x00000040
02187 #define MB_USERICON     0x00000080
02188 #define MB_ICONMASK     0x000000F0
02189
02190 #define MB_ICONINFORMATION  MB_ICONASTERISK
02191 #define MB_ICONSTOP     MB_ICONHAND
02192 #define MB_ICONWARNING      MB_ICONEXCLAMATION
02193 #define MB_ICONERROR        MB_ICONHAND
02194
02195 #define MB_DEFBUTTON1       0x00000000
02196 #define MB_DEFBUTTON2       0x00000100
02197 #define MB_DEFBUTTON3       0x00000200
02198 #define MB_DEFBUTTON4       0x00000300
02199 #define MB_DEFMASK      0x00000F00
02200
02201 #define MB_APPLMODAL        0x00000000
02202 #define MB_SYSTEMMODAL      0x00001000
02203 #define MB_TASKMODAL        0x00002000
02204 #define MB_MODEMASK     0x00003000
02205
02206 #define MB_HELP         0x00004000
02207 #define MB_NOFOCUS      0x00008000
02208 #define MB_MISCMASK     0x0000C000
02209
02210 #define MB_SETFOREGROUND    0x00010000
02211 #define MB_DEFAULT_DESKTOP_ONLY 0x00020000
02212 #define MB_SERVICE_NOTIFICATION 0x00040000
02213 #define MB_TOPMOST      0x00040000
02214 #define MB_RIGHT        0x00080000
02215 #define MB_RTLREADING       0x00100000
02216
02217 #define HELPINFO_WINDOW     0x0001
02218 #define HELPINFO_MENUITEM   0x0002
02219
02220 /* Structure pointed to by lParam of WM_HELP */
02221 typedef struct
02222 {
02223     UINT    cbSize;     /* Size in bytes of this struct  */
02224     INT iContextType;   /* Either HELPINFO_WINDOW or HELPINFO_MENUITEM */
02225     INT iCtrlId;    /* Control Id or a Menu item Id. */
02226     HANDLE  hItemHandle;    /* hWnd of control or hMenu.     */
02227     DWORD   dwContextId;    /* Context Id associated with this item */
02228     POINT   MousePos;   /* Mouse Position in screen co-ordinates */
02229 }  HELPINFO,*LPHELPINFO;
02230
02231 typedef void CALLBACK (*MSGBOXCALLBACK)(LPHELPINFO lpHelpInfo);
02232
02233 typedef struct
02234 {
02235     UINT    cbSize;
02236     HWND    hwndOwner;
```

```
02237     HINSTANCE   hInstance;
02238     LPCSTR  lpszText;
02239     LPCSTR  lpszCaption;
02240     DWORD   dwStyle;
02241     LPCSTR  lpszIcon;
02242     DWORD   dwContextHelpId;
02243     MSGBOXCALLBACK  lpfnMsgBoxCallback;
02244     DWORD   dwLanguageId;
02245 } MSGBOXPARAMSA, *PMSGBOXPARAMSA, *LPMSGBOXPARAMSA;
02246
02247 typedef struct
02248 {
02249     UINT    cbSize;
02250     HWND    hwndOwner;
02251     HINSTANCE   hInstance;
02252     LPCWSTR lpszText;
02253     LPCWSTR lpszCaption;
02254     DWORD   dwStyle;
02255     LPCWSTR lpszIcon;
02256     DWORD   dwContextHelpId;
02257     MSGBOXCALLBACK  lpfnMsgBoxCallback;
02258     DWORD   dwLanguageId;
02259 } MSGBOXPARAMSW, *PMSGBOXPARAMSW, *LPMSGBOXPARAMSW;
02260
02261 DECL_WINELIB_TYPE_AW(MSGBOXPARAMS)
02262 DECL_WINELIB_TYPE_AW(PMSGBOXPARAMS)
02263 DECL_WINELIB_TYPE_AW(LPMSGBOXPARAMS)
02264
02265 #define MONITOR_DEFAULTTONULL       0x00000000
02266 #define MONITOR_DEFAULTTOPRIMARY    0x00000001
02267 #define MONITOR_DEFAULTTONEAREST    0x00000002
02268
02269 #define MONITORINFOF_PRIMARY        0x00000001
02270
02271 #ifndef CCHDEVICENAME
02272 #define CCHDEVICENAME 32
02273 #endif
02274
02275 typedef struct tagMONITORINFO
02276 {
02277     DWORD   cbSize;
02278     RECT  rcMonitor;
02279     RECT  rcWork;
02280     DWORD   dwFlags;
02281 } MONITORINFO, *LPMONITORINFO;
02282
02283 typedef struct tagMONITORINFOEXA
02284 {
02285     MONITORINFO dummy;
02286     CHAR        szDevice[CCHDEVICENAME];
02287 } MONITORINFOEXA, *LPMONITORINFOEXA;
02288
02289 typedef struct tagMONITORINFOEXW
02290 {
02291     MONITORINFO dummy;
02292     WCHAR       szDevice[CCHDEVICENAME];
02293 } MONITORINFOEXW, *LPMONITORINFOEXW;
02294
02295 DECL_WINELIB_TYPE_AW(MONITORINFOEX)
02296 DECL_WINELIB_TYPE_AW(LPMONITORINFOEX)
02297
02298 typedef BOOL  CALLBACK (*MONITORENUMPROC)(HMONITOR,HDC,LPRECT,LPARAM);
02299
02300 #include "pshpack2.h"
02301
02302 /* FIXME: use this instead of LPCVOID for CreateDialogIndirectParam
02303    and DialogBoxIndirectParam */
02304 typedef struct tagDLGTEMPLATE
02305 {
02306     DWORD style;
02307     DWORD dwExtendedStyle;
02308     WORD cdit;
02309     short x;
02310     short y;
02311     short cx;
02312     short cy;
02313 } DLGTEMPLATE;
02314
02315 typedef DLGTEMPLATE *LPDLGTEMPLATEA;
02316 typedef DLGTEMPLATE *LPDLGTEMPLATEW;
02317 DECL_WINELIB_TYPE_AW(LPDLGTEMPLATE)
02318 typedef const DLGTEMPLATE *LPCDLGTEMPLATEA;
02319 typedef const DLGTEMPLATE *LPCDLGTEMPLATEW;
02320 DECL_WINELIB_TYPE_AW(LPCDLGTEMPLATE)
02321
02322 typedef struct tagDLGITEMTEMPLATE
02323 {
```

```
02324     DWORD style;
02325     DWORD dwExtendedStyle;
02326     short x;
02327     short y;
02328     short cx;
02329     short cy;
02330     WORD id;
02331 } DLGITEMTEMPLATE;
02332
02333 typedef DLGITEMTEMPLATE *PDLGITEMTEMPLATEA;
02334 typedef DLGITEMTEMPLATE *PDLGITEMTEMPLATEW;
02335 DECL_WINELIB_TYPE_AW(PDLGITEMTEMPLATE)
02336 typedef DLGITEMTEMPLATE *LPDLGITEMTEMPLATEA;
02337 typedef DLGITEMTEMPLATE *LPDLGITEMTEMPLATEW;
02338 DECL_WINELIB_TYPE_AW(LPDLGITEMTEMPLATE)
02339
02340 #include "poppack.h"
02341
02342   /* CBT hook values */
02343 #define HCBT_MOVESIZE       0
02344 #define HCBT_MINMAX     1
02345 #define HCBT_QS         2
02346 #define HCBT_CREATEWND      3
02347 #define HCBT_DESTROYWND     4
02348 #define HCBT_ACTIVATE       5
02349 #define HCBT_CLICKSKIPPED   6
02350 #define HCBT_KEYSKIPPED     7
02351 #define HCBT_SYSCOMMAND     8
02352 #define HCBT_SETFOCUS       9
02353
02354   /* CBT hook structures */
02355
02356 typedef struct
02357 {
02358     CREATESTRUCTA *lpcs;
02359     HWND           hwndInsertAfter;
02360 } CBT_CREATEWNDA, *LPCBT_CREATEWNDA;
02361
02362 typedef struct
02363 {
02364     CREATESTRUCTW *lpcs;
02365     HWND           hwndInsertAfter;
02366 } CBT_CREATEWNDW, *LPCBT_CREATEWNDW;
02367
02368 DECL_WINELIB_TYPE_AW(CBT_CREATEWND)
02369 DECL_WINELIB_TYPE_AW(LPCBT_CREATEWND)
02370
02371 typedef struct
02372 {
02373     BOOL    fMouse;
02374     HWND    hWndActive;
02375 } CBTACTIVATESTRUCT, *LPCBTACTIVATESTRUCT;
02376
02377
02378 /* modifiers for RegisterHotKey */
02379 #define MOD_ALT     0x0001
02380 #define MOD_CONTROL 0x0002
02381 #define MOD_SHIFT   0x0004
02382 #define MOD_WIN     0x0008
02383
02384 /* ids for RegisterHotKey */
02385 #define IDHOT_SNAPWINDOW    (-1)    /* SHIFT-PRINTSCRN  */
02386 #define IDHOT_SNAPDESKTOP   (-2)    /* PRINTSCRN        */
02387
02388   /* keybd_event flags */
02389 #define KEYEVENTF_EXTENDEDKEY        0x0001
02390 #define KEYEVENTF_KEYUP              0x0002
02391
02392   /* mouse_event flags */
02393 #define MOUSEEVENTF_MOVE        0x0001
02394 #define MOUSEEVENTF_LEFTDOWN    0x0002
02395 #define MOUSEEVENTF_LEFTUP      0x0004
02396 #define MOUSEEVENTF_RIGHTDOWN   0x0008
02397 #define MOUSEEVENTF_RIGHTUP     0x0010
02398 #define MOUSEEVENTF_MIDDLEDOWN  0x0020
02399 #define MOUSEEVENTF_MIDDLEUP    0x0040
02400 #define MOUSEEVENTF_WHEEL       0x0800
02401 #define MOUSEEVENTF_ABSOLUTE    0x8000
02402
02403 /* ExitWindows() flags */
02404 #define EW_RESTARTWINDOWS   0x0042
02405 #define EW_REBOOTSYSTEM     0x0043
02406 #define EW_EXITANDEXECAPP   0x0044
02407
02408 /* ExitWindowsEx() flags */
02409 #define EWX_LOGOFF           0
02410 #define EWX_SHUTDOWN         1
```

```
02411 #define EWX_REBOOT           2
02412 #define EWX_FORCE            4
02413 #define EWX_POWEROFF         8
02414
02415 /* SetLastErrorEx types */
02416 #define SLE_ERROR   0x00000001
02417 #define SLE_MINORERROR  0x00000002
02418 #define SLE_WARNING 0x00000003
02419
02420 /* Predefined resources */
02421 #define IDI_APPLICATIONA MAKEINTRESOURCEA(32512)
02422 #define IDI_APPLICATIONW MAKEINTRESOURCEW(32512)
02423 #define IDI_APPLICATION    WINELIB_NAME_AW(IDI_APPLICATION)
02424 #define IDI_HANDA        MAKEINTRESOURCEA(32513)
02425 #define IDI_HANDW        MAKEINTRESOURCEW(32513)
02426 #define IDI_HAND           WINELIB_NAME_AW(IDI_HAND)
02427 #define IDI_QUESTIONA    MAKEINTRESOURCEA(32514)
02428 #define IDI_QUESTIONW    MAKEINTRESOURCEW(32514)
02429 #define IDI_QUESTION       WINELIB_NAME_AW(IDI_QUESTION)
02430 #define IDI_EXCLAMATIONA MAKEINTRESOURCEA(32515)
02431 #define IDI_EXCLAMATIONW MAKEINTRESOURCEW(32515)
02432 #define IDI_EXCLAMATION    WINELIB_NAME_AW(IDI_EXCLAMATION)
02433 #define IDI_ASTERISKA    MAKEINTRESOURCEA(32516)
02434 #define IDI_ASTERISKW    MAKEINTRESOURCEW(32516)
02435 #define IDI_ASTERISK       WINELIB_NAME_AW(IDI_ASTERISK)
02436 #define IDI_WINLOGOA       MAKEINTRESOURCEA(32517)
02437 #define IDI_WINLOGOW       MAKEINTRESOURCEW(32517)
02438 #define IDI_WINLOGO        WINELIB_NAME_AW(IDI_WINLOGO)
02439
02440 #define IDI_WARNING        IDI_EXCLAMATION
02441 #define IDI_ERROR          IDI_HAND
02442 #define IDI_INFORMATION    IDI_ASTERISK
02443
02444 #define IDC_ARROWA       MAKEINTRESOURCEA(32512)
02445 #define IDC_ARROWW       MAKEINTRESOURCEW(32512)
02446 #define IDC_ARROW          WINELIB_NAME_AW(IDC_ARROW)
02447 #define IDC_IBEAMA       MAKEINTRESOURCEA(32513)
02448 #define IDC_IBEAMW       MAKEINTRESOURCEW(32513)
02449 #define IDC_IBEAM          WINELIB_NAME_AW(IDC_IBEAM)
02450 #define IDC_WAITA        MAKEINTRESOURCEA(32514)
02451 #define IDC_WAITW        MAKEINTRESOURCEW(32514)
02452 #define IDC_WAIT           WINELIB_NAME_AW(IDC_WAIT)
02453 #define IDC_CROSSA       MAKEINTRESOURCEA(32515)
02454 #define IDC_CROSSW       MAKEINTRESOURCEW(32515)
02455 #define IDC_CROSS          WINELIB_NAME_AW(IDC_CROSS)
02456 #define IDC_UPARROWA     MAKEINTRESOURCEA(32516)
02457 #define IDC_UPARROWW     MAKEINTRESOURCEW(32516)
02458 #define IDC_UPARROW        WINELIB_NAME_AW(IDC_UPARROW)
02459 #define IDC_SIZEA        MAKEINTRESOURCEA(32640)
02460 #define IDC_SIZEW        MAKEINTRESOURCEW(32640)
02461 #define IDC_SIZE           WINELIB_NAME_AW(IDC_SIZE)
02462 #define IDC_ICONA        MAKEINTRESOURCEA(32641)
02463 #define IDC_ICONW        MAKEINTRESOURCEW(32641)
02464 #define IDC_ICON           WINELIB_NAME_AW(IDC_ICON)
02465 #define IDC_SIZENWSEA    MAKEINTRESOURCEA(32642)
02466 #define IDC_SIZENWSEW    MAKEINTRESOURCEW(32642)
02467 #define IDC_SIZENWSE       WINELIB_NAME_AW(IDC_SIZENWSE)
02468 #define IDC_SIZENESWA    MAKEINTRESOURCEA(32643)
02469 #define IDC_SIZENESWW    MAKEINTRESOURCEW(32643)
02470 #define IDC_SIZENESW       WINELIB_NAME_AW(IDC_SIZENESW)
02471 #define IDC_SIZEWEA      MAKEINTRESOURCEA(32644)
02472 #define IDC_SIZEWEW      MAKEINTRESOURCEW(32644)
02473 #define IDC_SIZEWE         WINELIB_NAME_AW(IDC_SIZEWE)
02474 #define IDC_SIZENSA      MAKEINTRESOURCEA(32645)
02475 #define IDC_SIZENSW      MAKEINTRESOURCEW(32645)
02476 #define IDC_SIZENS         WINELIB_NAME_AW(IDC_SIZENS)
02477 #define IDC_SIZEALLA     MAKEINTRESOURCEA(32646)
02478 #define IDC_SIZEALLW     MAKEINTRESOURCEW(32646)
02479 #define IDC_SIZEALL        WINELIB_NAME_AW(IDC_SIZEALL)
02480 #define IDC_NOA          MAKEINTRESOURCEA(32648)
02481 #define IDC_NOW          MAKEINTRESOURCEW(32648)
02482 #define IDC_NO             WINELIB_NAME_AW(IDC_NO)
02483 #define IDC_HANDA        MAKEINTRESOURCEA(32649)
02484 #define IDC_HANDW        MAKEINTRESOURCEW(32649)
02485 #define IDC_HAND         WINELIB_NAME_AW(IDC_HAND)
02486 #define IDC_APPSTARTINGA MAKEINTRESOURCEA(32650)
02487 #define IDC_APPSTARTINGW MAKEINTRESOURCEW(32650)
02488 #define IDC_APPSTARTING    WINELIB_NAME_AW(IDC_APPSTARTING)
02489 #define IDC_HELPA        MAKEINTRESOURCEA(32651)
02490 #define IDC_HELPW        MAKEINTRESOURCEW(32651)
02491 #define IDC_HELP           WINELIB_NAME_AW(IDC_HELP)
02492
02493 #define MNC_IGNORE 0
02494 #define MNC_CLOSE 1
02495 #define MNC_EXECUTE 2
02496 #define MNC_SELECT 3
02497
```

```
02498 /* SystemParametersInfo */
02499 /* defines below are for all win versions */
02500 #define SPI_GETBEEP               1
02501 #define SPI_SETBEEP               2
02502 #define SPI_GETMOUSE              3
02503 #define SPI_SETMOUSE              4
02504 #define SPI_GETBORDER             5
02505 #define SPI_SETBORDER             6
02506 #define SPI_GETKEYBOARDSPEED      10
02507 #define SPI_SETKEYBOARDSPEED      11
02508 #define SPI_LANGDRIVER            12
02509 #define SPI_ICONHORIZONTALSPACING 13
02510 #define SPI_GETSCREENSAVETIMEOUT  14
02511 #define SPI_SETSCREENSAVETIMEOUT  15
02512 #define SPI_GETSCREENSAVEACTIVE   16
02513 #define SPI_SETSCREENSAVEACTIVE   17
02514 #define SPI_GETGRIDGRANULARITY    18
02515 #define SPI_SETGRIDGRANULARITY    19
02516 #define SPI_SETDESKWALLPAPER      20
02517 #define SPI_SETDESKPATTERN        21
02518 #define SPI_GETKEYBOARDDELAY      22
02519 #define SPI_SETKEYBOARDDELAY      23
02520 #define SPI_ICONVERTICALSPACING   24
02521 #define SPI_GETICONTITLEWRAP      25
02522 #define SPI_SETICONTITLEWRAP      26
02523 #define SPI_GETMENUDROPALIGNMENT  27
02524 #define SPI_SETMENUDROPALIGNMENT  28
02525 #define SPI_SETDOUBLECLKWIDTH     29
02526 #define SPI_SETDOUBLECLKHEIGHT    30
02527 #define SPI_GETICONTITLELOGFONT   31
02528 #define SPI_SETDOUBLECLICKTIME    32
02529 #define SPI_SETMOUSEBUTTONSWAP    33
02530 #define SPI_SETICONTITLELOGFONT   34
02531 #define SPI_GETFASTTASKSWITCH     35
02532 #define SPI_SETFASTTASKSWITCH     36
02533 #define SPI_SETDRAGFULLWINDOWS    37
02534 #define SPI_GETDRAGFULLWINDOWS    38
02535
02536 #define SPI_GETFILTERKEYS         50
02537 #define SPI_SETFILTERKEYS         51
02538 #define SPI_GETTOGGLEKEYS         52
02539 #define SPI_SETTOGGLEKEYS         53
02540 #define SPI_GETMOUSEKEYS          54
02541 #define SPI_SETMOUSEKEYS          55
02542 #define SPI_GETSHOWSOUNDS         56
02543 #define SPI_SETSHOWSOUNDS         57
02544 #define SPI_GETSTICKYKEYS         58
02545 #define SPI_SETSTICKYKEYS         59
02546 #define SPI_GETACCESSTIMEOUT      60
02547 #define SPI_SETACCESSTIMEOUT      61
02548
02549 #define SPI_GETSOUNDSENTRY        64
02550 #define SPI_SETSOUNDSENTRY        65
02551
02552 /* defines below are for all win versions WINVER >= 0x0400 */
02553 #define SPI_SETDRAGFULLWINDOWS    37
02554 #define SPI_GETDRAGFULLWINDOWS    38
02555 #define SPI_GETNONCLIENTMETRICS   41
02556 #define SPI_SETNONCLIENTMETRICS   42
02557 #define SPI_GETMINIMIZEDMETRICS   43
02558 #define SPI_SETMINIMIZEDMETRICS   44
02559 #define SPI_GETICONMETRICS        45
02560 #define SPI_SETICONMETRICS        46
02561 #define SPI_SETWORKAREA           47
02562 #define SPI_GETWORKAREA           48
02563 #define SPI_SETPENWINDOWS         49
02564
02565 #define SPI_GETSERIALKEYS         62
02566 #define SPI_SETSERIALKEYS         63
02567 #define SPI_GETHIGHCONTRAST       66
02568 #define SPI_SETHIGHCONTRAST       67
02569 #define SPI_GETKEYBOARDPREF       68
02570 #define SPI_SETKEYBOARDPREF       69
02571 #define SPI_GETSCREENREADER       70
02572 #define SPI_SETSCREENREADER       71
02573 #define SPI_GETANIMATION          72
02574 #define SPI_SETANIMATION          73
02575 #define SPI_GETFONTSMOOTHING      74
02576 #define SPI_SETFONTSMOOTHING      75
02577 #define SPI_SETDRAGWIDTH          76
02578 #define SPI_SETDRAGHEIGHT         77
02579 #define SPI_SETHANDHELD           78
02580 #define SPI_GETLOWPOWERTIMEOUT    79
02581 #define SPI_GETPOWEROFFTIMEOUT    80
02582 #define SPI_SETLOWPOWERTIMEOUT    81
02583 #define SPI_SETPOWEROFFTIMEOUT    82
02584 #define SPI_GETLOWPOWERACTIVE     83
```

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02585 #define SPI_GETPOWEROFFACTIVE     84
02586 #define SPI_SETLOWPOWERACTIVE     85
02587 #define SPI_SETPOWEROFFACTIVE     86
02588 #define SPI_SETCURSORS            87
02589 #define SPI_SETICONS              88
02590 #define SPI_GETDEFAULTINPUTLANG   89
02591 #define SPI_SETDEFAULTINPUTLANG   90
02592 #define SPI_SETLANGTOGGLE         91
02593 #define SPI_GETWINDOWSEXTENSION   92
02594 #define SPI_SETMOUSETRAILS        93
02595 #define SPI_GETMOUSETRAILS        94
02596 #define SPI_SETSCREENSAVERRUNNING 97
02597 #define SPI_SCREENSAVERRUNNING    SPI_SETSCREENSAVERRUNNING
02598
02599 /* defines below are for all win versions (_WIN32_WINNT >= 0x0400) ||
02600  *                                       (_WIN32_WINDOWS > 0x0400) */
02601 #define SPI_GETMOUSEHOVERWIDTH    98
02602 #define SPI_SETMOUSEHOVERWIDTH    99
02603 #define SPI_GETMOUSEHOVERHEIGHT   100
02604 #define SPI_SETMOUSEHOVERHEIGHT   101
02605 #define SPI_GETMOUSEHOVERTIME     102
02606 #define SPI_SETMOUSEHOVERTIME     103
02607 #define SPI_GETWHEELSCROLLLINES   104
02608 #define SPI_SETWHEELSCROLLLINES   105
02609 #define SPI_GETMENUSHOWDELAY      106
02610 #define SPI_SETMENUSHOWDELAY      107
02611
02612 #define SPI_GETSHOWIMEUI          110
02613 #define SPI_SETSHOWIMEUI          111
02614
02615 /* defines below are for all win versions WINVER >= 0x0500 */
02616 #define SPI_GETMOUSESPEED         112
02617 #define SPI_SETMOUSESPEED         113
02618 #define SPI_GETSCREENSAVERRUNNING 114
02619 #define SPI_GETDESKWALLPAPER      115
02620
02621 #define SPI_GETACTIVEWINDOWTRACKING    0x1000
02622 #define SPI_SETACTIVEWINDOWTRACKING    0x1001
02623 #define SPI_GETMENUANIMATION           0x1002
02624 #define SPI_SETMENUANIMATION           0x1003
02625 #define SPI_GETCOMBOBOXANIMATION       0x1004
02626 #define SPI_SETCOMBOBOXANIMATION       0x1005
02627 #define SPI_GETLISTBOXSMOOTHSCROLLING  0x1006
02628 #define SPI_SETLISTBOXSMOOTHSCROLLING  0x1007
02629 #define SPI_GETGRADIENTCAPTIONS        0x1008
02630 #define SPI_SETGRADIENTCAPTIONS        0x1009
02631 #define SPI_GETMENUUNDERLINES          0x100A
02632 #define SPI_SETMENUUNDERLINES          0x100B
02633 #define SPI_GETACTIVEWNDTRKZORDER      0x100C
02634 #define SPI_SETACTIVEWNDTRKZORDER      0x100D
02635 #define SPI_GETHOTTRACKING             0x100E
02636 #define SPI_SETHOTTRACKING             0x100F
02637 #define SPI_GETFOREGROUNDLOCKTIMEOUT   0x2000
02638 #define SPI_SETFOREGROUNDLOCKTIMEOUT   0x2001
02639 #define SPI_GETACTIVEWNDTRKTIMEOUT     0x2002
02640 #define SPI_SETACTIVEWNDTRKTIMEOUT     0x2003
02641 #define SPI_GETFOREGROUNDFLASHCOUNT    0x2004
02642 #define SPI_SETFOREGROUNDFLASHCOUNT    0x2005
02643
02644 /* SystemParametersInfo flags */
02645
02646 #define SPIF_UPDATEINIFILE             1
02647 #define SPIF_SENDWININICHANGE          2
02648 #define SPIF_SENDCHANGE                SPIF_SENDWININICHANGE
02649
02650 #if defined(_WINGDI_) && !defined(NOGDI)
02651 typedef struct {
02652     UINT        cbSize;
02653     INT     iBorderWidth;
02654     INT     iScrollWidth;
02655     INT     iScrollHeight;
02656     INT     iCaptionWidth;
02657     INT     iCaptionHeight;
02658     LOGFONTA    lfCaptionFont;
02659     INT     iSmCaptionWidth;
02660     INT     iSmCaptionHeight;
02661     LOGFONTA    lfSmCaptionFont;
02662     INT     iMenuWidth;
02663     INT     iMenuHeight;
02664     LOGFONTA    lfMenuFont;
02665     LOGFONTA    lfStatusFont;
02666     LOGFONTA    lfMessageFont;
02667 } NONCLIENTMETRICSA, *PNONCLIENTMETRICSA, *LPNONCLIENTMETRICSA;
02668
02669 typedef struct {
02670     UINT        cbSize;
02671     INT     iBorderWidth;
```

```
02672     INT     iScrollWidth;
02673     INT     iScrollHeight;
02674     INT     iCaptionWidth;
02675     INT     iCaptionHeight;
02676     LOGFONTW    lfCaptionFont;
02677     INT     iSmCaptionWidth;
02678     INT     iSmCaptionHeight;
02679     LOGFONTW    lfSmCaptionFont;
02680     INT     iMenuWidth;
02681     INT     iMenuHeight;
02682     LOGFONTW    lfMenuFont;
02683     LOGFONTW    lfStatusFont;
02684     LOGFONTW    lfMessageFont;
02685 } NONCLIENTMETRICSW, *PNONCLIENTMETRICSW, *LPNONCLIENTMETRICSW;
02686
02687 DECL_WINELIB_TYPE_AW(NONCLIENTMETRICS)
02688 DECL_WINELIB_TYPE_AW(PNONCLIENTMETRICS)
02689 DECL_WINELIB_TYPE_AW(LPNONCLIENTMETRICS)
02690
02691 typedef struct tagICONMETRICSA {
02692     UINT cbSize;
02693     int iHorzSpacing;
02694     int iVertSpacing;
02695     int iTitleWrap;
02696     LOGFONTA lfFont;
02697 } ICONMETRICSA, *PICONMETRICSA, *LPICONMETRICSA;
02698
02699 typedef struct tagICONMETRICSW {
02700     UINT cbSize;
02701     int iHorzSpacing;
02702     int iVertSpacing;
02703     int iTitleWrap;
02704     LOGFONTW lfFont;
02705 } ICONMETRICSW, *PICONMETRICSW, *LPICONMETRICSW;
02706
02707 DECL_WINELIB_TYPE_AW(ICONMETRICS)
02708 DECL_WINELIB_TYPE_AW(PICONMETRICS)
02709 DECL_WINELIB_TYPE_AW(LPICONMETRICS)
02710 #endif /* defined(_WINGDI_) && !defined(NOGDI) */
02711
02712 #define ARW_BOTTOMLEFT              0x0000L
02713 #define ARW_BOTTOMRIGHT             0x0001L
02714 #define ARW_TOPLEFT                 0x0002L
02715 #define ARW_TOPRIGHT                0x0003L
02716 #define ARW_STARTMASK               0x0003L
02717 #define ARW_STARTRIGHT              0x0001L
02718 #define ARW_STARTTOP                0x0002L
02719
02720 #define ARW_LEFT                    0x0000L
02721 #define ARW_RIGHT                   0x0000L
02722 #define ARW_UP                      0x0004L
02723 #define ARW_DOWN                    0x0004L
02724 #define ARW_HIDE                    0x0008L
02725
02726 typedef struct tagMINIMIZEDMETRICS {
02727     UINT cbSize;
02728     int iWidth;
02729     int iHorzGap;
02730     int iVertGap;
02731     int iArrange;
02732 } MINIMIZEDMETRICS, *PMINIMIZEDMETRICS, *LPMINIMIZEDMETRICS;
02733
02734 /* Window Styles */
02735 #define WS_OVERLAPPED    0x00000000L
02736 #define WS_POPUP         0x80000000L
02737 #define WS_CHILD         0x40000000L
02738 #define WS_MINIMIZE      0x20000000L
02739 #define WS_VISIBLE       0x10000000L
02740 #define WS_DISABLED      0x08000000L
02741 #define WS_CLIPSIBLINGS  0x04000000L
02742 #define WS_CLIPCHILDREN  0x02000000L
02743 #define WS_MAXIMIZE      0x01000000L
02744 #define WS_CAPTION       0x00C00000L
02745 #define WS_BORDER        0x00800000L
02746 #define WS_DLGFRAME      0x00400000L
02747 #define WS_VSCROLL       0x00200000L
02748 #define WS_HSCROLL       0x00100000L
02749 #define WS_SYSMENU       0x00080000L
02750 #define WS_THICKFRAME    0x00040000L
02751 #define WS_GROUP         0x00020000L
02752 #define WS_TABSTOP       0x00010000L
02753 #define WS_MINIMIZEBOX   0x00020000L
02754 #define WS_MAXIMIZEBOX   0x00010000L
02755 #define WS_TILED         WS_OVERLAPPED
02756 #define WS_ICONIC        WS_MINIMIZE
02757 #define WS_SIZEBOX       WS_THICKFRAME
02758 #define WS_OVERLAPPEDWINDOW (WS_OVERLAPPED | WS_CAPTION | WS_SYSMENU | WS_THICKFRAME| WS_MINIMIZEBOX |
```

```
    WS_MAXIMIZEBOX)
02759 #define WS_POPUPWINDOW (WS_POPUP | WS_BORDER | WS_SYSMENU)
02760 #define WS_CHILDWINDOW (WS_CHILD)
02761 #define WS_TILEDWINDOW (WS_OVERLAPPEDWINDOW)
02762
02763 /* Window extended styles */
02764 #define WS_EX_DLGMODALFRAME    0x00000001L
02765 #define WS_EX_DRAGDETECT       0x00000002L
02766 #define WS_EX_NOPARENTNOTIFY   0x00000004L
02767 #define WS_EX_TOPMOST          0x00000008L
02768 #define WS_EX_ACCEPTFILES      0x00000010L
02769 #define WS_EX_TRANSPARENT      0x00000020L
02770
02771 /* New Win95/WinNT4 styles */
02772 #define WS_EX_MDICHILD         0x00000040L
02773 #define WS_EX_TOOLWINDOW       0x00000080L
02774 #define WS_EX_WINDOWEDGE       0x00000100L
02775 #define WS_EX_CLIENTEDGE       0x00000200L
02776 #define WS_EX_CONTEXTHELP      0x00000400L
02777 #define WS_EX_RIGHT            0x00001000L
02778 #define WS_EX_LEFT             0x00000000L
02779 #define WS_EX_RTLREADING       0x00002000L
02780 #define WS_EX_LTRREADING       0x00000000L
02781 #define WS_EX_LEFTSCROLLBAR    0x00004000L
02782 #define WS_EX_RIGHTSCROLLBAR   0x00000000L
02783 #define WS_EX_CONTROLPARENT    0x00010000L
02784 #define WS_EX_STATICEDGE       0x00020000L
02785 #define WS_EX_APPWINDOW        0x00040000L
02786
02787 #define WS_EX_OVERLAPPEDWINDOW (WS_EX_WINDOWEDGE|WS_EX_CLIENTEDGE)
02788 #define WS_EX_PALETTEWINDOW    (WS_EX_WINDOWEDGE|WS_EX_TOOLWINDOW|WS_EX_TOPMOST)
02789
02790 /* New Win2000 styles */
02791 #define WS_EX_LAYERED          0x00080000L
02792
02793 /* WINE internal... */
02794 #define WS_EX_TRAYWINDOW    0x80000000L
02795 #define WS_EX_MANAGED       0x40000000L /* Window managed by the window system */
02796
02797 /* Window scrolling */
02798 #define SW_SCROLLCHILDREN      0x0001
02799 #define SW_INVALIDATE          0x0002
02800 #define SW_ERASE               0x0004
02801
02802 /* CreateWindow() coordinates */
02803 #define CW_USEDEFAULT ((INT)0x80000000)
02804
02805 /* ChildWindowFromPointEx Flags */
02806 #define CWP_ALL                0x0000
02807 #define CWP_SKIPINVISIBLE      0x0001
02808 #define CWP_SKIPDISABLED       0x0002
02809 #define CWP_SKIPTRANSPARENT    0x0004
02810
02811   /* PeekMessage() options */
02812 #define PM_NOREMOVE 0x0000
02813 #define PM_REMOVE   0x0001
02814 #define PM_NOYIELD  0x0002
02815
02816 /* AnimateWindow() flags */
02817 #define AW_SLIDE        0x00040000
02818 #define AW_ACTIVATE     0x00020000
02819 #define AW_BLEND        0x00080000
02820 #define AW_HIDE         0x00010000
02821 #define AW_CENTER       0x00000010
02822 #define AW_HOR_POSITIVE 0x00000001
02823 #define AW_HOR_NEGATIVE 0x00000002
02824 #define AW_VER_POSITIVE 0x00000004
02825 #define AW_VER_NEGATIVE 0x00000008
02826
02827 /* WM_SHOWWINDOW wParam codes */
02828 #define SW_PARENTCLOSING    1
02829 #define SW_OTHERMAXIMIZED   2
02830 #define SW_PARENTOPENING    3
02831 #define SW_OTHERRESTORED    4
02832
02833   /* ShowWindow() codes */
02834 #define SW_HIDE             0
02835 #define SW_SHOWNORMAL       1
02836 #define SW_NORMAL           1
02837 #define SW_SHOWMINIMIZED    2
02838 #define SW_SHOWMAXIMIZED    3
02839 #define SW_MAXIMIZE         3
02840 #define SW_SHOWNOACTIVATE   4
02841 #define SW_SHOW             5
02842 #define SW_MINIMIZE         6
02843 #define SW_SHOWMINNOACTIVE  7
02844 #define SW_SHOWNA           8
```

```
02845 #define SW_RESTORE          9
02846 #define SW_SHOWDEFAULT      10
02847 #define SW_MAX          10
02848 #define SW_NORMALNA     0xCC    /* undoc. flag in MinMaximize */
02849
02850   /* WM_SIZE message wParam values */
02851 #define SIZE_RESTORED        0
02852 #define SIZE_MINIMIZED       1
02853 #define SIZE_MAXIMIZED       2
02854 #define SIZE_MAXSHOW         3
02855 #define SIZE_MAXHIDE         4
02856 #define SIZENORMAL           SIZE_RESTORED
02857 #define SIZEICONIC           SIZE_MINIMIZED
02858 #define SIZEFULLSCREEN       SIZE_MAXIMIZED
02859 #define SIZEZOOMSHOW         SIZE_MAXSHOW
02860 #define SIZEZOOMHIDE         SIZE_MAXHIDE
02861
02862 /* SetWindowPos() and WINDOWPOS flags */
02863 #define SWP_NOSIZE          0x0001
02864 #define SWP_NOMOVE          0x0002
02865 #define SWP_NOZORDER        0x0004
02866 #define SWP_NOREDRAW        0x0008
02867 #define SWP_NOACTIVATE      0x0010
02868 #define SWP_FRAMECHANGED    0x0020  /* The frame changed: send WM_NCCALCSIZE */
02869 #define SWP_SHOWWINDOW      0x0040
02870 #define SWP_HIDEWINDOW      0x0080
02871 #define SWP_NOCOPYBITS      0x0100
02872 #define SWP_NOOWNERZORDER   0x0200  /* Don't do owner Z ordering */
02873
02874 #define SWP_DRAWFRAME       SWP_FRAMECHANGED
02875 #define SWP_NOREPOSITION    SWP_NOOWNERZORDER
02876
02877 #define SWP_NOSENDCHANGING  0x0400
02878 #define SWP_DEFERERASE      0x2000
02879 #define SWP_ASYNCWINDOWPOS  0x4000
02880
02881 #define HWND_DESKTOP        ((HWND)0)
02882 #define HWND_BROADCAST      ((HWND)0xffff)
02883
02884 /* SetWindowPos() hwndInsertAfter field values */
02885 #define HWND_TOP            ((HWND)0)
02886 #define HWND_BOTTOM         ((HWND)1)
02887 #define HWND_TOPMOST        ((HWND)-1)
02888 #define HWND_NOTOPMOST      ((HWND)-2)
02889 #define HWND_MESSAGE        ((HWND)-3)
02890
02891 /* GetDCEx flags */
02892 #define DCX_WINDOW           0x00000001
02893 #define DCX_CACHE            0x00000002
02894 #define DCX_NORESETATTRS     0x00000004
02895 #define DCX_CLIPCHILDREN     0x00000008
02896 #define DCX_CLIPSIBLINGS     0x00000010
02897 #define DCX_PARENTCLIP       0x00000020
02898 #define DCX_EXCLUDERGN       0x00000040
02899 #define DCX_INTERSECTRGN     0x00000080
02900 #define DCX_EXCLUDEUPDATE    0x00000100
02901 #define DCX_INTERSECTUPDATE  0x00000200
02902 #define DCX_LOCKWINDOWUPDATE 0x00000400
02903 #define DCX_USESTYLE         0x00010000
02904 #define DCX_NORECOMPUTE      0x00100000
02905 #define DCX_VALIDATE         0x00200000
02906
02907 #define MF_INSERT           0x0000
02908 #define MF_CHANGE           0x0080
02909 #define MF_APPEND           0x0100
02910 #define MF_DELETE           0x0200
02911 #define MF_REMOVE           0x1000
02912 #define MF_END              0x0080
02913
02914 #define MF_ENABLED          0x0000
02915 #define MF_GRAYED           0x0001
02916 #define MF_DISABLED         0x0002
02917 #define MF_STRING           0x0000
02918 #define MF_BITMAP           0x0004
02919 #define MF_UNCHECKED        0x0000
02920 #define MF_CHECKED          0x0008
02921 #define MF_POPUP            0x0010
02922 #define MF_MENUBARBREAK     0x0020
02923 #define MF_MENUBREAK        0x0040
02924 #define MF_UNHILITE         0x0000
02925 #define MF_HILITE           0x0080
02926 #define MF_OWNERDRAW        0x0100
02927 #define MF_USECHECKBITMAPS  0x0200
02928 #define MF_BYCOMMAND        0x0000
02929 #define MF_BYPOSITION       0x0400
02930 #define MF_SEPARATOR        0x0800
02931 #define MF_DEFAULT          0x1000
```

```
02932 #define MF_SYSMENU         0x2000
02933 #define MF_HELP            0x4000
02934 #define MF_RIGHTJUSTIFY    0x4000
02935 #define MF_MOUSESELECT     0x8000
02936
02937 /* Flags for extended menu item types.  */
02938 #define MFT_STRING         MF_STRING
02939 #define MFT_BITMAP         MF_BITMAP
02940 #define MFT_MENUBARBREAK   MF_MENUBARBREAK
02941 #define MFT_MENUBREAK      MF_MENUBREAK
02942 #define MFT_OWNERDRAW      MF_OWNERDRAW
02943 #define MFT_RADIOCHECK     0x00000200L
02944 #define MFT_SEPARATOR      MF_SEPARATOR
02945 #define MFT_RIGHTORDER     0x00002000L
02946 #define MFT_RIGHTJUSTIFY   MF_RIGHTJUSTIFY
02947
02948 /* Flags for extended menu item states.  */
02949 #define MFS_GRAYED          0x00000003L
02950 #define MFS_DISABLED        MFS_GRAYED
02951 #define MFS_CHECKED         MF_CHECKED
02952 #define MFS_HILITE          MF_HILITE
02953 #define MFS_ENABLED         MF_ENABLED
02954 #define MFS_UNCHECKED       MF_UNCHECKED
02955 #define MFS_UNHILITE        MF_UNHILITE
02956 #define MFS_DEFAULT         MF_DEFAULT
02957 #define MFS_MASK            0x0000108BL
02958 #define MFS_HOTTRACKDRAWN   0x10000000L
02959 #define MFS_CACHEDBMP       0x20000000L
02960 #define MFS_BOTTOMGAPDROP   0x40000000L
02961 #define MFS_TOPGAPDROP      0x80000000L
02962 #define MFS_GAPDROP         0xC0000000L
02963
02964 /* for GetMenuDefaultItem */
02965 #define GMDI_USEDISABLED    0x0001L
02966 #define GMDI_GOINTOPOPUPS   0x0002L
02967
02968 #define DT_TOP 0
02969 #define DT_LEFT 0
02970 #define DT_CENTER 1
02971 #define DT_RIGHT 2
02972 #define DT_VCENTER 4
02973 #define DT_BOTTOM 8
02974 #define DT_WORDBREAK 16
02975 #define DT_SINGLELINE 32
02976 #define DT_EXPANDTABS 64
02977 #define DT_TABSTOP 128
02978 #define DT_NOCLIP 256
02979 #define DT_EXTERNALLEADING 512
02980 #define DT_CALCRECT 1024
02981 #define DT_NOPREFIX 2048
02982 #define DT_INTERNAL 4096
02983
02984 /* DrawCaption()/DrawCaptionTemp() flags */
02985 #define DC_ACTIVE       0x0001
02986 #define DC_SMALLCAP     0x0002
02987 #define DC_ICON         0x0004
02988 #define DC_TEXT         0x0008
02989 #define DC_INBUTTON     0x0010
02990
02991 /* DrawEdge() flags */
02992 #define BDR_RAISEDOUTER    0x0001
02993 #define BDR_SUNKENOUTER    0x0002
02994 #define BDR_RAISEDINNER    0x0004
02995 #define BDR_SUNKENINNER    0x0008
02996
02997 #define BDR_OUTER          0x0003
02998 #define BDR_INNER          0x000c
02999 #define BDR_RAISED         0x0005
03000 #define BDR_SUNKEN         0x000a
03001
03002 #define EDGE_RAISED        (BDR_RAISEDOUTER | BDR_RAISEDINNER)
03003 #define EDGE_SUNKEN        (BDR_SUNKENOUTER | BDR_SUNKENINNER)
03004 #define EDGE_ETCHED        (BDR_SUNKENOUTER | BDR_RAISEDINNER)
03005 #define EDGE_BUMP          (BDR_RAISEDOUTER | BDR_SUNKENINNER)
03006
03007 /* border flags */
03008 #define BF_LEFT            0x0001
03009 #define BF_TOP             0x0002
03010 #define BF_RIGHT           0x0004
03011 #define BF_BOTTOM          0x0008
03012 #define BF_DIAGONAL        0x0010
03013 #define BF_MIDDLE          0x0800  /* Fill in the middle */
03014 #define BF_SOFT            0x1000  /* For softer buttons */
03015 #define BF_ADJUST          0x2000  /* Calculate the space left over */
03016 #define BF_FLAT            0x4000  /* For flat rather than 3D borders */
03017 #define BF_MONO            0x8000  /* For monochrome borders */
03018 #define BF_TOPLEFT         (BF_TOP | BF_LEFT)
```

```
03019 #define BF_TOPRIGHT        (BF_TOP | BF_RIGHT)
03020 #define BF_BOTTOMLEFT      (BF_BOTTOM | BF_LEFT)
03021 #define BF_BOTTOMRIGHT     (BF_BOTTOM | BF_RIGHT)
03022 #define BF_RECT            (BF_LEFT | BF_TOP | BF_RIGHT | BF_BOTTOM)
03023 #define BF_DIAGONAL_ENDTOPRIGHT     (BF_DIAGONAL | BF_TOP | BF_RIGHT)
03024 #define BF_DIAGONAL_ENDTOPLEFT      (BF_DIAGONAL | BF_TOP | BF_LEFT)
03025 #define BF_DIAGONAL_ENDBOTTOMLEFT   (BF_DIAGONAL | BF_BOTTOM | BF_LEFT)
03026 #define BF_DIAGONAL_ENDBOTTOMRIGHT  (BF_DIAGONAL | BF_BOTTOM | BF_RIGHT)
03027
03028 /* DrawFrameControl() uType's */
03029
03030 #define DFC_CAPTION             1
03031 #define DFC_MENU                2
03032 #define DFC_SCROLL              3
03033 #define DFC_BUTTON              4
03034
03035 /* uState's */
03036
03037 #define DFCS_CAPTIONCLOSE       0x0000
03038 #define DFCS_CAPTIONMIN         0x0001
03039 #define DFCS_CAPTIONMAX         0x0002
03040 #define DFCS_CAPTIONRESTORE     0x0003
03041 #define DFCS_CAPTIONHELP        0x0004      /* Windows 95 only */
03042
03043 #define DFCS_MENUARROW          0x0000
03044 #define DFCS_MENUCHECK          0x0001
03045 #define DFCS_MENUBULLET         0x0002
03046 #define DFCS_MENUARROWRIGHT     0x0004
03047
03048 #define DFCS_SCROLLUP            0x0000
03049 #define DFCS_SCROLLDOWN          0x0001
03050 #define DFCS_SCROLLLEFT          0x0002
03051 #define DFCS_SCROLLRIGHT         0x0003
03052 #define DFCS_SCROLLCOMBOBOX      0x0005
03053 #define DFCS_SCROLLSIZEGRIP      0x0008
03054 #define DFCS_SCROLLSIZEGRIPRIGHT 0x0010
03055
03056 #define DFCS_BUTTONCHECK        0x0000
03057 #define DFCS_BUTTONRADIOIMAGE   0x0001
03058 #define DFCS_BUTTONRADIOMASK    0x0002      /* to draw nonsquare button */
03059 #define DFCS_BUTTONRADIO        0x0004
03060 #define DFCS_BUTTON3STATE       0x0008
03061 #define DFCS_BUTTONPUSH         0x0010
03062
03063 /* additional state of the control */
03064
03065 #define DFCS_INACTIVE           0x0100
03066 #define DFCS_PUSHED             0x0200
03067 #define DFCS_CHECKED            0x0400
03068 #define DFCS_ADJUSTRECT         0x2000      /* exclude surrounding edge */
03069 #define DFCS_FLAT               0x4000
03070 #define DFCS_MONO               0x8000
03071
03072 /* Image type */
03073 #define DST_COMPLEX 0x0000
03074 #define DST_TEXT    0x0001
03075 #define DST_PREFIXTEXT  0x0002
03076 #define DST_ICON    0x0003
03077 #define DST_BITMAP  0x0004
03078
03079 /* State type */
03080 #define DSS_NORMAL  0x0000
03081 #define DSS_UNION   0x0010  /* Gray string appearance */
03082 #define DSS_DISABLED    0x0020
03083 #define DSS_DEFAULT 0x0040  /* Make it bold */
03084 #define DSS_MONO    0x0080
03085 #define DSS_RIGHT   0x8000
03086
03087 typedef struct
03088 {
03089     UINT      CtlType;
03090     UINT      CtlID;
03091     UINT      itemID;
03092     UINT      itemAction;
03093     UINT      itemState;
03094     HWND      hwndItem;
03095     HDC       hDC;
03096     RECT      rcItem WINE_PACKED;
03097     DWORD       itemData WINE_PACKED;
03098 } DRAWITEMSTRUCT, *PDRAWITEMSTRUCT, *LPDRAWITEMSTRUCT;
03099
03100
03101 typedef struct
03102 {
03103     UINT      CtlType;
03104     UINT      CtlID;
03105     UINT      itemID;
```

```
03106     UINT      itemWidth;
03107     UINT      itemHeight;
03108     DWORD       itemData;
03109 } MEASUREITEMSTRUCT, *PMEASUREITEMSTRUCT, *LPMEASUREITEMSTRUCT;
03110
03111
03112 typedef struct
03113 {
03114     UINT     CtlType;
03115     UINT     CtlID;
03116     UINT     itemID;
03117     HWND     hwndItem;
03118     DWORD      itemData;
03119 } DELETEITEMSTRUCT, *PDELETEITEMSTRUCT, *LPDELETEITEMSTRUCT;
03120
03121
03122 typedef struct
03123 {
03124     UINT      CtlType;
03125     UINT      CtlID;
03126     HWND      hwndItem;
03127     UINT      itemID1;
03128     DWORD       itemData1;
03129     UINT      itemID2;
03130     DWORD       itemData2;
03131     DWORD       dwLocaleId;
03132 } COMPAREITEMSTRUCT, *PCOMPAREITEMSTRUCT, *LPCOMPAREITEMSTRUCT;
03133
03134
03135 /* WM_KEYUP/DOWN/CHAR HIWORD(lParam) flags */
03136 #define KF_EXTENDED         0x0100
03137 #define KF_DLGMODE          0x0800
03138 #define KF_MENUMODE         0x1000
03139 #define KF_ALTDOWN          0x2000
03140 #define KF_REPEAT           0x4000
03141 #define KF_UP               0x8000
03142
03143 /* Virtual key codes */
03144 #define VK_LBUTTON          0x01
03145 #define VK_RBUTTON          0x02
03146 #define VK_CANCEL           0x03
03147 #define VK_MBUTTON          0x04
03148 #define VK_XBUTTON1         0x05
03149 #define VK_XBUTTON2         0x06
03150 /*                          0x07  Undefined */
03151 #define VK_BACK             0x08
03152 #define VK_TAB              0x09
03153 /*                          0x0A-0x0B  Undefined */
03154 #define VK_CLEAR            0x0C
03155 #define VK_RETURN           0x0D
03156 /*                          0x0E-0x0F  Undefined */
03157 #define VK_SHIFT            0x10
03158 #define VK_CONTROL          0x11
03159 #define VK_MENU             0x12
03160 #define VK_PAUSE            0x13
03161 #define VK_CAPITAL          0x14
03162 /*                          0x15-0x19  Reserved for Kanji systems */
03163 /*                          0x1A       Undefined */
03164 #define VK_ESCAPE           0x1B
03165 /*                          0x1C-0x1F  Reserved for Kanji systems */
03166 #define VK_SPACE            0x20
03167 #define VK_PRIOR            0x21
03168 #define VK_NEXT             0x22
03169 #define VK_END              0x23
03170 #define VK_HOME             0x24
03171 #define VK_LEFT             0x25
03172 #define VK_UP               0x26
03173 #define VK_RIGHT            0x27
03174 #define VK_DOWN             0x28
03175 #define VK_SELECT           0x29
03176 #define VK_PRINT            0x2A /* OEM specific in Windows 3.1 SDK */
03177 #define VK_EXECUTE          0x2B
03178 #define VK_SNAPSHOT         0x2C
03179 #define VK_INSERT           0x2D
03180 #define VK_DELETE           0x2E
03181 #define VK_HELP             0x2F
03182 #define VK_0                0x30
03183 #define VK_1                0x31
03184 #define VK_2                0x32
03185 #define VK_3                0x33
03186 #define VK_4                0x34
03187 #define VK_5                0x35
03188 #define VK_6                0x36
03189 #define VK_7                0x37
03190 #define VK_8                0x38
03191 #define VK_9                0x39
03192 /*                          0x3A-0x40  Undefined */
```

```
03193 #define VK_A                0x41
03194 #define VK_B                0x42
03195 #define VK_C                0x43
03196 #define VK_D                0x44
03197 #define VK_E                0x45
03198 #define VK_F                0x46
03199 #define VK_G                0x47
03200 #define VK_H                0x48
03201 #define VK_I                0x49
03202 #define VK_J                0x4A
03203 #define VK_K                0x4B
03204 #define VK_L                0x4C
03205 #define VK_M                0x4D
03206 #define VK_N                0x4E
03207 #define VK_O                0x4F
03208 #define VK_P                0x50
03209 #define VK_Q                0x51
03210 #define VK_R                0x52
03211 #define VK_S                0x53
03212 #define VK_T                0x54
03213 #define VK_U                0x55
03214 #define VK_V                0x56
03215 #define VK_W                0x57
03216 #define VK_X                0x58
03217 #define VK_Y                0x59
03218 #define VK_Z                0x5A
03219
03220 #define VK_LWIN             0x5B
03221 #define VK_RWIN             0x5C
03222 #define VK_APPS             0x5D
03223 /*                          0x5E-0x5F Unassigned */
03224 #define VK_NUMPAD0          0x60
03225 #define VK_NUMPAD1          0x61
03226 #define VK_NUMPAD2          0x62
03227 #define VK_NUMPAD3          0x63
03228 #define VK_NUMPAD4          0x64
03229 #define VK_NUMPAD5          0x65
03230 #define VK_NUMPAD6          0x66
03231 #define VK_NUMPAD7          0x67
03232 #define VK_NUMPAD8          0x68
03233 #define VK_NUMPAD9          0x69
03234 #define VK_MULTIPLY         0x6A
03235 #define VK_ADD              0x6B
03236 #define VK_SEPARATOR        0x6C
03237 #define VK_SUBTRACT         0x6D
03238 #define VK_DECIMAL          0x6E
03239 #define VK_DIVIDE           0x6F
03240 #define VK_F1               0x70
03241 #define VK_F2               0x71
03242 #define VK_F3               0x72
03243 #define VK_F4               0x73
03244 #define VK_F5               0x74
03245 #define VK_F6               0x75
03246 #define VK_F7               0x76
03247 #define VK_F8               0x77
03248 #define VK_F9               0x78
03249 #define VK_F10              0x79
03250 #define VK_F11              0x7A
03251 #define VK_F12              0x7B
03252 #define VK_F13              0x7C
03253 #define VK_F14              0x7D
03254 #define VK_F15              0x7E
03255 #define VK_F16              0x7F
03256 #define VK_F17              0x80
03257 #define VK_F18              0x81
03258 #define VK_F19              0x82
03259 #define VK_F20              0x83
03260 #define VK_F21              0x84
03261 #define VK_F22              0x85
03262 #define VK_F23              0x86
03263 #define VK_F24              0x87
03264 /*                          0x88-0x8F  Unassigned */
03265 #define VK_NUMLOCK          0x90
03266 #define VK_SCROLL           0x91
03267 /*                          0x92-0x9F  Unassigned */
03268 /*
03269  * differencing between right and left shift/control/alt key.
03270  * Used only by GetAsyncKeyState() and GetKeyState().
03271  */
03272 #define VK_LSHIFT           0xA0
03273 #define VK_RSHIFT           0xA1
03274 #define VK_LCONTROL         0xA2
03275 #define VK_RCONTROL         0xA3
03276 #define VK_LMENU            0xA4
03277 #define VK_RMENU            0xA5
03278 /*                          0xA6-0xB9  Unassigned */
03279 #define VK_OEM_1            0xBA
```

```
03280 #define VK_OEM_PLUS         0xBB
03281 #define VK_OEM_COMMA        0xBC
03282 #define VK_OEM_MINUS        0xBD
03283 #define VK_OEM_PERIOD       0xBE
03284 #define VK_OEM_2            0xBF
03285 #define VK_OEM_3            0xC0
03286 /*                          0xC1-0xDA  Unassigned */
03287 #define VK_OEM_4            0xDB
03288 #define VK_OEM_5            0xDC
03289 #define VK_OEM_6            0xDD
03290 #define VK_OEM_7            0xDE
03291 #define VK_OEM_8            0xDF
03292 /*                          0xE0       OEM specific */
03293 #define VK_OEM_AX           0xE1  /* "AX" key on Japanese AX keyboard */
03294 #define VK_OEM_102          0xE2  /* "<>" or "\|" on RT 102-key keyboard */
03295 #define VK_ICO_HELP         0xE3  /* Help key on ICO */
03296 #define VK_ICO_00           0xE4  /* 00 key on ICO */
03297 #define VK_PROCESSKEY       0xE5
03298
03299 /*                          0xE6       OEM specific */
03300 /*                          0xE7-0xE8  Unassigned */
03301 /*                          0xE9-0xF5  OEM specific */
03302
03303 #define VK_ATTN             0xF6
03304 #define VK_CRSEL            0xF7
03305 #define VK_EXSEL            0xF8
03306 #define VK_EREOF            0xF9
03307 #define VK_PLAY             0xFA
03308 #define VK_ZOOM             0xFB
03309 #define VK_NONAME           0xFC
03310 #define VK_PA1              0xFD
03311 #define VK_OEM_CLEAR        0xFE
03312
03313   /* Key status flags for mouse events */
03314 #define MK_LBUTTON      0x0001
03315 #define MK_RBUTTON      0x0002
03316 #define MK_SHIFT        0x0004
03317 #define MK_CONTROL      0x0008
03318 #define MK_MBUTTON      0x0010
03319 #define MK_XBUTTON1         0x0020
03320 #define MK_XBUTTON2         0x0040
03321
03322   /* Queue status flags */
03323 #define QS_KEY      0x0001
03324 #define QS_MOUSEMOVE    0x0002
03325 #define QS_MOUSEBUTTON  0x0004
03326 #define QS_MOUSE    (QS_MOUSEMOVE | QS_MOUSEBUTTON)
03327 #define QS_POSTMESSAGE  0x0008
03328 #define QS_TIMER    0x0010
03329 #define QS_PAINT    0x0020
03330 #define QS_SENDMESSAGE  0x0040
03331 #define QS_HOTKEY   0x0080
03332 #define QS_INPUT    (QS_MOUSE | QS_KEY)
03333 #define QS_ALLEVENTS    (QS_INPUT | QS_POSTMESSAGE | QS_TIMER | QS_PAINT | QS_HOTKEY)
03334 #define QS_ALLINPUT     (QS_ALLEVENTS | QS_SENDMESSAGE)
03335
03336 /* Extra (undocumented) queue wake bits - see "Undoc. Windows" */
03337 #define QS_SMRESULT      0x8000
03338
03339 /* InSendMessageEx flags */
03340 #define ISMEX_NOSEND      0x00000000
03341 #define ISMEX_SEND        0x00000001
03342 #define ISMEX_NOTIFY      0x00000002
03343 #define ISMEX_CALLBACK    0x00000004
03344 #define ISMEX_REPLIED     0x00000008
03345
03346 #define DDL_READWRITE   0x0000
03347 #define DDL_READONLY    0x0001
03348 #define DDL_HIDDEN  0x0002
03349 #define DDL_SYSTEM  0x0004
03350 #define DDL_DIRECTORY   0x0010
03351 #define DDL_ARCHIVE 0x0020
03352
03353 #define DDL_POSTMSGS    0x2000
03354 #define DDL_DRIVES  0x4000
03355 #define DDL_EXCLUSIVE   0x8000
03356
03357   /* Shell hook values */
03358 #define HSHELL_WINDOWCREATED       1
03359 #define HSHELL_WINDOWDESTROYED     2
03360 #define HSHELL_ACTIVATESHELLWINDOW 3
03361
03362 /* Predefined Clipboard Formats */
03363 #define CF_TEXT             1
03364 #define CF_BITMAP           2
03365 #define CF_METAFILEPICT     3
03366 #define CF_SYLK             4
```

```
03367 #define CF_DIF               5
03368 #define CF_TIFF              6
03369 #define CF_OEMTEXT           7
03370 #define CF_DIB               8
03371 #define CF_PALETTE           9
03372 #define CF_PENDATA          10
03373 #define CF_RIFF             11
03374 #define CF_WAVE             12
03375 #define CF_UNICODETEXT      13
03376 #define CF_ENHMETAFILE      14
03377 #define CF_HDROP            15
03378 #define CF_LOCALE           16
03379 #define CF_DIBV5            17
03380 #define CF_MAX              18
03381
03382 #define CF_OWNERDISPLAY     0x0080
03383 #define CF_DSPTEXT          0x0081
03384 #define CF_DSPBITMAP        0x0082
03385 #define CF_DSPMETAFILEPICT  0x0083
03386 #define CF_DSPENHMETAFILE   0x008E
03387
03388 /* "Private" formats don't get GlobalFree()'d */
03389 #define CF_PRIVATEFIRST     0x0200
03390 #define CF_PRIVATELAST      0x02FF
03391
03392 /* "GDIOBJ" formats do get DeleteObject()'d */
03393 #define CF_GDIOBJFIRST      0x0300
03394 #define CF_GDIOBJLAST       0x03FF
03395
03396
03397 /* types of LoadImage */
03398 #define IMAGE_BITMAP    0
03399 #define IMAGE_ICON  1
03400 #define IMAGE_CURSOR    2
03401 #define IMAGE_ENHMETAFILE   3
03402
03403 /* loadflags to LoadImage */
03404 #define LR_DEFAULTCOLOR     0x0000
03405 #define LR_MONOCHROME       0x0001
03406 #define LR_COLOR        0x0002
03407 #define LR_COPYRETURNORG    0x0004
03408 #define LR_COPYDELETEORG    0x0008
03409 #define LR_LOADFROMFILE     0x0010
03410 #define LR_LOADTRANSPARENT  0x0020
03411 #define LR_DEFAULTSIZE      0x0040
03412 #define LR_VGA_COLOR        0x0080
03413 #define LR_LOADMAP3DCOLORS  0x1000
03414 #define LR_CREATEDIBSECTION 0x2000
03415 #define LR_COPYFROMRESOURCE 0x4000
03416 #define LR_SHARED       0x8000
03417
03418 /* Flags for DrawIconEx.  */
03419 #define DI_MASK                 1
03420 #define DI_IMAGE                2
03421 #define DI_NORMAL               (DI_MASK | DI_IMAGE)
03422 #define DI_COMPAT               4
03423 #define DI_DEFAULTSIZE          8
03424
03425 /* WM_NOTIFYFORMAT commands and return values */
03426 #define NFR_ANSI        1
03427 #define NFR_UNICODE     2
03428 #define NF_QUERY        3
03429 #define NF_REQUERY      4
03430
03431 /* RegisterDeviceNotification stuff */
03432 typedef  PVOID           HDEVNOTIFY;
03433 typedef  HDEVNOTIFY     *PHDEVNOTIFY;
03434
03435 #define DEVICE_NOTIFY_WINDOW_HANDLE     0x00000000
03436
03437 #define     EnumTaskWindows(handle,proc,lparam) \
03438             EnumThreadWindows(handle,proc,lparam)
03439 #define     OemToAnsiA OemToCharA
03440 #define     OemToAnsiW OemToCharW
03441 #define     OemToAnsi WINELIB_NAME_AW(OemToAnsi)
03442 #define     OemToAnsiBuffA OemToCharBuffA
03443 #define     OemToAnsiBuffW OemToCharBuffW
03444 #define     OemToAnsiBuff WINELIB_NAME_AW(OemToAnsiBuff)
03445 #define     AnsiToOemA CharToOemA
03446 #define     AnsiToOemW CharToOemW
03447 #define     AnsiToOem WINELIB_NAME_AW(AnsiToOem)
03448 #define     AnsiToOemBuffA CharToOemBuffA
03449 #define     AnsiToOemBuffW CharToOemBuffW
03450 #define     AnsiToOemBuff WINELIB_NAME_AW(AnsiToOemBuff)
03451
03452 #if defined(_WINGDI_) && !defined(NOGDI)
03453 LONG        WINAPI ChangeDisplaySettingsA(LPDEVMODEA,DWORD);
```

```
03454 LONG        WINAPI ChangeDisplaySettingsW(LPDEVMODEW,DWORD);
03455 #define     ChangeDisplaySettings WINELIB_NAME_AW(ChangeDisplaySettings)
03456 LONG        WINAPI ChangeDisplaySettingsExA(LPCSTR,LPDEVMODEA,HWND,DWORD,LPARAM);
03457 LONG        WINAPI ChangeDisplaySettingsExW(LPCWSTR,LPDEVMODEW,HWND,DWORD,LPARAM);
03458 #define     ChangeDisplaySettingsEx WINELIB_NAME_AW(ChangeDisplaySettingsEx)
03459 BOOL        WINAPI EnumDisplayDevicesA(LPVOID,DWORD,LPDISPLAY_DEVICEA,DWORD);
03460 BOOL        WINAPI EnumDisplayDevicesW(LPVOID,DWORD,LPDISPLAY_DEVICEW,DWORD);
03461 #define     EnumDisplayDevices WINELIB_NAME_AW(EnumDisplayDevices)
03462 BOOL        WINAPI EnumDisplaySettingsA(LPCSTR,DWORD,LPDEVMODEA);
03463 BOOL        WINAPI EnumDisplaySettingsW(LPCWSTR,DWORD,LPDEVMODEW);
03464 #define     EnumDisplaySettings WINELIB_NAME_AW(EnumDisplaySettings)
03465 #endif /* defined(_WINGDI_) && !defined(NOGDI) */
03466
03467 HKL         WINAPI ActivateKeyboardLayout(HKL,UINT);
03468 LONG        WINAPI BroadcastSystemMessage(DWORD,LPDWORD,UINT,WPARAM,LPARAM);
03469 WORD        WINAPI CascadeWindows(HWND, UINT, const LPRECT, UINT, const HWND *);
03470 INT       WINAPI CopyAcceleratorTableA(HACCEL,LPACCEL,INT);
03471 INT       WINAPI CopyAcceleratorTableW(HACCEL,LPACCEL,INT);
03472 #define     CopyAcceleratorTable WINELIB_NAME_AW(CopyAcceleratorTable)
03473 HACCEL      WINAPI CreateAcceleratorTableA(LPACCEL,INT);
03474 HACCEL      WINAPI CreateAcceleratorTableW(LPACCEL,INT);
03475 #define     CreateAcceleratorTable WINELIB_NAME_AW(CreateAcceleratorTable)
03476 HICON     WINAPI CreateIconIndirect(PICONINFO);
03477 BOOL      WINAPI DestroyAcceleratorTable(HACCEL);
03478 BOOL        WINAPI EnumDesktopsA(HWINSTA,DESKTOPENUMPROCA,LPARAM);
03479 BOOL        WINAPI EnumDesktopsW(HWINSTA,DESKTOPENUMPROCW,LPARAM);
03480 #define     EnumDesktops WINELIB_NAME_AW(EnumDesktops)
03481 BOOL      WINAPI EnumDisplayMonitors(HDC,LPRECT,MONITORENUMPROC,LPARAM);
03482 INT       WINAPI EnumPropsExA(HWND,PROPENUMPROCEXA,LPARAM);
03483 INT       WINAPI EnumPropsExW(HWND,PROPENUMPROCEXW,LPARAM);
03484 #define     EnumPropsEx WINELIB_NAME_AW(EnumPropsEx)
03485 BOOL      WINAPI EnumThreadWindows(DWORD,WNDENUMPROC,LPARAM);
03486 BOOL      WINAPI ExitWindowsEx(UINT,DWORD);
03487 BOOL      WINAPI GetIconInfo(HICON,PICONINFO);
03488 HKL       WINAPI GetKeyboardLayout(DWORD);
03489 INT       WINAPI GetKeyboardLayoutList(INT,HKL *);
03490 DWORD     WINAPI GetMenuContextHelpId(HMENU);
03491 UINT      WINAPI GetMenuDefaultItem(HMENU,UINT,UINT);
03492 BOOL      WINAPI GetMenuInfo(HMENU,LPMENUINFO);
03493 BOOL      WINAPI GetMenuItemInfoA(HMENU,UINT,BOOL,MENUITEMINFOA*);
03494 BOOL      WINAPI GetMenuItemInfoW(HMENU,UINT,BOOL,MENUITEMINFOW*);
03495 #define     GetMenuItemInfo WINELIB_NAME_AW(GetMenuItemInfo)
03496 BOOL      WINAPI GetMonitorInfoA(HMONITOR,LPMONITORINFO);
03497 BOOL      WINAPI GetMonitorInfoW(HMONITOR,LPMONITORINFO);
03498 #define     GetMonitorInfo WINELIB_NAME_AW(GetMonitorInfo)
03499 DWORD       WINAPI GetWindowContextHelpId(HWND);
03500 DWORD       WINAPI GetWindowThreadProcessId(HWND,LPDWORD);
03501 BOOL      WINAPI IsWindowUnicode(HWND);
03502 HKL       WINAPI LoadKeyboardLayoutA(LPCSTR,UINT);
03503 HKL       WINAPI LoadKeyboardLayoutW(LPCWSTR,UINT);
03504 #define     LoadKeyboardLayout WINELIB_NAME_AW(LoadKeyboardLayout)
03505 INT       WINAPI MessageBoxExA(HWND,LPCSTR,LPCSTR,UINT,WORD);
03506 INT       WINAPI MessageBoxExW(HWND,LPCWSTR,LPCWSTR,UINT,WORD);
03507 #define     MessageBoxEx WINELIB_NAME_AW(MessageBoxEx)
03508 HMONITOR    WINAPI MonitorFromPoint(POINT,DWORD);
03509 HMONITOR    WINAPI MonitorFromRect(LPRECT,DWORD);
03510 HMONITOR    WINAPI MonitorFromWindow(HWND,DWORD);
03511 DWORD       WINAPI MsgWaitForMultipleObjects(DWORD,CONST HANDLE*,BOOL,DWORD,DWORD);
03512 DWORD       WINAPI MsgWaitForMultipleObjectsEx(DWORD,CONST HANDLE*,DWORD,DWORD,DWORD);
03513 BOOL        WINAPI PaintDesktop(HDC);
03514 BOOL        WINAPI PostThreadMessageA(DWORD,UINT,WPARAM,LPARAM);
03515 BOOL        WINAPI PostThreadMessageW(DWORD,UINT,WPARAM,LPARAM);
03516 #define     PostThreadMessage WINELIB_NAME_AW(PostThreadMessage)
03517 BOOL        WINAPI RegisterHotKey(HWND,INT,UINT,UINT);
03518 HDEVNOTIFY  WINAPI RegisterDeviceNotificationA(HANDLE,LPVOID,DWORD);
03519 HDEVNOTIFY  WINAPI RegisterDeviceNotificationW(HANDLE,LPVOID,DWORD);
03520 #define     RegisterDeviceNotification WINELIB_NAME_AW(RegisterDeviceNotification)
03521 BOOL        WINAPI SendMessageCallbackA(HWND,UINT,WPARAM,LPARAM,SENDASYNCPROC,ULONG_PTR);
03522 BOOL        WINAPI SendMessageCallbackW(HWND,UINT,WPARAM,LPARAM,SENDASYNCPROC,ULONG_PTR);
03523 #define      SendMessageCallback WINELIB_NAME_AW(SendMessageCallback)
03524 BOOL        WINAPI SendNotifyMessageA(HWND,UINT,WPARAM,LPARAM);
03525 BOOL        WINAPI SendNotifyMessageW(HWND,UINT,WPARAM,LPARAM);
03526 #define     SendNotifyMessage WINELIB_NAME_AW(SendNotifyMessage)
03527 VOID        WINAPI SetDebugErrorLevel(DWORD);
03528 VOID        WINAPI SetLastErrorEx(DWORD,DWORD);
03529 BOOL      WINAPI SetMenuDefaultItem(HMENU,UINT,UINT);
03530 BOOL      WINAPI SetMenuInfo(HMENU,LPCMENUINFO);
03531 BOOL      WINAPI SetMenuItemInfoA(HMENU,UINT,BOOL,const MENUITEMINFOA*);
03532 BOOL      WINAPI SetMenuItemInfoW(HMENU,UINT,BOOL,const MENUITEMINFOW*);
03533 #define     SetMenuItemInfo WINELIB_NAME_AW(SetMenuItemInfo)
03534 BOOL      WINAPI SetWindowContextHelpId(HWND,DWORD);
03535 WORD        WINAPI TileWindows (HWND, UINT, const LPRECT,
03536                                 UINT, const HWND *);
03537 INT         WINAPI ToUnicode(UINT,UINT,PBYTE,LPWSTR,int,UINT);
03538 BOOL      WINAPI TrackPopupMenuEx(HMENU,UINT,INT,INT,HWND,
03539                                   LPTPMPARAMS);
03540 BOOL        WINAPI UnregisterDeviceNotification(HDEVNOTIFY);
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03541 BOOL        WINAPI UnregisterHotKey(HWND,INT);
03542 DWORD       WINAPI WaitForInputIdle(HANDLE,DWORD);
03543 VOID        WINAPI keybd_event(BYTE,BYTE,DWORD,DWORD);
03544 VOID        WINAPI mouse_event(DWORD,DWORD,DWORD,DWORD,DWORD);
03545
03546 /* Declarations for functions that are the same in Win16 and Win32 */
03547 VOID        WINAPI EndMenu(void);
03548 DWORD       WINAPI GetDialogBaseUnits(void);
03549 BOOL        WINAPI GetKeyboardState(LPBYTE);
03550 DWORD       WINAPI GetMenuCheckMarkDimensions(void);
03551 LONG        WINAPI GetMessageExtraInfo(void);
03552 DWORD       WINAPI GetMessagePos(void);
03553 LONG        WINAPI GetMessageTime(void);
03554 DWORD       WINAPI OemKeyScan(WORD);
03555 BOOL        WINAPI ReleaseCapture(void);
03556 BOOL        WINAPI SetKeyboardState(LPBYTE);
03557
03558 /* Declarations for functions that change between Win16 and Win32 */
03559
03560 BOOL        WINAPI AdjustWindowRect(LPRECT,DWORD,BOOL);
03561 BOOL        WINAPI AdjustWindowRectEx(LPRECT,DWORD,BOOL,DWORD);
03562 BOOL        WINAPI AnimateWindow(HWND,DWORD,DWORD);
03563 #define     AnsiLowerA CharLowerA
03564 #define     AnsiLowerW CharLowerW
03565 #define     AnsiLower WINELIB_NAME_AW(AnsiLower)
03566 #define     AnsiLowerBuffA CharLowerBuffA
03567 #define     AnsiLowerBuffW CharLowerBuffW
03568 #define     AnsiLowerBuff WINELIB_NAME_AW(AnsiLowerBuff)
03569 #define     AnsiNextA CharNextA
03570 #define     AnsiNextW CharNextW
03571 #define     AnsiNext WINELIB_NAME_AW(AnsiNext)
03572 #define     AnsiPrevA CharPrevA
03573 #define     AnsiPrevW CharPrevW
03574 #define     AnsiPrev WINELIB_NAME_AW(AnsiPrev)
03575 #define     AnsiUpperA CharUpperA
03576 #define     AnsiUpperW CharUpperW
03577 #define     AnsiUpper WINELIB_NAME_AW(AnsiUpper)
03578 #define     AnsiUpperBuffA CharUpperBuffA
03579 #define     AnsiUpperBuffW CharUpperBuffW
03580 #define     AnsiUpperBuff WINELIB_NAME_AW(AnsiUpperBuff)
03581 BOOL      WINAPI AnyPopup(void);
03582 BOOL      WINAPI AppendMenuA(HMENU,UINT,UINT,LPCSTR);
03583 BOOL      WINAPI AppendMenuW(HMENU,UINT,UINT,LPCWSTR);
03584 #define     AppendMenu WINELIB_NAME_AW(AppendMenu)
03585 UINT      WINAPI ArrangeIconicWindows(HWND);
03586 HDWP      WINAPI BeginDeferWindowPos(INT);
03587 HDC       WINAPI BeginPaint(HWND,LPPAINTSTRUCT);
03588 BOOL      WINAPI BringWindowToTop(HWND);
03589 void      WINAPI CalcChildScroll(HWND, INT);
03590 BOOL      WINAPI CallMsgFilterA(LPMSG,INT);
03591 BOOL      WINAPI CallMsgFilterW(LPMSG,INT);
03592 #define     CallMsgFilter WINELIB_NAME_AW(CallMsgFilter)
03593 LRESULT     WINAPI CallNextHookEx(HHOOK,INT,WPARAM,LPARAM);
03594 LRESULT     WINAPI CallWindowProcA(WNDPROC,HWND,UINT,WPARAM,LPARAM);
03595 LRESULT     WINAPI CallWindowProcW(WNDPROC,HWND,UINT,WPARAM,LPARAM);
03596 #define     CallWindowProc WINELIB_NAME_AW(CallWindowProc)
03597 BOOL      WINAPI ChangeClipboardChain(HWND,HWND);
03598 BOOL      WINAPI ChangeMenuA(HMENU,UINT,LPCSTR,UINT,UINT);
03599 BOOL      WINAPI ChangeMenuW(HMENU,UINT,LPCWSTR,UINT,UINT);
03600 #define     ChangeMenu WINELIB_NAME_AW(ChangeMenu)
03601 LPSTR       WINAPI CharLowerA(LPSTR);
03602 LPWSTR      WINAPI CharLowerW(LPWSTR);
03603 #define     CharLower WINELIB_NAME_AW(CharLower)
03604 DWORD       WINAPI CharLowerBuffA(LPSTR,DWORD);
03605 DWORD       WINAPI CharLowerBuffW(LPWSTR,DWORD);
03606 #define     CharLowerBuff WINELIB_NAME_AW(CharLowerBuff)
03607 LPSTR       WINAPI CharNextA(LPCSTR);
03608 LPWSTR      WINAPI CharNextW(LPCWSTR);
03609 #define     CharNext WINELIB_NAME_AW(CharNext)
03610 LPSTR       WINAPI CharNextExA(WORD,LPCSTR,DWORD);
03611 /* no CharNextExW (doesn't make sense) */
03612 LPSTR       WINAPI CharPrevA(LPCSTR,LPCSTR);
03613 LPWSTR      WINAPI CharPrevW(LPCWSTR,LPCWSTR);
03614 #define     CharPrev WINELIB_NAME_AW(CharPrev)
03615 LPSTR       WINAPI CharPrevExA(WORD,LPCSTR,LPCSTR,DWORD);
03616 /* no CharPrevExW (doesn't make sense) */
03617 LPSTR       WINAPI CharUpperA(LPSTR);
03618 LPWSTR      WINAPI CharUpperW(LPWSTR);
03619 #define     CharUpper WINELIB_NAME_AW(CharUpper)
03620 DWORD       WINAPI CharUpperBuffA(LPSTR,DWORD);
03621 DWORD       WINAPI CharUpperBuffW(LPWSTR,DWORD);
03622 #define     CharUpperBuff WINELIB_NAME_AW(CharUpperBuff)
03623 BOOL      WINAPI CharToOemA(LPCSTR,LPSTR);
03624 BOOL      WINAPI CharToOemW(LPCWSTR,LPSTR);
03625 #define     CharToOem WINELIB_NAME_AW(CharToOem)
03626 BOOL      WINAPI CharToOemBuffA(LPCSTR,LPSTR,DWORD);
03627 BOOL      WINAPI CharToOemBuffW(LPCWSTR,LPSTR,DWORD);
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03628 #define     CharToOemBuff WINELIB_NAME_AW(CharToOemBuff)
03629 BOOL      WINAPI CheckDlgButton(HWND,INT,UINT);
03630 DWORD       WINAPI CheckMenuItem(HMENU,UINT,UINT);
03631 BOOL      WINAPI CheckMenuRadioItem(HMENU,UINT,UINT,UINT,UINT);
03632 BOOL      WINAPI CheckRadioButton(HWND,UINT,UINT,UINT);
03633 HWND      WINAPI ChildWindowFromPoint(HWND,POINT);
03634 HWND      WINAPI ChildWindowFromPointEx(HWND,POINT,UINT);
03635 BOOL      WINAPI ClientToScreen(HWND,LPPOINT);
03636 BOOL      WINAPI ClipCursor(const RECT*);
03637 BOOL      WINAPI CloseClipboard(void);
03638 BOOL      WINAPI CloseDesktop(HDESK);
03639 BOOL      WINAPI CloseWindow(HWND);
03640 BOOL      WINAPI CloseWindowStation(HWINSTA);
03641 #define     CopyCursor(cur) ((HCURSOR)CopyIcon((HICON)(cur)))
03642 HICON     WINAPI CopyIcon(HICON);
03643 HICON     WINAPI CopyImage(HANDLE,UINT,INT,INT,UINT);
03644 BOOL      WINAPI CopyRect(RECT*,const RECT*);
03645 INT       WINAPI CountClipboardFormats(void);
03646 BOOL      WINAPI CreateCaret(HWND,HBITMAP,INT,INT);
03647 HCURSOR   WINAPI CreateCursor(HINSTANCE,INT,INT,INT,INT,LPCVOID,LPCVOID);
03648 #define     CreateDialogA(inst,ptr,hwnd,dlg) \
03649              CreateDialogParamA(inst,ptr,hwnd,dlg,0)
03650 #define     CreateDialogW(inst,ptr,hwnd,dlg) \
03651              CreateDialogParamW(inst,ptr,hwnd,dlg,0)
03652 #define     CreateDialog WINELIB_NAME_AW(CreateDialog)
03653 #define     CreateDialogIndirectA(inst,ptr,hwnd,dlg) \
03654              CreateDialogIndirectParamA(inst,ptr,hwnd,dlg,0)
03655 #define     CreateDialogIndirectW(inst,ptr,hwnd,dlg) \
03656              CreateDialogIndirectParamW(inst,ptr,hwnd,dlg,0)
03657 #define     CreateDialogIndirect WINELIB_NAME_AW(CreateDialogIndirect)
03658 HWND      WINAPI CreateDialogIndirectParamA(HINSTANCE,LPCVOID,HWND,
03659                                             DLGPROC,LPARAM);
03660 HWND      WINAPI CreateDialogIndirectParamW(HINSTANCE,LPCVOID,HWND,
03661                                             DLGPROC,LPARAM);
03662 #define     CreateDialogIndirectParam WINELIB_NAME_AW(CreateDialogIndirectParam)
03663 HWND      WINAPI CreateDialogParamA(HINSTANCE,LPCSTR,HWND,DLGPROC,LPARAM);
03664 HWND      WINAPI CreateDialogParamW(HINSTANCE,LPCWSTR,HWND,DLGPROC,LPARAM);
03665 #define     CreateDialogParam WINELIB_NAME_AW(CreateDialogParam)
03666 HICON     WINAPI CreateIcon(HINSTANCE,INT,INT,BYTE,BYTE,LPCVOID,LPCVOID);
03667 HICON     WINAPI CreateIconFromResource(LPBYTE,UINT,BOOL,DWORD);
03668 HICON     WINAPI CreateIconFromResourceEx(LPBYTE,UINT,BOOL,DWORD,INT,INT,UINT);
03669 HMENU     WINAPI CreateMenu(void);
03670 HMENU     WINAPI CreatePopupMenu(void);
03671 #define     CreateWindowA(className,titleName,style,x,y,width,height,\
03672                           parent,menu,instance,param) \
03673             CreateWindowExA(0,className,titleName,style,x,y,width,height,\
03674                             parent,menu,instance,param)
03675 #define     CreateWindowW(className,titleName,style,x,y,width,height,\
03676                           parent,menu,instance,param) \
03677             CreateWindowExW(0,className,titleName,style,x,y,width,height,\
03678                             parent,menu,instance,param)
03679 #define     CreateWindow WINELIB_NAME_AW(CreateWindow)
03680 HWND      WINAPI CreateWindowExA(DWORD,LPCSTR,LPCSTR,DWORD,INT,INT,
03681                                  INT,INT,HWND,HMENU,HINSTANCE,LPVOID);
03682 HWND      WINAPI CreateWindowExW(DWORD,LPCWSTR,LPCWSTR,DWORD,INT,INT,
03683                                  INT,INT,HWND,HMENU,HINSTANCE,LPVOID);
03684 #define     CreateWindowEx WINELIB_NAME_AW(CreateWindowEx)
03685 HWINSTA     WINAPI CreateWindowStationA(LPSTR,DWORD,DWORD,LPSECURITY_ATTRIBUTES);
03686 HWINSTA     WINAPI CreateWindowStationW(LPWSTR,DWORD,DWORD,LPSECURITY_ATTRIBUTES);
03687 #define     CreateWindowStation WINELIB_NAME_AW(CreateWindowStation)
03688 HWND      WINAPI CreateMDIWindowA(LPCSTR,LPCSTR,DWORD,INT,INT,
03689                                   INT,INT,HWND,HINSTANCE,LPARAM);
03690 HWND      WINAPI CreateMDIWindowW(LPCWSTR,LPCWSTR,DWORD,INT,INT,
03691                                   INT,INT,HWND,HINSTANCE,LPARAM);
03692 #define     CreateMDIWindow WINELIB_NAME_AW(CreateMDIWindow)
03693 LRESULT     WINAPI DefDlgProcA(HWND,UINT,WPARAM,LPARAM);
03694 LRESULT     WINAPI DefDlgProcW(HWND,UINT,WPARAM,LPARAM);
03695 #define     DefDlgProc WINELIB_NAME_AW(DefDlgProc)
03696 HDWP      WINAPI DeferWindowPos(HDWP,HWND,HWND,INT,INT,INT,INT,UINT);
03697 LRESULT     WINAPI DefFrameProcA(HWND,HWND,UINT,WPARAM,LPARAM);
03698 LRESULT     WINAPI DefFrameProcW(HWND,HWND,UINT,WPARAM,LPARAM);
03699 #define     DefFrameProc WINELIB_NAME_AW(DefFrameProc)
03700 #define     DefHookProc(code,wparam,lparam,phhook) \
03701             CallNextHookEx(*(phhook),code,wparam,lparam)
03702 LRESULT     WINAPI DefMDIChildProcA(HWND,UINT,WPARAM,LPARAM);
03703 LRESULT     WINAPI DefMDIChildProcW(HWND,UINT,WPARAM,LPARAM);
03704 #define     DefMDIChildProc WINELIB_NAME_AW(DefMDIChildProc)
03705 LRESULT     WINAPI DefWindowProcA(HWND,UINT,WPARAM,LPARAM);
03706 LRESULT     WINAPI DefWindowProcW(HWND,UINT,WPARAM,LPARAM);
03707 #define     DefWindowProc WINELIB_NAME_AW(DefWindowProc)
03708 BOOL      WINAPI DeleteMenu(HMENU,UINT,UINT);
03709 BOOL      WINAPI DestroyCaret(void);
03710 BOOL      WINAPI DestroyCursor(HCURSOR);
03711 BOOL      WINAPI DestroyIcon(HICON);
03712 BOOL      WINAPI DestroyMenu(HMENU);
03713 BOOL      WINAPI DestroyWindow(HWND);
03714 #define     DialogBoxA(inst,template,owner,func) \
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03715             DialogBoxParamA(inst,template,owner,func,0)
03716 #define     DialogBoxW(inst,template,owner,func) \
03717             DialogBoxParamW(inst,template,owner,func,0)
03718 #define     DialogBox WINELIB_NAME_AW(DialogBox)
03719 #define     DialogBoxIndirectA(inst,template,owner,func) \
03720             DialogBoxIndirectParamA(inst,template,owner,func,0)
03721 #define     DialogBoxIndirectW(inst,template,owner,func) \
03722             DialogBoxIndirectParamW(inst,template,owner,func,0)
03723 #define     DialogBoxIndirect WINELIB_NAME_AW(DialogBoxIndirect)
03724 INT       WINAPI DialogBoxIndirectParamA(HINSTANCE,LPCVOID,HWND,DLGPROC,LPARAM);
03725 INT       WINAPI DialogBoxIndirectParamW(HINSTANCE,LPCVOID,HWND,DLGPROC,LPARAM);
03726 #define     DialogBoxIndirectParam WINELIB_NAME_AW(DialogBoxIndirectParam)
03727 INT       WINAPI DialogBoxParamA(HINSTANCE,LPCSTR,HWND,DLGPROC,LPARAM);
03728 INT       WINAPI DialogBoxParamW(HINSTANCE,LPCWSTR,HWND,DLGPROC,LPARAM);
03729 #define     DialogBoxParam WINELIB_NAME_AW(DialogBoxParam)
03730 LONG        WINAPI DispatchMessageA(const MSG*);
03731 LONG        WINAPI DispatchMessageW(const MSG*);
03732 #define     DispatchMessage WINELIB_NAME_AW(DispatchMessage)
03733 INT       WINAPI DlgDirListA(HWND,LPSTR,INT,INT,UINT);
03734 INT       WINAPI DlgDirListW(HWND,LPWSTR,INT,INT,UINT);
03735 #define     DlgDirList WINELIB_NAME_AW(DlgDirList)
03736 INT       WINAPI DlgDirListComboBoxA(HWND,LPSTR,INT,INT,UINT);
03737 INT       WINAPI DlgDirListComboBoxW(HWND,LPWSTR,INT,INT,UINT);
03738 #define     DlgDirListComboBox WINELIB_NAME_AW(DlgDirListComboBox)
03739 BOOL      WINAPI DlgDirSelectComboBoxExA(HWND,LPSTR,INT,INT);
03740 BOOL      WINAPI DlgDirSelectComboBoxExW(HWND,LPWSTR,INT,INT);
03741 #define     DlgDirSelectComboBoxEx WINELIB_NAME_AW(DlgDirSelectComboBoxEx)
03742 BOOL      WINAPI DlgDirSelectExA(HWND,LPSTR,INT,INT);
03743 BOOL      WINAPI DlgDirSelectExW(HWND,LPWSTR,INT,INT);
03744 #define     DlgDirSelectEx WINELIB_NAME_AW(DlgDirSelectEx)
03745 BOOL      WINAPI DragDetect(HWND,POINT);
03746 DWORD       WINAPI DragObject(HWND,HWND,UINT,DWORD,HCURSOR);
03747 BOOL      WINAPI DrawAnimatedRects(HWND,int,const RECT*,const RECT*);
03748 BOOL      WINAPI DrawCaption(HWND,HDC,const RECT*,UINT);
03749 BOOL      WINAPI DrawCaptionTempA(HWND,HDC,const RECT*,HFONT,HICON,LPCSTR,UINT);
03750 BOOL      WINAPI DrawCaptionTempW(HWND,HDC,const RECT*,HFONT,HICON,LPCWSTR,UINT);
03751 #define     DrawCaptionTemp WINELIB_NAME_AW(DrawCaptionTemp)
03752 BOOL        WINAPI DrawEdge(HDC,LPRECT,UINT,UINT);
03753 BOOL        WINAPI DrawFocusRect(HDC,const RECT*);
03754 BOOL        WINAPI DrawFrameControl(HDC,LPRECT,UINT,UINT);
03755 BOOL        WINAPI DrawIcon(HDC,INT,INT,HICON);
03756 BOOL        WINAPI DrawIconEx(HDC,INT,INT,HICON,INT,INT,UINT,HBRUSH,UINT);
03757 BOOL        WINAPI DrawMenuBar(HWND);
03758 BOOL        WINAPI DrawStateA(HDC,HBRUSH,DRAWSTATEPROC,LPARAM,WPARAM,INT,INT,INT,INT,UINT);
03759 BOOL        WINAPI DrawStateW(HDC,HBRUSH,DRAWSTATEPROC,LPARAM,WPARAM,INT,INT,INT,INT,UINT);
03760 #define     DrawState WINELIB_NAME_AW(DrawState)
03761 INT         WINAPI DrawTextA(HDC,LPCSTR,INT,LPRECT,UINT);
03762 INT         WINAPI DrawTextW(HDC,LPCWSTR,INT,LPRECT,UINT);
03763 #define     DrawText WINELIB_NAME_AW(DrawText)
03764 INT         WINAPI DrawTextExA(HDC,LPSTR,INT,LPRECT,UINT,LPDRAWTEXTPARAMS);
03765 INT         WINAPI DrawTextExW(HDC,LPWSTR,INT,LPRECT,UINT,LPDRAWTEXTPARAMS);
03766 #define     DrawTextEx WINELIB_NAME_AW(DrawTextEx)
03767 BOOL        WINAPI EmptyClipboard(void);
03768 UINT        WINAPI EnableMenuItem(HMENU,UINT,UINT);
03769 BOOL        WINAPI EnableScrollBar(HWND,INT,UINT);
03770 BOOL        WINAPI EnableWindow(HWND,BOOL);
03771 BOOL        WINAPI EndDeferWindowPos(HDWP);
03772 BOOL        WINAPI EndDialog(HWND,INT);
03773 BOOL        WINAPI EndPaint(HWND,const PAINTSTRUCT*);
03774 BOOL        WINAPI EnumChildWindows(HWND,WNDENUMPROC,LPARAM);
03775 UINT        WINAPI EnumClipboardFormats(UINT);
03776 INT         WINAPI EnumPropsA(HWND,PROPENUMPROCA);
03777 INT         WINAPI EnumPropsW(HWND,PROPENUMPROCW);
03778 #define     EnumProps WINELIB_NAME_AW(EnumProps)
03779 BOOL      WINAPI EnumWindows(WNDENUMPROC,LPARAM);
03780 BOOL        WINAPI EnumWindowStationsA(WINSTAENUMPROCA,LPARAM);
03781 BOOL        WINAPI EnumWindowStationsW(WINSTAENUMPROCW,LPARAM);
03782 #define     EnumWindowStations WINELIB_NAME_AW(EnumWindowStations)
03783 BOOL      WINAPI EqualRect(const RECT*,const RECT*);
03784 INT       WINAPI ExcludeUpdateRgn(HDC,HWND);
03785 #define     ExitWindows(a,b) ExitWindowsEx(EWX_LOGOFF,0xffffffff)
03786 INT       WINAPI FillRect(HDC,const RECT*,HBRUSH);
03787 HWND      WINAPI FindWindowA(LPCSTR,LPCSTR);
03788 HWND      WINAPI FindWindowW(LPCWSTR,LPCWSTR);
03789 #define     FindWindow WINELIB_NAME_AW(FindWindow)
03790 HWND      WINAPI FindWindowExA(HWND,HWND,LPCSTR,LPCSTR);
03791 HWND      WINAPI FindWindowExW(HWND,HWND,LPCWSTR,LPCWSTR);
03792 #define     FindWindowEx WINELIB_NAME_AW(FindWindowEx)
03793 BOOL        WINAPI FlashWindow(HWND,BOOL);
03794 INT         WINAPI FrameRect(HDC,const RECT*,HBRUSH);
03795 HWND        WINAPI GetActiveWindow(void);
03796 HWND        WINAPI GetAncestor(HWND,UINT);
03797 DWORD       WINAPI GetAppCompatFlags(HTASK);
03798 WORD        WINAPI GetAsyncKeyState(INT);
03799 HWND        WINAPI GetCapture(void);
03800 UINT        WINAPI GetCaretBlinkTime(void);
03801 BOOL        WINAPI GetCaretPos(LPPOINT);
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```
03802 BOOL        WINAPI GetClassInfoA(HINSTANCE,LPCSTR,WNDCLASSA *);
03803 BOOL        WINAPI GetClassInfoW(HINSTANCE,LPCWSTR,WNDCLASSW *);
03804 #define     GetClassInfo WINELIB_NAME_AW(GetClassInfo)
03805 BOOL      WINAPI GetClassInfoExA(HINSTANCE,LPCSTR,WNDCLASSEXA *);
03806 BOOL      WINAPI GetClassInfoExW(HINSTANCE,LPCWSTR,WNDCLASSEXW *);
03807 #define     GetClassInfoEx WINELIB_NAME_AW(GetClassInfoEx)
03808 LONG        WINAPI GetClassLongA(HWND,INT);
03809 LONG        WINAPI GetClassLongW(HWND,INT);
03810 #define     GetClassLong WINELIB_NAME_AW(GetClassLong)
03811 INT       WINAPI GetClassNameA(HWND,LPSTR,INT);
03812 INT       WINAPI GetClassNameW(HWND,LPWSTR,INT);
03813 #define     GetClassName WINELIB_NAME_AW(GetClassName)
03814 WORD        WINAPI GetClassWord(HWND,INT);
03815 BOOL      WINAPI GetClientRect(HWND,LPRECT);
03816 HANDLE    WINAPI GetClipboardData(UINT);
03817 INT       WINAPI GetClipboardFormatNameA(UINT,LPSTR,INT);
03818 INT       WINAPI GetClipboardFormatNameW(UINT,LPWSTR,INT);
03819 #define     GetClipboardFormatName WINELIB_NAME_AW(GetClipboardFormatName)
03820 HWND      WINAPI GetClipboardOwner(void);
03821 HWND      WINAPI GetClipboardViewer(void);
03822 BOOL      WINAPI GetClipCursor(LPRECT);
03823 HCURSOR   WINAPI GetCursor(void);
03824 BOOL      WINAPI GetCursorPos(LPPOINT);
03825 HDC       WINAPI GetDC(HWND);
03826 HDC       WINAPI GetDCEx(HWND,HRGN,DWORD);
03827 HWND      WINAPI GetDesktopWindow(void);
03828 INT       WINAPI GetDlgCtrlID(HWND);
03829 HWND      WINAPI GetDlgItem(HWND,INT);
03830 UINT      WINAPI GetDlgItemInt(HWND,INT,BOOL*,BOOL);
03831 INT       WINAPI GetDlgItemTextA(HWND,INT,LPSTR,UINT);
03832 INT       WINAPI GetDlgItemTextW(HWND,INT,LPWSTR,UINT);
03833 #define     GetDlgItemText WINELIB_NAME_AW(GetDlgItemText)
03834 UINT      WINAPI GetDoubleClickTime(void);
03835 HWND      WINAPI GetFocus(void);
03836 HWND      WINAPI GetForegroundWindow(void);
03837 BOOL      WINAPI GetInputState(void);
03838 UINT      WINAPI GetInternalWindowPos(HWND,LPRECT,LPPOINT);
03839 UINT      WINAPI GetKBCodePage(void);
03840 INT       WINAPI GetKeyboardType(INT);
03841 INT       WINAPI GetKeyNameTextA(LONG,LPSTR,INT);
03842 INT       WINAPI GetKeyNameTextW(LONG,LPWSTR,INT);
03843 #define     GetKeyNameText WINELIB_NAME_AW(GetKeyNameText)
03844 INT       WINAPI GetKeyboardLayoutNameA(LPSTR);
03845 INT       WINAPI GetKeyboardLayoutNameW(LPWSTR);
03846 #define     GetKeyboardLayoutName WINELIB_NAME_AW(GetKeyboardLayoutName)
03847 SHORT       WINAPI GetKeyState(INT);
03848 HWND      WINAPI GetLastActivePopup(HWND);
03849 HMENU     WINAPI GetMenu(HWND);
03850 INT       WINAPI GetMenuItemCount(HMENU);
03851 UINT      WINAPI GetMenuItemID(HMENU,INT);
03852 BOOL      WINAPI GetMenuItemRect(HWND,HMENU,UINT,LPRECT);
03853 UINT      WINAPI GetMenuState(HMENU,UINT,UINT);
03854 INT       WINAPI GetMenuStringA(HMENU,UINT,LPSTR,INT,UINT);
03855 INT       WINAPI GetMenuStringW(HMENU,UINT,LPWSTR,INT,UINT);
03856 #define     GetMenuString WINELIB_NAME_AW(GetMenuString)
03857 BOOL      WINAPI GetMessageA(LPMSG,HWND,UINT,UINT);
03858 BOOL      WINAPI GetMessageW(LPMSG,HWND,UINT,UINT);
03859 #define     GetMessage WINELIB_NAME_AW(GetMessage)
03860 HWND      WINAPI GetNextDlgGroupItem(HWND,HWND,BOOL);
03861 HWND      WINAPI GetNextDlgTabItem(HWND,HWND,BOOL);
03862 #define     GetNextWindow GetWindow
03863 HWND      WINAPI GetOpenClipboardWindow(void);
03864 HWND      WINAPI GetParent(HWND);
03865 INT       WINAPI GetPriorityClipboardFormat(UINT*,INT);
03866 BOOL      WINAPI GetProcessDefaultLayout(DWORD*);
03867 HANDLE    WINAPI GetPropA(HWND,LPCSTR);
03868 HANDLE    WINAPI GetPropW(HWND,LPCWSTR);
03869 #define     GetProp WINELIB_NAME_AW(GetProp)
03870 DWORD       WINAPI GetQueueStatus(UINT);
03871 BOOL      WINAPI GetScrollInfo(HWND,INT,LPSCROLLINFO);
03872 INT       WINAPI GetScrollPos(HWND,INT);
03873 BOOL      WINAPI GetScrollRange(HWND,INT,LPINT,LPINT);
03874 HWND      WINAPI GetShellWindow(void);
03875 HMENU     WINAPI GetSubMenu(HMENU,INT);
03876 HBRUSH    WINAPI GetSysColorBrush(INT);
03877 #define     GetSysModalWindow() ((HWND)0)
03878 HMENU     WINAPI GetSystemMenu(HWND,BOOL);
03879 INT       WINAPI GetSystemMetrics(INT);
03880 DWORD       WINAPI GetTabbedTextExtentA(HDC,LPCSTR,INT,INT,const INT*);
03881 DWORD       WINAPI GetTabbedTextExtentW(HDC,LPCWSTR,INT,INT,const INT*);
03882 #define     GetTabbedTextExtent WINELIB_NAME_AW(GetTabbedTextExtent)
03883 HWND      WINAPI GetTopWindow(HWND);
03884 BOOL      WINAPI GetUpdateRect(HWND,LPRECT,BOOL);
03885 INT       WINAPI GetUpdateRgn(HWND,HRGN,BOOL);
03886 BOOL        WINAPI GetUserObjectInformationA(HANDLE,INT,LPVOID,DWORD,LPDWORD);
03887 BOOL        WINAPI GetUserObjectInformationW(HANDLE,INT,LPVOID,DWORD,LPDWORD);
03888 #define     GetUserObjectInformation WINELIB_NAME_AW(GetUserObjectInformation)
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03889 HWND        WINAPI GetWindow(HWND,UINT);
03890 HDC         WINAPI GetWindowDC(HWND);
03891 LONG        WINAPI GetWindowLongA(HWND,INT);
03892 LONG        WINAPI GetWindowLongW(HWND,INT);
03893 #define     GetWindowLong WINELIB_NAME_AW(GetWindowLong)
03894 BOOL      WINAPI GetWindowPlacement(HWND,LPWINDOWPLACEMENT);
03895 BOOL      WINAPI GetWindowRect(HWND,LPRECT);
03896 INT       WINAPI GetWindowRgn(HWND,HRGN);
03897 HWINSTA     WINAPI GetProcessWindowStation(void);
03898 #define     GetWindowTask(hwnd) ((HTASK)GetWindowThreadProcessId(hwnd,NULL))
03899 INT       WINAPI GetWindowTextA(HWND,LPSTR,INT);
03900 INT       WINAPI GetWindowTextW(HWND,LPWSTR,INT);
03901 #define     GetWindowText WINELIB_NAME_AW(GetWindowText)
03902 INT       WINAPI GetWindowTextLengthA(HWND);
03903 INT       WINAPI GetWindowTextLengthW(HWND);
03904 #define     GetWindowTextLength WINELIB_NAME_AW(GetWindowTextLength)
03905 WORD        WINAPI GetWindowWord(HWND,INT);
03906 BOOL      WINAPI GrayStringA(HDC,HBRUSH,GRAYSTRINGPROC,LPARAM,
03907                              INT,INT,INT,INT,INT);
03908 BOOL      WINAPI GrayStringW(HDC,HBRUSH,GRAYSTRINGPROC,LPARAM,
03909                              INT,INT,INT,INT,INT);
03910 #define     GrayString WINELIB_NAME_AW(GrayString)
03911 BOOL        WINAPI HideCaret(HWND);
03912 BOOL        WINAPI HiliteMenuItem(HWND,HMENU,UINT,UINT);
03913 BOOL        WINAPI InflateRect(LPRECT,INT,INT);
03914 BOOL        WINAPI InSendMessage(void);
03915 DWORD       WINAPI InSendMessageEx(LPVOID);
03916 BOOL        WINAPI InsertMenuA(HMENU,UINT,UINT,UINT,LPCSTR);
03917 BOOL        WINAPI InsertMenuW(HMENU,UINT,UINT,UINT,LPCWSTR);
03918 #define     InsertMenu WINELIB_NAME_AW(InsertMenu)
03919 BOOL        WINAPI InsertMenuItemA(HMENU,UINT,BOOL,const MENUITEMINFOA*);
03920 BOOL        WINAPI InsertMenuItemW(HMENU,UINT,BOOL,const MENUITEMINFOW*);
03921 #define     InsertMenuItem WINELIB_NAME_AW(InsertMenuItem)
03922 INT         WINAPI InternalGetWindowText(HWND,LPWSTR,INT);
03923 BOOL        WINAPI IntersectRect(LPRECT,const RECT*,const RECT*);
03924 BOOL        WINAPI InvalidateRect(HWND,const RECT*,BOOL);
03925 BOOL        WINAPI InvalidateRgn(HWND,HRGN,BOOL);
03926 BOOL        WINAPI InvertRect(HDC,const RECT*);
03927 BOOL        WINAPI IsCharAlphaA(CHAR);
03928 BOOL        WINAPI IsCharAlphaW(WCHAR);
03929 #define     IsCharAlpha WINELIB_NAME_AW(IsCharAlpha)
03930 BOOL      WINAPI IsCharAlphaNumericA(CHAR);
03931 BOOL      WINAPI IsCharAlphaNumericW(WCHAR);
03932 #define     IsCharAlphaNumeric WINELIB_NAME_AW(IsCharAlphaNumeric)
03933 BOOL      WINAPI IsCharLowerA(CHAR);
03934 BOOL      WINAPI IsCharLowerW(WCHAR);
03935 #define     IsCharLower WINELIB_NAME_AW(IsCharLower)
03936 BOOL      WINAPI IsCharUpperA(CHAR);
03937 BOOL      WINAPI IsCharUpperW(WCHAR);
03938 #define     IsCharUpper WINELIB_NAME_AW(IsCharUpper)
03939 BOOL      WINAPI IsChild(HWND,HWND);
03940 BOOL      WINAPI IsClipboardFormatAvailable(UINT);
03941 BOOL      WINAPI IsDialogMessageA(HWND,LPMSG);
03942 BOOL      WINAPI IsDialogMessageW(HWND,LPMSG);
03943 #define     IsDialogMessage WINELIB_NAME_AW(IsDialogMessage)
03944 UINT      WINAPI IsDlgButtonChecked(HWND,UINT);
03945 BOOL      WINAPI IsIconic(HWND);
03946 BOOL      WINAPI IsMenu(HMENU);
03947 BOOL      WINAPI IsRectEmpty(const RECT*);
03948 BOOL      WINAPI IsWindow(HWND);
03949 BOOL      WINAPI IsWindowEnabled(HWND);
03950 BOOL      WINAPI IsWindowVisible(HWND);
03951 BOOL      WINAPI IsZoomed(HWND);
03952 BOOL      WINAPI KillSystemTimer(HWND,UINT);
03953 BOOL      WINAPI KillTimer(HWND,UINT);
03954 HACCEL    WINAPI LoadAcceleratorsA(HINSTANCE,LPCSTR);
03955 HACCEL    WINAPI LoadAcceleratorsW(HINSTANCE,LPCWSTR);
03956 #define     LoadAccelerators WINELIB_NAME_AW(LoadAccelerators)
03957 HBITMAP     WINAPI LoadBitmapA(HINSTANCE,LPCSTR);
03958 HBITMAP     WINAPI LoadBitmapW(HINSTANCE,LPCWSTR);
03959 #define     LoadBitmap WINELIB_NAME_AW(LoadBitmap)
03960 HCURSOR   WINAPI LoadCursorA(HINSTANCE,LPCSTR);
03961 HCURSOR   WINAPI LoadCursorW(HINSTANCE,LPCWSTR);
03962 #define     LoadCursor WINELIB_NAME_AW(LoadCursor)
03963 HCURSOR   WINAPI LoadCursorFromFileA(LPCSTR);
03964 HCURSOR   WINAPI LoadCursorFromFileW(LPCWSTR);
03965 #define     LoadCursorFromFile WINELIB_NAME_AW(LoadCursorFromFile)
03966 HICON     WINAPI LoadIconA(HINSTANCE,LPCSTR);
03967 HICON     WINAPI LoadIconW(HINSTANCE,LPCWSTR);
03968 #define     LoadIcon WINELIB_NAME_AW(LoadIcon)
03969 HANDLE    WINAPI LoadImageA(HINSTANCE,LPCSTR,UINT,INT,INT,UINT);
03970 HANDLE    WINAPI LoadImageW(HINSTANCE,LPCWSTR,UINT,INT,INT,UINT);
03971 #define     LoadImage WINELIB_NAME_AW(LoadImage)
03972 HMENU     WINAPI LoadMenuA(HINSTANCE,LPCSTR);
03973 HMENU     WINAPI LoadMenuW(HINSTANCE,LPCWSTR);
03974 #define     LoadMenu WINELIB_NAME_AW(LoadMenu)
03975 HMENU     WINAPI LoadMenuIndirectA(LPCVOID);
```

```
03976 HMENU     WINAPI LoadMenuIndirectW(LPCVOID);
03977 #define     LoadMenuIndirect WINELIB_NAME_AW(LoadMenuIndirect)
03978 INT       WINAPI LoadStringA(HINSTANCE,UINT,LPSTR,INT);
03979 INT       WINAPI LoadStringW(HINSTANCE,UINT,LPWSTR,INT);
03980 #define     LoadString WINELIB_NAME_AW(LoadString)
03981 BOOL      WINAPI LockWindowUpdate(HWND);
03982 INT       WINAPI LookupIconIdFromDirectory(LPBYTE,BOOL);
03983 INT       WINAPI LookupIconIdFromDirectoryEx(LPBYTE,BOOL,INT,INT,UINT);
03984 UINT      WINAPI MapVirtualKeyA(UINT,UINT);
03985 UINT      WINAPI MapVirtualKeyW(UINT,UINT);
03986 #define     MapVirtualKey WINELIB_NAME_AW(MapVirtualKey)
03987 UINT        WINAPI MapVirtualKeyExA(UINT,UINT,HKL);
03988 UINT        WINAPI MapVirtualKeyExW(UINT,UINT,HKL);
03989 #define     MapVirtualKeyEx WINELIB_NAME_AW(MapVirtualKeyEx)
03990 BOOL        WINAPI MapDialogRect(HWND,LPRECT);
03991 INT         WINAPI MapWindowPoints(HWND,HWND,LPPOINT,UINT);
03992 UINT        WINAPI MenuItemFromPoint(HWND,HMENU,POINT);
03993 BOOL        WINAPI MessageBeep(UINT);
03994 INT         WINAPI MessageBoxA(HWND,LPCSTR,LPCSTR,UINT);
03995 INT         WINAPI MessageBoxW(HWND,LPCWSTR,LPCWSTR,UINT);
03996 #define     MessageBox WINELIB_NAME_AW(MessageBox)
03997 INT       WINAPI MessageBoxIndirectA(LPMSGBOXPARAMSA);
03998 INT       WINAPI MessageBoxIndirectW(LPMSGBOXPARAMSW);
03999 #define     MessageBoxIndirect WINELIB_NAME_AW(MessageBoxIndirect)
04000 BOOL      WINAPI ModifyMenuA(HMENU,UINT,UINT,UINT,LPCSTR);
04001 BOOL      WINAPI ModifyMenuW(HMENU,UINT,UINT,UINT,LPCWSTR);
04002 #define     ModifyMenu WINELIB_NAME_AW(ModifyMenu)
04003 BOOL      WINAPI MoveWindow(HWND,INT,INT,INT,INT,BOOL);
04004 BOOL      WINAPI OemToCharA(LPCSTR,LPSTR);
04005 BOOL      WINAPI OemToCharW(LPCSTR,LPWSTR);
04006 #define     OemToChar WINELIB_NAME_AW(OemToChar)
04007 BOOL      WINAPI OemToCharBuffA(LPCSTR,LPSTR,DWORD);
04008 BOOL      WINAPI OemToCharBuffW(LPCSTR,LPWSTR,DWORD);
04009 #define     OemToCharBuff WINELIB_NAME_AW(OemToCharBuff)
04010 BOOL      WINAPI OffsetRect(LPRECT,INT,INT);
04011 BOOL      WINAPI OpenClipboard(HWND);
04012 BOOL      WINAPI OpenIcon(HWND);
04013 HWINSTA     WINAPI OpenWindowStationA(LPSTR,BOOL,ACCESS_MASK);
04014 HWINSTA     WINAPI OpenWindowStationW(LPWSTR,BOOL,ACCESS_MASK);
04015 #define     OpenWindowStation WINELIB_NAME_AW(OpenWindowStation)
04016 BOOL      WINAPI PeekMessageA(LPMSG,HWND,UINT,UINT,UINT);
04017 BOOL      WINAPI PeekMessageW(LPMSG,HWND,UINT,UINT,UINT);
04018 #define     PeekMessage WINELIB_NAME_AW(PeekMessage)
04019 #define     PostAppMessageA(thread,msg,wparam,lparam) \
04020               PostThreadMessageA((DWORD)(thread),msg,wparam,lparam)
04021 #define     PostAppMessageW(thread,msg,wparam,lparam) \
04022               PostThreadMessageW((DWORD)(thread),msg,wparam,lparam)
04023 #define     PostAppMessage WINELIB_NAME_AW(PostAppMessage)
04024 BOOL      WINAPI PostMessageA(HWND,UINT,WPARAM,LPARAM);
04025 BOOL      WINAPI PostMessageW(HWND,UINT,WPARAM,LPARAM);
04026 #define     PostMessage WINELIB_NAME_AW(PostMessage)
04027 void        WINAPI PostQuitMessage(INT);
04028 BOOL      WINAPI PtInRect(const RECT*,POINT);
04029 BOOL      WINAPI RedrawWindow(HWND,const RECT*,HRGN,UINT);
04030 ATOM        WINAPI RegisterClassA(const WNDCLASSA *);
04031 ATOM        WINAPI RegisterClassW(const WNDCLASSW *);
04032 #define     RegisterClass WINELIB_NAME_AW(RegisterClass)
04033 ATOM        WINAPI RegisterClassExA(const WNDCLASSEXA *);
04034 ATOM        WINAPI RegisterClassExW(const WNDCLASSEXW *);
04035 #define     RegisterClassEx WINELIB_NAME_AW(RegisterClassEx)
04036 UINT      WINAPI RegisterClipboardFormatA(LPCSTR);
04037 UINT      WINAPI RegisterClipboardFormatW(LPCWSTR);
04038 #define     RegisterClipboardFormat WINELIB_NAME_AW(RegisterClipboardFormat)
04039 WORD        WINAPI RegisterWindowMessageA(LPCSTR);
04040 WORD        WINAPI RegisterWindowMessageW(LPCWSTR);
04041 #define     RegisterWindowMessage WINELIB_NAME_AW(RegisterWindowMessage)
04042 INT       WINAPI ReleaseDC(HWND,HDC);
04043 BOOL      WINAPI RemoveMenu(HMENU,UINT,UINT);
04044 HANDLE    WINAPI RemovePropA(HWND,LPCSTR);
04045 HANDLE    WINAPI RemovePropW(HWND,LPCWSTR);
04046 #define     RemoveProp WINELIB_NAME_AW(RemoveProp)
04047 BOOL        WINAPI ReplyMessage(LRESULT);
04048 BOOL        WINAPI ScreenToClient(HWND,LPPOINT);
04049 VOID        WINAPI ScrollChildren(HWND,UINT,WPARAM,LPARAM);
04050 BOOL        WINAPI ScrollDC(HDC,INT,INT,const RECT*,const RECT*,HRGN,LPRECT);
04051 BOOL        WINAPI ScrollWindow(HWND,INT,INT,const RECT*,const RECT*);
04052 INT         WINAPI ScrollWindowEx(HWND,INT,INT,const RECT*,const RECT*,HRGN,LPRECT,UINT);
04053 LRESULT     WINAPI SendDlgItemMessageA(HWND,INT,UINT,WPARAM,LPARAM);
04054 LRESULT     WINAPI SendDlgItemMessageW(HWND,INT,UINT,WPARAM,LPARAM);
04055 #define     SendDlgItemMessage WINELIB_NAME_AW(SendDlgItemMessage)
04056 UINT        WINAPI SendInput(UINT,LPINPUT,int);
04057 LRESULT     WINAPI SendMessageA(HWND,UINT,WPARAM,LPARAM);
04058 LRESULT     WINAPI SendMessageW(HWND,UINT,WPARAM,LPARAM);
04059 #define     SendMessage WINELIB_NAME_AW(SendMessage)
04060 LRESULT     WINAPI SendMessageTimeoutA(HWND,UINT,WPARAM,LPARAM,UINT,UINT,LPDWORD);
04061 LRESULT     WINAPI SendMessageTimeoutW(HWND,UINT,WPARAM,LPARAM,UINT,UINT,LPDWORD);
04062 #define     SendMessageTimeout WINELIB_NAME_AW(SendMessageTimeout)
```

```
04063 HWND        WINAPI SetActiveWindow(HWND);
04064 HWND        WINAPI SetCapture(HWND);
04065 BOOL        WINAPI SetCaretBlinkTime(UINT);
04066 BOOL        WINAPI SetCaretPos(INT,INT);
04067 LONG        WINAPI SetClassLongA(HWND,INT,LONG);
04068 LONG        WINAPI SetClassLongW(HWND,INT,LONG);
04069 #define     SetClassLong WINELIB_NAME_AW(SetClassLong)
04070 WORD        WINAPI SetClassWord(HWND,INT,WORD);
04071 HANDLE    WINAPI SetClipboardData(UINT,HANDLE);
04072 HWND      WINAPI SetClipboardViewer(HWND);
04073 HCURSOR   WINAPI SetCursor(HCURSOR);
04074 BOOL      WINAPI SetCursorPos(INT,INT);
04075 BOOL      WINAPI SetDeskWallPaper(LPCSTR);
04076 BOOL      WINAPI SetDlgItemInt(HWND,INT,UINT,BOOL);
04077 BOOL      WINAPI SetDlgItemTextA(HWND,INT,LPCSTR);
04078 BOOL      WINAPI SetDlgItemTextW(HWND,INT,LPCWSTR);
04079 #define     SetDlgItemText WINELIB_NAME_AW(SetDlgItemText)
04080 BOOL      WINAPI SetDoubleClickTime(UINT);
04081 HWND      WINAPI SetFocus(HWND);
04082 BOOL      WINAPI SetForegroundWindow(HWND);
04083 void        WINAPI SetInternalWindowPos(HWND,UINT,LPRECT,LPPOINT);
04084 BOOL      WINAPI SetMenu(HWND,HMENU);
04085 BOOL      WINAPI SetMenuContextHelpId(HMENU,DWORD);
04086 BOOL      WINAPI SetMenuItemBitmaps(HMENU,UINT,UINT,HBITMAP,HBITMAP);
04087 BOOL      WINAPI SetMessageQueue(INT);
04088 BOOL      WINAPI SetProcessDefaultLayout(DWORD);
04089 BOOL      WINAPI SetProcessWindowStation(HWINSTA);
04090 HWND      WINAPI SetParent(HWND,HWND);
04091 BOOL      WINAPI SetPropA(HWND,LPCSTR,HANDLE);
04092 BOOL      WINAPI SetPropW(HWND,LPCWSTR,HANDLE);
04093 #define     SetProp WINELIB_NAME_AW(SetProp)
04094 BOOL      WINAPI SetRect(LPRECT,INT,INT,INT,INT);
04095 BOOL      WINAPI SetRectEmpty(LPRECT);
04096 INT       WINAPI SetScrollInfo(HWND,INT,const SCROLLINFO*,BOOL);
04097 INT       WINAPI SetScrollPos(HWND,INT,INT,BOOL);
04098 BOOL      WINAPI SetScrollRange(HWND,INT,INT,INT,BOOL);
04099 #define     SetSysModalWindow(hwnd) ((HWND)0)
04100 BOOL      WINAPI SetSystemCursor(HCURSOR,DWORD);
04101 BOOL      WINAPI SetSystemMenu(HWND,HMENU);
04102 UINT      WINAPI SetSystemTimer(HWND,UINT,UINT,TIMERPROC);
04103 UINT      WINAPI SetTimer(HWND,UINT,UINT,TIMERPROC);
04104 BOOL        WINAPI SetUserObjectSecurity(HANDLE,PSECURITY_INFORMATION,PSECURITY_DESCRIPTOR);
04105 LONG        WINAPI SetWindowLongA(HWND,INT,LONG);
04106 LONG        WINAPI SetWindowLongW(HWND,INT,LONG);
04107 #define     SetWindowLong WINELIB_NAME_AW(SetWindowLong)
04108 BOOL      WINAPI SetWindowPlacement(HWND,const WINDOWPLACEMENT*);
04109 HHOOK       WINAPI SetWindowsHookA(INT,HOOKPROC);
04110 HHOOK       WINAPI SetWindowsHookW(INT,HOOKPROC);
04111 #define     SetWindowsHook WINELIB_NAME_AW(SetWindowsHook)
04112 HHOOK       WINAPI SetWindowsHookExA(INT,HOOKPROC,HINSTANCE,DWORD);
04113 HHOOK       WINAPI SetWindowsHookExW(INT,HOOKPROC,HINSTANCE,DWORD);
04114 #define     SetWindowsHookEx WINELIB_NAME_AW(SetWindowsHookEx)
04115 BOOL      WINAPI SetWindowPos(HWND,HWND,INT,INT,INT,INT,UINT);
04116 INT       WINAPI SetWindowRgn(HWND,HRGN,BOOL);
04117 BOOL      WINAPI SetWindowTextA(HWND,LPCSTR);
04118 BOOL      WINAPI SetWindowTextW(HWND,LPCWSTR);
04119 #define     SetWindowText WINELIB_NAME_AW(SetWindowText)
04120 WORD        WINAPI SetWindowWord(HWND,INT,WORD);
04121 BOOL      WINAPI ShowCaret(HWND);
04122 INT       WINAPI ShowCursor(BOOL);
04123 BOOL      WINAPI ShowScrollBar(HWND,INT,BOOL);
04124 BOOL      WINAPI ShowOwnedPopups(HWND,BOOL);
04125 BOOL      WINAPI ShowWindow(HWND,INT);
04126 BOOL      WINAPI SubtractRect(LPRECT,const RECT*,const RECT*);
04127 BOOL      WINAPI SwapMouseButton(BOOL);
04128 VOID        WINAPI SwitchToThisWindow(HWND,BOOL);
04129 BOOL      WINAPI SystemParametersInfoA(UINT,UINT,LPVOID,UINT);
04130 BOOL      WINAPI SystemParametersInfoW(UINT,UINT,LPVOID,UINT);
04131 #define     SystemParametersInfo WINELIB_NAME_AW(SystemParametersInfo)
04132 LONG        WINAPI TabbedTextOutA(HDC,INT,INT,LPCSTR,INT,INT,const INT*,INT);
04133 LONG        WINAPI TabbedTextOutW(HDC,INT,INT,LPCWSTR,INT,INT,const INT*,INT);
04134 #define     TabbedTextOut WINELIB_NAME_AW(TabbedTextOut)
04135 INT       WINAPI ToAscii(UINT,UINT,LPBYTE,LPWORD,UINT);
04136 INT       WINAPI ToAsciiEx(UINT,UINT,LPBYTE,LPWORD,UINT,HKL);
04137 BOOL      WINAPI TrackPopupMenu(HMENU,UINT,INT,INT,INT,HWND,const RECT*);
04138 INT       WINAPI TranslateAccelerator(HWND,HACCEL,LPMSG);
04139 BOOL      WINAPI TranslateMDISysAccel(HWND,LPMSG);
04140 BOOL      WINAPI TranslateMessage(const MSG*);
04141 BOOL      WINAPI UnhookWindowsHook(INT,HOOKPROC);
04142 BOOL      WINAPI UnhookWindowsHookEx(HHOOK);
04143 BOOL      WINAPI UnionRect(LPRECT,const RECT*,const RECT*);
04144 BOOL      WINAPI UnregisterClassA(LPCSTR,HINSTANCE);
04145 BOOL      WINAPI UnregisterClassW(LPCWSTR,HINSTANCE);
04146 #define     UnregisterClass WINELIB_NAME_AW(UnregisterClass)
04147 VOID        WINAPI UpdateWindow(HWND);
04148 UINT        WINAPI UserRealizePalette(HDC);
04149 VOID        WINAPI ValidateRect(HWND,const RECT*);
```

```
04150 VOID        WINAPI ValidateRgn(HWND,HRGN);
04151 WORD        WINAPI VkKeyScanA(CHAR);
04152 WORD        WINAPI VkKeyScanW(WCHAR);
04153 #define     VkKeyScan WINELIB_NAME_AW(VkKeyScan)
04154 WORD        WINAPI VkKeyScanExA(CHAR, HKL);
04155 WORD        WINAPI VkKeyScanExW(WCHAR, HKL);
04156 #define     VkKeyScanEx WINELIB_NAME_AW(VkKeyScanEx)
04157 BOOL        WINAPI WaitMessage(void);
04158 HWND      WINAPI WindowFromDC(HDC);
04159 HWND      WINAPI WindowFromPoint(POINT);
04160 BOOL      WINAPI WinHelpA(HWND,LPCSTR,UINT,DWORD);
04161 BOOL      WINAPI WinHelpW(HWND,LPCWSTR,UINT,DWORD);
04162 #define     WinHelp WINELIB_NAME_AW(WinHelp)
04163 INT       WINAPIV wsprintfA(LPSTR,LPCSTR,...);
04164 INT       WINAPIV wsprintfW(LPWSTR,LPCWSTR,...);
04165 #define     wsprintf WINELIB_NAME_AW(wsprintf)
04166 INT       WINAPI wvsprintfA(LPSTR,LPCSTR,va_list);
04167 INT       WINAPI wvsprintfW(LPWSTR,LPCWSTR,va_list);
04168 #define     wvsprintf WINELIB_NAME_AW(wvsprintf)
04169
04170 /* Undocumented functions */
04171
04172 /* NOTE: This is SYSTEM.3, not USER.182, which is also named KillSystemTimer */
04173 WORD        WINAPI SYSTEM_KillSystemTimer( WORD );
04174
04175 HRESULT     WINAPI PrivateExtractIconsA(LPCSTR,INT,DWORD,DWORD,HICON*,DWORD,UINT,DWORD);
04176 HRESULT     WINAPI PrivateExtractIconsW(LPCWSTR,INT,DWORD,DWORD,HICON*,DWORD,UINT,DWORD);
04177
04178 /* Extra functions that don't exist in the Windows API */
04179
04180 HPEN        WINAPI GetSysColorPen(INT);
04181 INT         WINAPI wvsnprintfA(LPSTR,UINT,LPCSTR,va_list);
04182 INT         WINAPI wvsnprintfW(LPWSTR,UINT,LPCWSTR,va_list);
04183 #define     wvsnprintf WINELIB_NAME_AW(wvsnprintf)
04184
04185 #ifdef __cplusplus
04186 }
04187 #endif
04188
04189 #endif /* _WINUSER_ */
```

5.14 libemf.h

```
00001 /* -*- c++ -*-
00002  * EMF: A library for generating ECMA-234 Enhanced Metafiles
00003  * Copyright (C) 2002, 2003 lignum Computing, Inc. <dallenbarnett@users.sourceforge.net>
00004  * $Id: libemf.h 94 2020-04-25 18:46:06Z dallenbarnett $
00005  *
00006  * This library is free software; you can redistribute it and/or
00007  * modify it under the terms of the GNU Lesser General Public
00008  * License as published by the Free Software Foundation; either
00009  * version 2.1 of the License, or (at your option) any later version.
00010  *
00011  * This library is distributed in the hope that it will be useful,
00012  * but WITHOUT ANY WARRANTY; without even the implied warranty of
00013  * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
00014  * Lesser General Public License for more details.
00015  *
00016  * You should have received a copy of the GNU Lesser General Public
00017  * License along with this library; if not, write to the Free Software
00018  * Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA  02111-1307  USA
00019  *
00020  */
00021 #ifndef _LIBEMF_H
00022 #define _LIBEMF_H 1
00023
00024 #include <cmath>
00025 #include <vector>
00026 #include <map>
00027 #include <functional>
00028 #include <algorithm>
00029 #include <stdexcept>
00030 #include <memory>
00031
00032 #include <config.h>
00033 #include <libEMF/emf.h>
00034
00035 #include <libEMF/wine/w16.h>
00036
00037 #ifdef ENABLE_EDITING
00038 #include <iconv.h>
00039 #include <errno.h>
00040 #endif
00041
```

```
00042 #define EMF_UNUSED(x) (void)x;
00043
00044 namespace EMF {
00049 #if 1
00050   const int XMAX_PIXELS = 1024; /*(INT_MAX)*/
00051 #else
00052   const int XMAX_PIXELS = 1280; /*(INT_MAX)*/
00053 #endif
00058 #if 1
00059   const int YMAX_PIXELS = 768; /*(INT_MAX)*/
00060 #else
00061   const int YMAX_PIXELS = 1024; /*(INT_MAX)*/
00062 #endif
00068   const int XMAX_MM = 320;
00074   const int YMAX_MM = 240;
00078   const int RESOLUTION = 96;
00082   static inline DWORD ROUND_TO_LONG ( DWORD n ) { return ((n+3)/4)*4; }
00083
00084   static bool bigEndian ( void );
00085
00087
00092   struct WCHARSTR {
00093     WCHAR *const string_;
00094     const int length_;
00100     WCHARSTR ( WCHAR *const string, const int length )
00101       : string_( string ), length_( length ) {}
00102   };
00103
00105
00110   struct CHARSTR {
00111     CHAR *const string_;
00112     const int length_;
00118     CHARSTR ( CHAR *const string, const int length )
00119       : string_( string ), length_( length ) {}
00120   };
00121
00123
00127   struct BYTEARRAY {
00128     BYTE *const array_;
00129     const int n_;
00135     BYTEARRAY ( BYTE *const array, const int n )
00136       : array_( array ), n_( n ) {}
00137   };
00138
00140
00143   struct POINTLARRAY {
00144     POINTL *const points_;
00145     const DWORD n_;
00151     POINTLARRAY ( POINTL *const points, const DWORD n )
00152       : points_( points ), n_( n ) {}
00153   };
00154
00156
00159   struct POINT16ARRAY {
00160     POINT16 *const points_;
00161     const DWORD n_;
00167     POINT16ARRAY ( POINT16 *const points, const DWORD n )
00168       : points_( points ), n_( n ) {}
00169   };
00170
00172
00175   struct INTARRAY {
00176     INT *const ints_;
00177     const DWORD n_;
00183     INTARRAY ( INT *const ints, const DWORD n )
00184       : ints_( ints ), n_( n ) {}
00185   };
00186
00188
00191   struct DWORDARRAY {
00192     DWORD *const dwords_;
00193     const DWORD n_;
00199     DWORDARRAY ( DWORD *const dwords, const DWORD n )
00200       : dwords_( dwords ), n_( n ) {}
00201   };
00202
00204
00207   struct PADDING {
00208     static const char padding_[4];
00209     const int size_;
00214     PADDING ( const int size ) : size_( size ) {}
00215   };
00216
00218
00225   class DATASTREAM {
00226     bool swap_;
00227     ::FILE* fp_;
```

```
00228   public:
00234     DATASTREAM ( ::FILE* fp = 0 ) : swap_( bigEndian() ), fp_( fp ) {}
00239     void setStream ( ::FILE* fp ) { fp_ = fp; }
00244     DATASTREAM& operator« ( const BYTE& byte )
00245     {
00246       fwrite( &byte, sizeof(BYTE), 1, fp_ );
00247       return *this;
00248     }
00253     DATASTREAM& operator» ( BYTE& byte )
00254     {
00255       fread( &byte, sizeof(BYTE), 1, fp_ );
00256       return *this;
00257     }
00262     DATASTREAM& operator« ( const WORD& word )
00263     {
00264       if ( swap_ ) {
00265     unsigned char const * p = (unsigned char const*)&word;
00266     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00267     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00268       }
00269       else
00270     fwrite( &word, sizeof(WORD), 1, fp_ );
00271       return *this;
00272     }
00277     DATASTREAM& operator» ( WORD& word )
00278     {
00279       if ( swap_ ) {
00280     unsigned char* p = (unsigned char*)&word;
00281     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00282     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00283       }
00284       else
00285     fread( &word, sizeof(WORD), 1, fp_ );
00286       return *this;
00287     }
00292     DATASTREAM& operator« ( const INT16& word )
00293     {
00294       if ( swap_ ) {
00295     unsigned char const * p = (unsigned char const*)&word;
00296     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00297     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00298       }
00299       else
00300     fwrite( &word, sizeof(INT16), 1, fp_ );
00301       return *this;
00302     }
00307     DATASTREAM& operator» ( INT16& word )
00308     {
00309       if ( swap_ ) {
00310     unsigned char* p = (unsigned char*)&word;
00311     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00312     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00313       }
00314       else
00315     fread( &word, sizeof(INT16), 1, fp_ );
00316       return *this;
00317     }
00322     DATASTREAM& operator« ( const DWORD& dword )
00323     {
00324       if ( swap_ ) {
00325     unsigned char const* p = (unsigned char const*)&dword;
00326     fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00327     fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00328     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00329     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00330       }
00331       else
00332     fwrite( &dword, sizeof(DWORD), 1, fp_ );
00333       return *this;
00334     }
00339     DATASTREAM& operator» ( DWORD& dword )
00340     {
00341       if ( swap_ ) {
00342     unsigned char* p = (unsigned char*)&dword;
00343     fread( &p[3], sizeof(unsigned char), 1, fp_ );
00344     fread( &p[2], sizeof(unsigned char), 1, fp_ );
00345     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00346     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00347       }
00348       else
00349     fread( &dword, sizeof(DWORD), 1, fp_ );
00350       return *this;
00351     }
00352 #if !defined( __LP64__ )
00357     DATASTREAM& operator« ( const LONG& long_ )
00358     {
00359       if ( swap_ ) {
```

```
00360     unsigned char const* p = (unsigned char const*)&long_;
00361     fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00362     fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00363     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00364     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00365       }
00366       else
00367     fwrite( &long_, sizeof(LONG), 1, fp_ );
00368       return *this;
00369     }
00374     DATASTREAM& operator» ( LONG& long_ )
00375     {
00376       if ( swap_ ) {
00377     unsigned char* p = (unsigned char*)&long_;
00378     fread( &p[3], sizeof(unsigned char), 1, fp_ );
00379     fread( &p[2], sizeof(unsigned char), 1, fp_ );
00380     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00381     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00382       }
00383       else
00384     fread( &long_, sizeof(LONG), 1, fp_ );
00385       return *this;
00386     }
00387 #endif /* __x86_64__ */
00392     DATASTREAM& operator« ( const INT& int_ )
00393     {
00394       if ( swap_ ) {
00395     unsigned char const* p = (unsigned char const*)&int_;
00396     fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00397     fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00398     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00399     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00400       }
00401       else
00402     fwrite( &int_, sizeof(INT), 1, fp_ );
00403       return *this;
00404     }
00409     DATASTREAM& operator» ( INT& int_ )
00410     {
00411       if ( swap_ ) {
00412     unsigned char* p = (unsigned char*)&int_;
00413     fread( &p[3], sizeof(unsigned char), 1, fp_ );
00414     fread( &p[2], sizeof(unsigned char), 1, fp_ );
00415     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00416     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00417       }
00418       else
00419     fread( &int_, sizeof(INT), 1, fp_ );
00420       return *this;
00421     }
00422 #if !defined(__LP64__)
00427     DATASTREAM& operator« ( const UINT& uint )
00428     {
00429       if ( swap_ ) {
00430     unsigned char const* p = (unsigned char const*)&uint;
00431     fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00432     fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00433     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00434     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00435       }
00436       else
00437     fwrite( &uint, sizeof(UINT), 1, fp_ );
00438       return *this;
00439     }
00444     DATASTREAM& operator» ( UINT& uint )
00445     {
00446       if ( swap_ ) {
00447     unsigned char* p = (unsigned char*)&uint;
00448     fread( &p[3], sizeof(unsigned char), 1, fp_ );
00449     fread( &p[2], sizeof(unsigned char), 1, fp_ );
00450     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00451     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00452       }
00453       else
00454     fread( &uint, sizeof(UINT), 1, fp_ );
00455       return *this;
00456     }
00457 #endif /* !__x86_64__ */
00462     DATASTREAM& operator« ( const FLOAT& float_ )
00463     {
00464       if ( swap_ ) {
00465     unsigned char const* p = (unsigned char const*)&float_;
00466     fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00467     fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00468     fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00469     fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00470       }
```

```
00471       else
00472     fwrite( &float_, sizeof(FLOAT), 1, fp_ );
00473       return *this;
00474     }
00479     DATASTREAM& operator» ( FLOAT& float_ )
00480     {
00481       if ( swap_ ) {
00482     unsigned char* p = (unsigned char*)&float_;
00483     fread( &p[3], sizeof(unsigned char), 1, fp_ );
00484     fread( &p[2], sizeof(unsigned char), 1, fp_ );
00485     fread( &p[1], sizeof(unsigned char), 1, fp_ );
00486     fread( &p[0], sizeof(unsigned char), 1, fp_ );
00487       }
00488       else
00489     fread( &float_, sizeof(FLOAT), 1, fp_ );
00490       return *this;
00491     }
00496     DATASTREAM& operator« ( const PADDING& padding )
00497     {
00498       if ( padding.size_ != 0 )
00499     fwrite( &padding.padding_, sizeof(CHAR), padding.size_, fp_ );
00500       return *this;
00501     }
00506     DATASTREAM& operator« ( const RECTL& rectl )
00507     {
00508       *this « rectl.left « rectl.top « rectl.right « rectl.bottom;
00509       return *this;
00510     }
00515     DATASTREAM& operator» ( RECTL& rectl )
00516     {
00517       *this » rectl.left » rectl.top » rectl.right » rectl.bottom;
00518       return *this;
00519     }
00524     DATASTREAM& operator« ( const SIZEL& sizel )
00525     {
00526       *this « sizel.cx « sizel.cy;
00527       return *this;
00528     }
00533     DATASTREAM& operator» ( SIZEL& sizel )
00534     {
00535       *this » sizel.cx » sizel.cy;
00536       return *this;
00537     }
00542     DATASTREAM& operator« ( const WCHARSTR& wcharstr )
00543     {
00544       for ( int i = 0; i < wcharstr.length_; i++ )
00545     *this « wcharstr.string_[i];
00546       return *this;
00547     }
00552     DATASTREAM& operator» ( WCHARSTR& wcharstr )
00553     {
00554       for ( int i = 0; i < wcharstr.length_; i++ )
00555     *this » wcharstr.string_[i];
00556       return *this;
00557     }
00562     DATASTREAM& operator« ( const CHARSTR& charstr )
00563     {
00564       fwrite( charstr.string_, sizeof(CHAR), charstr.length_, fp_ );
00565       return *this;
00566     }
00571     DATASTREAM& operator» ( CHARSTR& charstr )
00572     {
00573       fread( charstr.string_, sizeof(CHAR), charstr.length_, fp_ );
00574       return *this;
00575     }
00580     DATASTREAM& operator« ( const ::EMR& emr )
00581     {
00582       *this « emr.iType « emr.nSize;
00583       return *this;
00584     }
00589     DATASTREAM& operator» ( ::EMR& emr )
00590     {
00591       *this » emr.iType » emr.nSize;
00592       return *this;
00593     }
00598     DATASTREAM& operator« ( const POINT& point )
00599     {
00600       *this « point.x « point.y;
00601       return *this;
00602     }
00607     DATASTREAM& operator» ( POINT& point )
00608     {
00609       *this » point.x » point.y;
00610       return *this;
00611     }
00616     DATASTREAM& operator« ( const POINTL& pointl )
00617     {
```

```
00618       *this « pointl.x « pointl.y;
00619       return *this;
00620     }
00625     DATASTREAM& operator» ( POINTL& pointl )
00626     {
00627       *this » pointl.x » pointl.y;
00628       return *this;
00629     }
00634     DATASTREAM& operator« ( const POINT16& point )
00635     {
00636       *this « point.x « point.y;
00637       return *this;
00638     }
00643     DATASTREAM& operator» ( POINT16& point )
00644     {
00645       *this » point.x » point.y;
00646       return *this;
00647     }
00652     DATASTREAM& operator« ( const XFORM& xform )
00653     {
00654       *this « xform.eM11 « xform.eM12 « xform.eM21 « xform.eM22
00655         « xform.eDx « xform.eDy;
00656       return *this;
00657     }
00662     DATASTREAM& operator» ( XFORM& xform )
00663     {
00664       *this » xform.eM11 » xform.eM12 » xform.eM21 » xform.eM22
00665         » xform.eDx » xform.eDy;
00666       return *this;
00667     }
00672     DATASTREAM& operator« ( const BYTEARRAY& array )
00673     {
00674       fwrite( array.array_, sizeof(BYTE), array.n_, fp_ );
00675       return *this;
00676     }
00681     DATASTREAM& operator» ( BYTEARRAY& array )
00682     {
00683       fread( array.array_, sizeof(BYTE), array.n_, fp_ );
00684       return *this;
00685     }
00690     DATASTREAM& operator« ( const POINTLARRAY& array )
00691     {
00692       for ( unsigned int i = 0; i < array.n_; i++ )
00693     *this « array.points_[i];
00694       return *this;
00695     }
00700     DATASTREAM& operator» ( POINTLARRAY& array )
00701     {
00702       for ( unsigned int i = 0; i < array.n_; i++ )
00703     *this » array.points_[i];
00704       return *this;
00705     }
00710     DATASTREAM& operator« ( const POINT16ARRAY& array )
00711     {
00712       for ( unsigned int i = 0; i < array.n_; i++ )
00713     *this « array.points_[i];
00714       return *this;
00715     }
00720     DATASTREAM& operator» ( POINT16ARRAY& array )
00721     {
00722       for ( unsigned int i = 0; i < array.n_; i++ )
00723     *this » array.points_[i];
00724       return *this;
00725     }
00730     DATASTREAM& operator« ( const INTARRAY& array )
00731     {
00732       for ( unsigned int i = 0; i < array.n_; i++ )
00733     *this « array.ints_[i];
00734       return *this;
00735     }
00740     DATASTREAM& operator» ( INTARRAY& array )
00741     {
00742       for ( unsigned int i = 0; i < array.n_; i++ )
00743     *this » array.ints_[i];
00744       return *this;
00745     }
00750     DATASTREAM& operator« ( const DWORDARRAY& array )
00751     {
00752       for ( unsigned int i = 0; i < array.n_; i++ )
00753     *this « array.dwords_[i];
00754       return *this;
00755     }
00760     DATASTREAM& operator» ( DWORDARRAY& array )
00761     {
00762       for ( unsigned int i = 0; i < array.n_; i++ )
00763     *this » array.dwords_[i];
00764       return *this;
```

```
00765     }
00770     DATASTREAM& operator« ( const ::EMRTEXT& text )
00771     {
00772       *this « text.ptlReference « text.nChars « text.offString « text.fOptions
00773      « text.rcl « text.offDx;
00774       return *this;
00775     }
00780     DATASTREAM& operator» ( ::EMRTEXT& text )
00781     {
00782       *this » text.ptlReference » text.nChars » text.offString » text.fOptions
00783         » text.rcl » text.offDx;
00784       return *this;
00785     }
00790     DATASTREAM& operator« ( const LOGPEN& pen )
00791     {
00792       *this « pen.lopnStyle « pen.lopnWidth « pen.lopnColor;
00793       return *this;
00794     }
00799     DATASTREAM& operator» ( LOGPEN& pen )
00800     {
00801       *this » pen.lopnStyle » pen.lopnWidth » pen.lopnColor;
00802       return *this;
00803     }
00808     DATASTREAM& operator« ( const EXTLOGPEN& pen )
00809     {
00810       // *** How big is this structure if there are no style entries? ***
00811       *this « pen.elpPenStyle « pen.elpWidth « pen.elpBrushStyle « pen.elpColor
00812         « pen.elpHatch « pen.elpNumEntries;
00813       return *this;
00814     }
00819     DATASTREAM& operator» ( EXTLOGPEN& pen )
00820     {
00821       // *** How big is this structure if there are no style entries? ***
00822       *this » pen.elpPenStyle » pen.elpWidth » pen.elpBrushStyle » pen.elpColor
00823         » pen.elpHatch » pen.elpNumEntries;
00824       return *this;
00825     }
00830     DATASTREAM& operator« ( const LOGBRUSH& brush )
00831     {
00832       *this « brush.lbStyle « brush.lbColor « brush.lbHatch;
00833       return *this;
00834     }
00839     DATASTREAM& operator» ( LOGBRUSH& brush )
00840     {
00841       *this » brush.lbStyle » brush.lbColor » brush.lbHatch;
00842       return *this;
00843     }
00848     DATASTREAM& operator« ( const LOGFONTW& font )
00849     {
00850       *this « font.lfHeight « font.lfWidth « font.lfEscapement
00851         « font.lfOrientation « font.lfWeight « font.lfItalic
00852         « font.lfUnderline « font.lfStrikeOut « font.lfCharSet
00853         « font.lfOutPrecision « font.lfClipPrecision « font.lfQuality
00854         « font.lfPitchAndFamily
00855         « WCHARSTR( const_cast<WCHAR*>(font.lfFaceName), LF_FACESIZE );
00856       return *this;
00857     }
00862     DATASTREAM& operator» ( LOGFONTW& font )
00863     {
00864       WCHARSTR wFaceName( font.lfFaceName, LF_FACESIZE );
00865
00866       *this » font.lfHeight » font.lfWidth » font.lfEscapement
00867         » font.lfOrientation » font.lfWeight » font.lfItalic
00868         » font.lfUnderline » font.lfStrikeOut » font.lfCharSet
00869         » font.lfOutPrecision » font.lfClipPrecision » font.lfQuality
00870         » font.lfPitchAndFamily
00871         » wFaceName;
00872       return *this;
00873     }
00878     DATASTREAM& operator« ( const PANOSE& panose )
00879     {
00880       fwrite( &panose, sizeof(PANOSE), 1, fp_ );
00881       return *this;
00882     }
00887     DATASTREAM& operator» ( PANOSE& panose )
00888     {
00889       fread( &panose, sizeof(PANOSE), 1, fp_ );
00890       return *this;
00891     }
00896     DATASTREAM& operator« ( const EXTLOGFONTW& font )
00897     {
00898       *this « font.elfLogFont
00899         « WCHARSTR( const_cast<WCHAR*>(font.elfFullName),
00900             LF_FULLFACESIZE )
00901         « WCHARSTR( const_cast<WCHAR*>(font.elfStyle), LF_FACESIZE )
00902         « font.elfVersion « font.elfStyleSize « font.elfMatch
00903         « font.elfReserved
```

```
00904         « BYTEARRAY( const_cast<BYTE*>(font.elfVendorId),
00905               ELF_VENDOR_SIZE )
00906         « font.elfCulture « font.elfPanose;
00907       return *this;
00908     }
00913     DATASTREAM& operator» ( EXTLOGFONTW& font )
00914     {
00915       WCHARSTR wFullName( font.elfFullName, LF_FULLFACESIZE );
00916       WCHARSTR wStyle( font.elfStyle, LF_FACESIZE );
00917       BYTEARRAY bVendorId( font.elfVendorId, ELF_VENDOR_SIZE );
00918       *this » font.elfLogFont
00919         » wFullName » wStyle
00920         » font.elfVersion » font.elfStyleSize » font.elfMatch
00921         » font.elfReserved » bVendorId
00922         » font.elfCulture » font.elfPanose;
00923       return *this;
00924     }
00929     DATASTREAM& operator« ( const LOGPALETTE& palette )
00930     {
00931       // *** How big is this structure if the palette is empty? ***
00932       *this « palette.palVersion « palette.palNumEntries;
00933       return *this;
00934     }
00939     DATASTREAM& operator» ( LOGPALETTE& palette )
00940     {
00941       // *** How big is this structure if the palette is empty? ***
00942       *this » palette.palVersion » palette.palNumEntries;
00943       return *this;
00944     }
00945   private:
00955     void fread ( void* ptr, size_t size, size_t nmemb, FILE* stream )
00956     {
00957       size_t res = ::fread( ptr, size, nmemb, stream );
00958       if ( res < nmemb ) {
00959         throw std::runtime_error( "Premature EOF on EMF stream" );
00960       }
00961     }
00971     void fwrite ( const void* ptr, size_t size, size_t nmemb, FILE* stream )
00972     {
00973       size_t res = ::fwrite( ptr, size, nmemb, stream );
00974       if ( res < nmemb ) {
00975         throw std::runtime_error( "error writing EMF stream" );
00976       }
00977     }
00978   };
00979
00980   class METAFILEDEVICECONTEXT;
00981
00983
00989   class METARECORD {
00990   public:
00997     virtual void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const = 0;
01004     virtual bool serialize ( DATASTREAM ds ) = 0;
01010     virtual int size ( void ) const = 0;
01016     virtual ~METARECORD( ) { }
01017 #ifdef ENABLE_EDITING
01022     virtual void edit ( void ) const {}
01023 #endif
01024   };
01025
01026 #ifdef ENABLE_EDITING
01027   /* Miscellaneous editing routines */
01028   inline void edit_rectl ( const char* tag, const RECTL& rectl )
01029   {
01030 #if defined(__LP64__)
01031     const char* FMT = "\t%s\t: (%d, %d) - (%d, %d)\n";
01032 #else
01033     const char* FMT = "\t%s\t: (%ld, %ld) - (%ld, %ld)\n";
01034 #endif /* __x86_64__ */
01035     printf( FMT, tag, rectl.left, rectl.top, rectl.right, rectl.bottom );
01036   }
01037
01038   inline void edit_xform ( const char* tag, const XFORM& xform )
01039   {
01040     printf( "\t%s.eM11\t: %f\n", tag, xform.eM11 );
01041     printf( "\t%s.eM12\t: %f\n", tag, xform.eM12 );
01042     printf( "\t%s.eM21\t: %f\n", tag, xform.eM21 );
01043     printf( "\t%s.eM22\t: %f\n", tag, xform.eM22 );
01044     printf( "\t%s.eDx\t: %f\n", tag, xform.eDx );
01045     printf( "\t%s.eDy\t: %f\n", tag, xform.eDy );
01046   }
01047
01048   inline void edit_color ( const char* tag, const COLORREF& color )
01049   {
01050 #if defined(__LP64__)
01051     const char* FMT = "\t%s\t: R(0x%02x) G(0x%02x) B(0x%02x)\n";
01052 #else
```

```
01053     const char* FMT = "\t%s\t: R(0x%02lx) G(0x%02lx) B(0x%02lx)\n";
01054 #endif /* __x86_64__ */
01055     printf( FMT, tag,
01056         GetRValue( color ), GetGValue( color ), GetBValue( color ) );
01057   }
01058
01059   inline void edit_sizel ( const char* tag, const SIZEL& size )
01060   {
01061 #if defined(__LP64__)
01062     const char* FMT = "\t%s\t: (%d, %d)\n";
01063 #else
01064     const char* FMT = "\t%s\t: (%ld, %ld)\n";
01065 #endif /* __x86_64__ */
01066     printf( FMT, tag, size.cx, size.cy );
01067   }
01068
01069   inline void edit_pointl ( const char* tag, const POINTL& point )
01070   {
01071 #if defined(__LP64__)
01072     const char* FMT = "\t%s\t: (%d, %d)\n";
01073 #else
01074     const char* FMT = "\t%s\t: (%ld, %ld)\n";
01075 #endif /* __x86_64__ */
01076     printf( FMT, tag, point.x, point.y );
01077   }
01078
01079   inline void edit_pointlarray ( const char* tag, const DWORD cptl,
01080                  const POINTL* points )
01081   {
01082 #if defined(__LP64__)
01083     const char* FMT0 = "\tcptl%s\t: %d\n";
01084     const char* FMT1 = "%d, %d\n";
01085     const char* FMT2 = "\t\t%s  %d, %d\n";
01086 #else
01087     const char* FMT0 = "\tcptl%s\t: %ld\n";
01088     const char* FMT1 = "%ld, %ld\n";
01089     const char* FMT2 = "\t\t%s  %ld, %ld\n";
01090 #endif /* __x86_64__ */
01091     printf( FMT0, tag, cptl );
01092     printf( "\taptl%s\t: ", tag );
01093     if ( cptl > 0 )
01094       printf( FMT1, points[0].x, points[0].y );
01095     else
01096       puts( "" );
01097     for ( DWORD i = 1; i < cptl; i++ )
01098       printf( FMT2, tag, points[i].x, points[i].y );
01099   }
01100
01101   inline void edit_point16array ( const char* tag, const unsigned int cpts,
01102                  const POINT16* points )
01103   {
01104     printf( "\tcpts%s\t: %d\n", tag, cpts );
01105     printf( "\tapts%s\t: ", tag );
01106     if ( cpts > 0 )
01107       printf( "%d, %d\n", points[0].x, points[0].y );
01108     else
01109       puts( "" );
01110     for ( unsigned int i = 1; i < cpts; i++ )
01111       printf( "\t\t%s  %d, %d\n", tag, points[i].x, points[i].y );
01112   }
01113
01114   inline void edit_pen_style ( const char* tag, DWORD style )
01115   {
01116     printf( "\t%s\t: ", tag );
01117     switch ( style & PS_STYLE_MASK ) {
01118     case PS_SOLID: printf( "PS_SOLID" ); break;
01119     case PS_DASH: printf( "PS_DASH" ); break;
01120     case PS_DOT: printf( "PS_DOT" ); break;
01121     case PS_DASHDOT: printf( "PS_DASHDOT" ); break;
01122     case PS_DASHDOTDOT: printf( "PS_DASHDOTDOT" ); break;
01123     case PS_NULL: printf( "PS_NULL" ); break;
01124     case PS_INSIDEFRAME: printf( "PS_INSIDEFRAME" ); break;
01125     case PS_USERSTYLE: printf( "PS_USERSTYLE" ); break;
01126     case PS_ALTERNATE: printf( "PS_ALTERNATE" ); break;
01127     }
01128     switch ( style & PS_ENDCAP_MASK ) {
01129     case PS_ENDCAP_ROUND: printf( " | PS_ENDCAP_ROUND" ); break;
01130     case PS_ENDCAP_SQUARE: printf( " | PS_ENDCAP_SQUARE" ); break;
01131     case PS_ENDCAP_FLAT: printf( " | PS_ENDCAP_FLAT" ); break;
01132     }
01133     switch ( style & PS_JOIN_MASK ) {
01134     case PS_JOIN_ROUND: printf( " | PS_JOIN_ROUND" ); break;
01135     case PS_JOIN_BEVEL: printf( " | PS_JOIN_BEVEL" ); break;
01136     case PS_JOIN_MITER: printf( " | PS_JOIN_MITER" ); break;
01137     }
01138     switch ( style & PS_TYPE_MASK ) {
01139     case PS_COSMETIC: printf( " | PS_COSMETIC" ); break;
```

```
01140     case PS_GEOMETRIC: printf( " | PS_GEOMETRIC" ); break;
01141     }
01142     printf( "\n" );
01143   }
01144
01145   inline void edit_brush_style ( const char* tag, DWORD style )
01146   {
01147 #if defined(__LP64__)
01148     const char* FMT = "unknown(%d)";
01149 #else
01150     const char* FMT = "unknown(%ld)";
01151 #endif /* __x86_64__ */
01152     printf( "\t%s\t: ", tag );
01153     switch ( style ) {
01154     case BS_SOLID: printf( "BS_SOLID" ); break;
01155     case BS_NULL: printf( "BS_NULL" ); break;
01156     case BS_HATCHED: printf( "BS_HATCHED" ); break;
01157     case BS_PATTERN: printf( "BS_PATTERN" ); break;
01158     case BS_INDEXED: printf( "BS_INDEXED" ); break;
01159     case BS_DIBPATTERN: printf( "BS_DIBPATTERN" ); break;
01160     case BS_DIBPATTERNPT: printf( "BS_DIBPATTERNPT" ); break;
01161     case BS_PATTERN8X8: printf( "BS_PATTERN8X8" ); break;
01162     case BS_DIBPATTERN8X8: printf( "BS_DIBPATTERN8X8" ); break;
01163     case BS_MONOPATTERN: printf( "BS_DIBPATTERN8X8" ); break;
01164     default: printf( FMT, style );
01165     }
01166     printf( "\n" );
01167   }
01168
01169   inline void edit_brush_hatch ( const char* tag, DWORD hatch )
01170   {
01171 #if defined(__LP64__)
01172     const char* FMT = "unknown(%d)";
01173 #else
01174     const char* FMT = "unknown(%ld)";
01175 #endif /* __x86_64__ */
01176     printf( "\t%s\t: ", tag );
01177     switch ( hatch ) {
01178     case HS_HORIZONTAL: printf( "HS_HORIZONTAL" ); break;
01179     case HS_VERTICAL: printf( "HS_VERTICAL" ); break;
01180     case HS_FDIAGONAL: printf( "HS_FDIAGONAL" ); break;
01181     case HS_BDIAGONAL: printf( "HS_BDIAGONAL" ); break;
01182     case HS_CROSS: printf( "HS_CROSS" ); break;
01183     case HS_DIAGCROSS: printf( "HS_DIAGCROSS" ); break;
01184     default: printf( FMT, hatch );
01185     }
01186     printf( "\n" );
01187   }
01188 #endif
01196   enum OBJECTTYPE { O_METAFILEDEVICECONTEXT = OBJ_METADC,
01197             O_FONT          = OBJ_FONT,
01198             O_PEN           = OBJ_PEN,
01199             O_EXTPEN            = OBJ_EXTPEN,
01200             O_BRUSH         = OBJ_BRUSH,
01201             O_PALETTE           = OBJ_PAL };
01202 #if 0
01206   static char* typStr ( OBJECTTYPE type )
01207   {
01208     switch (type) {
01209     case O_METAFILEDEVICECONTEXT:
01210       return "metafile device context";
01211     case O_FONT:
01212       return "font";
01213     case O_PEN:
01214       return "pen";
01215     case O_EXTPEN:
01216       return "extended pen";
01217     case O_BRUSH:
01218       return "brush";
01219     case O_PALETTE:
01220       return "palette";
01221     }
01222     return "unknown object";
01223   }
01224 #endif
01226
01231   class OBJECT {
01232   public:
01233     HGDIOBJ handle;
01235     virtual ~OBJECT () {}
01240     OBJECT ( void ) : handle( 0 ) {}
01244     virtual OBJECTTYPE getType ( void ) const = 0;
01245   };
01246
01248
01253   class GRAPHICSOBJECT : public OBJECT {
01254   public:
```

```
01256     virtual ~GRAPHICSOBJECT () {}
01261     std::map< HDC, HGDIOBJ > contexts;
01268     virtual METARECORD* newEMR ( HDC dc, HGDIOBJ handle ) = 0;
01269   };
01270
01271   typedef METARECORD*(*METARECORDCTOR)(DATASTREAM&);
01272
01276   class GLOBALOBJECTS {
01280     std::vector<OBJECT*> objects;
01281
01288     std::map< DWORD, METARECORDCTOR > new_records;
01289
01290   public:
01291     GLOBALOBJECTS ( void );
01292     ~GLOBALOBJECTS ( void );
01293     HGDIOBJ add ( OBJECT* object );
01294     OBJECT* find ( const HGDIOBJ handle );
01295     void remove ( const OBJECT* object );
01296
01300     auto begin ( void ) const { return objects.begin(); }
01301
01305     auto end ( void ) const { return objects.end(); }
01306
01307     METARECORDCTOR newRecord ( DWORD iType ) const;
01308
01310     static EMF::METARECORD* new_eof ( DATASTREAM& ds );
01312     static EMF::METARECORD* new_setviewportorgex ( DATASTREAM& ds );
01314     static EMF::METARECORD* new_setwindoworgex ( DATASTREAM& ds );
01316     static EMF::METARECORD* new_setviewportextex ( DATASTREAM& ds );
01318     static EMF::METARECORD* new_setwindowextex ( DATASTREAM& ds );
01320     static EMF::METARECORD* new_scaleviewportextex ( DATASTREAM& ds );
01322     static EMF::METARECORD* new_scalewindowextex ( DATASTREAM& ds );
01324     static EMF::METARECORD* new_modifyworldtransform ( DATASTREAM& ds );
01326     static EMF::METARECORD* new_setworldtransform ( DATASTREAM& ds );
01328     static EMF::METARECORD* new_settextalign ( DATASTREAM& ds );
01330     static EMF::METARECORD* new_settextcolor ( DATASTREAM& ds );
01332     static EMF::METARECORD* new_setbkcolor ( DATASTREAM& ds );
01334     static EMF::METARECORD* new_setbkmode ( DATASTREAM& ds );
01336     static EMF::METARECORD* new_setpolyfillmode ( DATASTREAM& ds );
01338     static EMF::METARECORD* new_setmapmode ( DATASTREAM& ds );
01340     static EMF::METARECORD* new_selectobject ( DATASTREAM& ds );
01342     static EMF::METARECORD* new_deleteobject ( DATASTREAM& ds );
01344     static EMF::METARECORD* new_movetoex ( DATASTREAM& ds );
01346     static EMF::METARECORD* new_lineto ( DATASTREAM& ds );
01348     static EMF::METARECORD* new_arc ( DATASTREAM& ds );
01350     static EMF::METARECORD* new_arcto ( DATASTREAM& ds );
01352     static EMF::METARECORD* new_rectangle ( DATASTREAM& ds );
01354     static EMF::METARECORD* new_ellipse ( DATASTREAM& ds );
01356     static EMF::METARECORD* new_polyline ( DATASTREAM& ds );
01358     static EMF::METARECORD* new_polyline16 ( DATASTREAM& ds );
01360     static EMF::METARECORD* new_polygon ( DATASTREAM& ds );
01362     static EMF::METARECORD* new_polygon16 ( DATASTREAM& ds );
01364     static EMF::METARECORD* new_polypolygon ( DATASTREAM& ds );
01366     static EMF::METARECORD* new_polypolygon16 ( DATASTREAM& ds );
01368     static EMF::METARECORD* new_polybezier ( DATASTREAM& ds );
01370     static EMF::METARECORD* new_polybezier16 ( DATASTREAM& ds );
01372     static EMF::METARECORD* new_polybezierto ( DATASTREAM& ds );
01374     static EMF::METARECORD* new_polybezierto16 ( DATASTREAM& ds );
01376     static EMF::METARECORD* new_polylineto ( DATASTREAM& ds );
01378     static EMF::METARECORD* new_polylineto16 ( DATASTREAM& ds );
01380     static EMF::METARECORD* new_exttextouta ( DATASTREAM& ds );
01382     static EMF::METARECORD* new_exttextoutw ( DATASTREAM& ds );
01384     static EMF::METARECORD* new_setpixelv ( DATASTREAM& ds );
01386     static EMF::METARECORD* new_createpen ( DATASTREAM& ds );
01388     static EMF::METARECORD* new_extcreatepen ( DATASTREAM& ds );
01390     static EMF::METARECORD* new_createbrushindirect ( DATASTREAM& ds );
01392     static EMF::METARECORD* new_extcreatefontindirectw ( DATASTREAM& ds );
01394     static EMF::METARECORD* new_fillpath ( DATASTREAM& ds );
01396     static EMF::METARECORD* new_strokepath ( DATASTREAM& ds );
01398     static EMF::METARECORD* new_strokeandfillpath ( DATASTREAM& ds );
01400     static EMF::METARECORD* new_beginpath ( DATASTREAM& ds );
01402     static EMF::METARECORD* new_endpath ( DATASTREAM& ds );
01404     static EMF::METARECORD* new_closefigure ( DATASTREAM& ds );
01406     static EMF::METARECORD* new_savedc ( DATASTREAM& ds );
01408     static EMF::METARECORD* new_restoredc ( DATASTREAM& ds );
01410     static EMF::METARECORD* new_setmetargn ( DATASTREAM& ds );
01412     static EMF::METARECORD* new_setmiterlimit ( DATASTREAM& ds );
01413   };
01414
01415   extern GLOBALOBJECTS globalObjects;
01416
01418
01424   class ENHMETAHEADER : public METARECORD, public ::ENHMETAHEADER {
01425
01426     LPWSTR description_w{ nullptr };
01427     int description_size{ 0 };
01428
```

```
01429   public:
01436     ENHMETAHEADER ( LPCWSTR description = 0 )
01437       : description_w( 0 ), description_size( 0 )
01438     {
01439       iType = EMR_HEADER;
01440       nSize = sizeof( ::ENHMETAHEADER );
01441
01442       // Compute the bounds
01443       RECTL default_bounds = { 0, 0, 0, 0 };
01444       rclBounds = default_bounds;
01445       RECTL default_frame = { 0, 0, 0, 0 };
01446       rclFrame = default_frame;
01447       dSignature = ENHMETA_SIGNATURE;
01448       nVersion = 0x10000;
01449       nBytes = nSize;
01450       nRecords = 1;
01451       nHandles = 0;
01452       sReserved = 0;
01453       nDescription = 0;
01454       offDescription = 0;
01455       nPalEntries = 0;
01456       szlDevice.cx = XMAX_PIXELS;
01457       szlDevice.cy = YMAX_PIXELS;
01458       szlMillimeters.cx = XMAX_MM;
01459       szlMillimeters.cy = YMAX_MM;
01460       //
01461       cbPixelFormat = 0;
01462       offPixelFormat = 0;
01463       bOpenGL = FALSE;
01464       //
01465 #if 1
01466       szlMicrometers.cx = 1000 * szlMillimeters.cx;
01467       szlMicrometers.cy = 1000 * szlMillimeters.cy;
01468 #endif
01469       if ( description ) {
01470     // Count the number of characters in the description
01471     int description_count = 0, nulls = 0;
01472     LPCWSTR description_p = description;
01473     while ( nulls < 3 ) {
01474       description_count++;
01475       if ( (*description_p++) == 0 ) nulls++;
01476     }
01477
01478     // Make sure that the TOTAL record length will be a multiple of 4
01479
01480     int record_size = ROUND_TO_LONG( sizeof( ::ENHMETAHEADER ) +
01481                      sizeof( WCHAR ) * description_count );
01482     description_size =
01483       (record_size - sizeof( ::ENHMETAHEADER )) / sizeof( WCHAR );
01484
01485         std::unique_ptr<WCHAR[]>
01486           description_tmp( new WCHAR[ description_size ] );
01487
01488         description_w = description_tmp.release();
01489
01490     memset( description_w, 0, sizeof(WCHAR) * description_size );
01491
01492     for ( int i=0; i<description_count; i++ )
01493       description_w[i] = *description++;
01494
01495     nSize = nBytes = record_size;
01496     nDescription = description_count;
01497     offDescription = sizeof( ::ENHMETAHEADER );
01498       }
01499     }
01500
01504     ~ENHMETAHEADER ( )
01505     {
01506       if ( description_w ) delete[] description_w;
01507     }
01512     bool serialize ( DATASTREAM ds )
01513     {
01514       ds « iType « nSize
01515      « rclBounds « rclFrame
01516      « dSignature « nVersion « nBytes « nRecords « nHandles « sReserved
01517      « nDescription « offDescription « nPalEntries
01518      « szlDevice « szlMillimeters
01519      « cbPixelFormat « offPixelFormat « bOpenGL
01520      « szlMicrometers
01521      « WCHARSTR( description_w, description_size );
01522       return true;
01523     }
01527     bool unserialize ( DATASTREAM ds )
01528     {
01529       ds » iType » nSize
01530      » rclBounds » rclFrame
01531      » dSignature » nVersion » nBytes » nRecords » nHandles » sReserved
```

```
01532       » nDescription » offDescription » nPalEntries
01533       » szlDevice » szlMillimeters;
01534
01535       // Some elements of the metafile header were added at later dates
01536
01537 #define OffsetOf( a, b ) ((unsigned int)(((char*)&(((::ENHMETAHEADER*)a)->b)) - \
01538 (char*)((::ENHMETAHEADER*)a)))
01539       if ( OffsetOf( this, szlMicrometers ) <= offDescription )
01540     ds » cbPixelFormat » offPixelFormat » bOpenGL;
01541 #undef OffsetOf
01542       if ( sizeof(::ENHMETAHEADER) <= offDescription )
01543     ds » szlMicrometers;
01544
01545       // Should now probably check that the offset is correct...
01546
01547       int description_size_to_read = ( nSize - offDescription ) / sizeof(WCHAR);
01548
01549       if ( description_size_to_read < (int)nDescription ) {
01550         throw std::runtime_error( "record size inconsistent with description size" );
01551       }
01552
01553       description_size = max( 2, description_size_to_read );
01554
01555       std::unique_ptr<WCHAR[]> buffer( new WCHAR[description_size] );
01556
01557       WCHARSTR description( buffer.get(), description_size_to_read );
01558
01559       ds » description;
01560
01561       description_w = buffer.release();
01562
01563       // Make sure it's terminated properly.
01564       description_w[description_size-1] = 0;
01565       description_w[description_size-2] = 0;
01566
01567       return true;
01568     }
01572     int size ( void ) const { return nSize; }
01578     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01579     {
01580       // Actually handled by the destination device context.
01581       EMF_UNUSED(source);
01582       EMF_UNUSED(dc);
01583     }
01584 #ifdef ENABLE_EDITING
01588     void edit ( void ) const
01589     {
01590 #if defined(__LP64__)
01591       const char* FMT0 = "\tiType\t\t\t: %d\n";
01592       const char* FMT1 = "\tnSize\t\t\t: %d\n";
01593       const char* FMT2 = "\tnBytes\t\t\t: %d\n";
01594       const char* FMT3 = "\tnRecords\t\t: %d\n";
01595       const char* FMT4 = "\tnDescription\t\t: %d\n";
01596       const char* FMT5 = "\toffDescription\t\t: %d\n";
01597       const char* FMT6 = "\tnPalEntries\t\t: %d\n";
01598       const char* FMT7 = "\tcbPixelFormat\t\t: %d\n";
01599       const char* FMT8 = "\toffPixelFormat\t\t: %d\n";
01600       const char* FMT9 = "\tbOpenGL\t\t\t: %d\n";
01601 #else
01602       const char* FMT0 = "\tiType\t\t\t: %ld\n";
01603       const char* FMT1 = "\tnSize\t\t\t: %ld\n";
01604       const char* FMT2 = "\tnBytes\t\t\t: %ld\n";
01605       const char* FMT3 = "\tnRecords\t\t: %ld\n";
01606       const char* FMT4 = "\tnDescription\t\t: %ld\n";
01607       const char* FMT5 = "\toffDescription\t\t: %ld\n";
01608       const char* FMT6 = "\tnPalEntries\t\t: %ld\n";
01609       const char* FMT7 = "\tcbPixelFormat\t\t: %ld\n";
01610       const char* FMT8 = "\toffPixelFormat\t\t: %ld\n";
01611       const char* FMT9 = "\tbOpenGL\t\t\t: %ld\n";
01612 #endif
01613       printf( "*HEADER*\n" );
01614       printf( FMT0, iType );
01615       printf( FMT1, nSize );
01616       edit_rectl( "rclBounds\t", rclBounds );
01617       edit_rectl( "rclFrame\t", rclFrame );
01618       printf( "\tdSignature\t\t: %.4s\n", (const char*)&dSignature );
01619       printf( "\tnVersion\t\t: 0x%x\n", (unsigned int)nVersion );
01620       printf( FMT2, nBytes );
01621       printf( FMT3, nRecords );
01622       printf( "\tnHandles\t\t: %d\n", nHandles );
01623       printf( FMT4, nDescription );
01624       printf( FMT5, offDescription );
01625       printf( FMT6, nPalEntries );
01626       edit_sizel( "szlDevice\t", szlDevice );
01627       edit_sizel( "szlMillimeters\t", szlMillimeters );
01628
01629       /* Make a crude guess as to the age of this file */
```

```
01630 #define OffsetOf( a, b ) ((unsigned int)(((const char*)&(((const ::ENHMETAHEADER*)a)->b)) - \
01631 (const char*)((const ::ENHMETAHEADER*)a)))
01632
01633       if ( OffsetOf( this, cbPixelFormat ) <= offDescription ) {
01634     printf( FMT7, cbPixelFormat );
01635     printf( FMT8, offPixelFormat );
01636     printf( FMT9, bOpenGL );
01637 #if 1
01638     if ( sizeof(::ENHMETAHEADER) <= offDescription ) {
01639       edit_sizel( "szlMicrometers\t", szlMicrometers );
01640     }
01641 #endif
01642       }
01643
01644 #undef OffsetOf
01645
01646       if ( nDescription != 0 ) {
01647
01648     wchar_t last_w = 0;
01649     WCHAR* description = description_w;
01650
01651     printf( "\tDescription:" );
01652
01653     for ( DWORD i = 0; i < nDescription; i++ ) {
01654
01655       wchar_t w = *description++; /* This is not true, really. UNICODE is not
01656                     * glibc's wide character representation */
01657
01658       if ( w != 0 ) {
01659         if ( last_w == 0 ) printf( "\n\t\t" );
01660         putchar( w );
01661       }
01662
01663       last_w = w;
01664     }
01665     printf( "\n" );
01666       }
01667     }
01668 #endif /* ENABLE_EDITING */
01669   };
01670
01672
01677   class EMREOF : public METARECORD, ::EMREOF {
01678   public:
01682     EMREOF ( void )
01683     {
01684       emr.iType = EMR_EOF;
01685       emr.nSize = sizeof( ::EMREOF );
01686       nPalEntries = 0;
01687       offPalEntries = 0;
01688       nSizeLast = 0;
01689     }
01690
01695     EMREOF ( DATASTREAM& ds )
01696     {
01697       ds » emr » nPalEntries » offPalEntries » nSizeLast;
01698     }
01699
01703     bool serialize ( DATASTREAM ds )
01704     {
01705       ds « emr « nPalEntries « offPalEntries « nSizeLast;
01706       return true;
01707     }
01711     int size ( void ) const { return emr.nSize; }
01717     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01718     {
01719       // Actually handled by the destination device context.
01720       EMF_UNUSED(source);
01721       EMF_UNUSED(dc);
01722     }
01723 #ifdef ENABLE_EDITING
01727     void edit ( void ) const
01728     {
01729       printf( "*EOF*\n" );
01730     }
01731 #endif /* ENABLE_EDITING */
01732   };
01733
01735
01740   class EMRSETVIEWPORTORGEX : public METARECORD, ::EMRSETVIEWPORTORGEX {
01741   public:
01746     EMRSETVIEWPORTORGEX ( INT x, INT y )
01747     {
01748       emr.iType = EMR_SETVIEWPORTORGEX;
01749       emr.nSize = sizeof( ::EMRSETVIEWPORTORGEX );
01750       ptlOrigin.x = x;
01751       ptlOrigin.y = y;
```

```
01752     }
01757     EMRSETVIEWPORTORGEX ( DATASTREAM& ds )
01758     {
01759       ds » emr » ptlOrigin;
01760     }
01764     bool serialize ( DATASTREAM ds )
01765     {
01766       ds « emr « ptlOrigin;
01767       return true;
01768     }
01772     int size ( void ) const { return emr.nSize; }
01778     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01779     {
01780       EMF_UNUSED(source);
01781       SetViewportOrgEx( dc, ptlOrigin.x, ptlOrigin.y, 0 );
01782     }
01783 #ifdef ENABLE_EDITING
01787     void edit ( void ) const
01788     {
01789       printf( "*SETVIEWPORTORGEX*\n" );
01790       edit_pointl( "ptlOrigin", ptlOrigin );
01791     }
01792 #endif /* ENABLE_EDITING */
01793   };
01794
01796
01803   class EMRSETWINDOWORGEX : public METARECORD, ::EMRSETWINDOWORGEX {
01804   public:
01809     EMRSETWINDOWORGEX ( INT x, INT y )
01810     {
01811       emr.iType = EMR_SETWINDOWORGEX;
01812       emr.nSize = sizeof( ::EMRSETWINDOWORGEX );
01813       ptlOrigin.x = x;
01814       ptlOrigin.y = y;
01815     }
01820     EMRSETWINDOWORGEX ( DATASTREAM& ds )
01821     {
01822       ds » emr » ptlOrigin;
01823     }
01827     bool serialize ( DATASTREAM ds )
01828     {
01829       ds « emr « ptlOrigin;
01830       return true;
01831     }
01835     int size ( void ) const { return emr.nSize; }
01841     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01842     {
01843       EMF_UNUSED(source);
01844       SetWindowOrgEx( dc, ptlOrigin.x, ptlOrigin.y, 0 );
01845     }
01846 #ifdef ENABLE_EDITING
01850     void edit ( void ) const
01851     {
01852       printf( "*SETWINDOWORGEX*\n" );
01853       edit_pointl( "ptlOrigin", ptlOrigin );
01854     }
01855 #endif /* ENABLE_EDITING */
01856   };
01857
01859
01864   class EMRSETVIEWPORTEXTEX : public METARECORD, ::EMRSETVIEWPORTEXTEX {
01865   public:
01870     EMRSETVIEWPORTEXTEX ( INT cx, INT cy )
01871     {
01872       emr.iType = EMR_SETVIEWPORTEXTEX;
01873       emr.nSize = sizeof( ::EMRSETVIEWPORTEXTEX );
01874       szlExtent.cx = cx;
01875       szlExtent.cy = cy;
01876     }
01881     EMRSETVIEWPORTEXTEX ( DATASTREAM& ds )
01882     {
01883       ds » emr » szlExtent;
01884     }
01888     bool serialize ( DATASTREAM ds )
01889     {
01890       ds « emr « szlExtent;
01891       return true;
01892     }
01896     int size ( void ) const { return emr.nSize; }
01902     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01903     {
01904       EMF_UNUSED(source);
01905       SetViewportExtEx( dc, szlExtent.cx, szlExtent.cy, 0 );
01906     }
01907 #ifdef ENABLE_EDITING
01911     void edit ( void ) const
01912     {
```

```
01913       printf( "*SETVIEWPORTEXTEX*\n" );
01914       edit_sizel( "szlExtent", szlExtent );
01915     }
01916 #endif /* ENABLE_EDITING */
01917   };
01918
01920
01925   class EMRSCALEVIEWPORTEXTEX : public METARECORD, ::EMRSCALEVIEWPORTEXTEX {
01926   public:
01933     EMRSCALEVIEWPORTEXTEX ( LONG x_num, LONG x_den, LONG y_num, LONG y_den )
01934     {
01935       emr.iType = EMR_SCALEVIEWPORTEXTEX;
01936       emr.nSize = sizeof( ::EMRSCALEVIEWPORTEXTEX );
01937       xNum = x_num;
01938       xDenom = x_den;
01939       yNum = y_num;
01940       yDenom = y_den;
01941     }
01946     EMRSCALEVIEWPORTEXTEX ( DATASTREAM& ds )
01947     {
01948       ds » emr » xNum » xDenom » yNum » yDenom;
01949     }
01953     bool serialize ( DATASTREAM ds )
01954     {
01955       ds « emr « xNum « xDenom « yNum « yDenom;
01956       return true;
01957     }
01961     int size ( void ) const { return emr.nSize; }
01967     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01968     {
01969       EMF_UNUSED(source);
01970       ScaleViewportExtEx( dc, xNum, xDenom, yNum, yDenom, 0 );
01971     }
01972 #ifdef ENABLE_EDITING
01976     void edit ( void ) const
01977     {
01978 #if defined(__LP64__)
01979       const char* FMT0 = "\txNum\t: %d\n";
01980       const char* FMT1 = "\txDenom\t: %d\n";
01981       const char* FMT2 = "\tyNum\t: %d\n";
01982       const char* FMT3 = "\tyDenom\t: %d\n";
01983 #else
01984       const char* FMT0 = "\txNum\t: %ld\n";
01985       const char* FMT1 = "\txDenom\t: %ld\n";
01986       const char* FMT2 = "\tyNum\t: %ld\n";
01987       const char* FMT3 = "\tyDenom\t: %ld\n";
01988 #endif
01989       printf( "*SCALEVIEWPORTEXTEX*\n" );
01990       printf( FMT0, xNum );
01991       printf( FMT1, xDenom );
01992       printf( FMT2, yNum );
01993       printf( FMT3, yDenom );
01994     }
01995 #endif /* ENABLE_EDITING */
01996   };
01997
01999
02004   class EMRSETWINDOWEXTEX : public METARECORD, ::EMRSETWINDOWEXTEX {
02005   public:
02010     EMRSETWINDOWEXTEX ( INT cx, INT cy )
02011     {
02012       emr.iType = EMR_SETWINDOWEXTEX;
02013       emr.nSize = sizeof( ::EMRSETWINDOWEXTEX );
02014       szlExtent.cx = cx;
02015       szlExtent.cy = cy;
02016     }
02021     EMRSETWINDOWEXTEX ( DATASTREAM& ds )
02022     {
02023       ds » emr » szlExtent;
02024     }
02028     bool serialize ( DATASTREAM ds )
02029     {
02030       ds « emr « szlExtent;
02031       return true;
02032     }
02036     int size ( void ) const { return emr.nSize; }
02042     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02043     {
02044       EMF_UNUSED(source);
02045       SetWindowExtEx( dc, szlExtent.cx, szlExtent.cy, 0 );
02046     }
02047 #ifdef ENABLE_EDITING
02051     void edit ( void ) const
02052     {
02053       printf( "*SETWINDOWEXTEX*\n" );
02054       edit_sizel( "szlExtent", szlExtent );
02055     }
```

```
02056 #endif /* ENABLE_EDITING */
02057   };
02058
02060
02065   class EMRSCALEWINDOWEXTEX : public METARECORD, ::EMRSCALEWINDOWEXTEX {
02066   public:
02073     EMRSCALEWINDOWEXTEX ( LONG x_num, LONG x_den, LONG y_num, LONG y_den )
02074     {
02075       emr.iType = EMR_SCALEWINDOWEXTEX;
02076       emr.nSize = sizeof( ::EMRSCALEWINDOWEXTEX );
02077       xNum = x_num;
02078       xDenom = x_den;
02079       yNum = y_num;
02080       yDenom = y_den;
02081     }
02086     EMRSCALEWINDOWEXTEX ( DATASTREAM& ds )
02087     {
02088       ds » emr » xNum » xDenom » yNum » yDenom;
02089     }
02093     bool serialize ( DATASTREAM ds )
02094     {
02095       ds « emr « xNum « xDenom « yNum « yDenom;
02096       return true;
02097     }
02101     int size ( void ) const { return emr.nSize; }
02107     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02108     {
02109       EMF_UNUSED(source);
02110       ScaleWindowExtEx( dc, xNum, xDenom, yNum, yDenom, 0 );
02111     }
02112 #ifdef ENABLE_EDITING
02116     void edit ( void ) const
02117     {
02118 #if defined(__LP64__)
02119       const char* FMT0 = "\txNum\t: %d\n";
02120       const char* FMT1 = "\txDenom\t: %d\n";
02121       const char* FMT2 = "\tyNum\t: %d\n";
02122       const char* FMT3 = "\tyDenom\t: %d\n";
02123 #else
02124       const char* FMT0 = "\txNum\t: %ld\n";
02125       const char* FMT1 = "\txDenom\t: %ld\n";
02126       const char* FMT2 = "\tyNum\t: %ld\n";
02127       const char* FMT3 = "\tyDenom\t: %ld\n";
02128 #endif
02129       printf( "*SCALEWINDOWEXTEX*\n" );
02130       printf( FMT0, xNum );
02131       printf( FMT1, xDenom );
02132       printf( FMT2, yNum );
02133       printf( FMT3, yDenom );
02134     }
02135 #endif /* ENABLE_EDITING */
02136   };
02137
02139
02145   class EMRMODIFYWORLDTRANSFORM : public METARECORD, ::EMRMODIFYWORLDTRANSFORM {
02146   public:
02152     EMRMODIFYWORLDTRANSFORM ( const XFORM* transform, DWORD mode )
02153     {
02154       emr.iType = EMR_MODIFYWORLDTRANSFORM;
02155       emr.nSize = sizeof( ::EMRMODIFYWORLDTRANSFORM );
02156       xform = *transform;
02157       iMode = mode;
02158     }
02163     EMRMODIFYWORLDTRANSFORM ( DATASTREAM& ds )
02164     {
02165       ds » emr » xform » iMode;
02166     }
02170     bool serialize ( DATASTREAM ds )
02171     {
02172       ds « emr « xform « iMode;
02173       return true;
02174     }
02178     int size ( void ) const { return emr.nSize; }
02184     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02185     {
02186       EMF_UNUSED(source);
02187       ModifyWorldTransform( dc, &xform, iMode );
02188     }
02189 #ifdef ENABLE_EDITING
02193     void edit ( void ) const
02194     {
02195 #if defined(__LP64__)
02196     const char* FMT = "unknown(%d)\n";
02197 #else
02198     const char* FMT = "unknown(%ld)\n";
02199 #endif /* __x86_64__ */
02200       printf( "*MODIFYWORLDTRANSFORM*\n" );
```

```
02201       edit_xform( "xform", xform );
02202       printf( "\tiMode\t\t: " );
02203       switch ( iMode ) {
02204       case MWT_IDENTITY: printf( "MWT_IDENTITY\n" ); break;
02205       case MWT_LEFTMULTIPLY: printf( "MWT_LEFTMULTIPLY\n" ); break;
02206       case MWT_RIGHTMULTIPLY: printf( "MWT_RIGHTMULTIPLY\n" ); break;
02207       default: printf( FMT, iMode );
02208       }
02209     }
02210 #endif /* ENABLE_EDITING */
02211   };
02212
02214
02220   class EMRSETWORLDTRANSFORM : public METARECORD, ::EMRSETWORLDTRANSFORM {
02221   public:
02225     EMRSETWORLDTRANSFORM ( const XFORM* transform )
02226     {
02227       emr.iType = EMR_SETWORLDTRANSFORM;
02228       emr.nSize = sizeof( ::EMRSETWORLDTRANSFORM );
02229       xform = *transform;
02230     }
02235     EMRSETWORLDTRANSFORM ( DATASTREAM& ds )
02236     {
02237       ds » emr » xform;
02238     }
02242     bool serialize ( DATASTREAM ds )
02243     {
02244       ds « emr « xform;
02245       return true;
02246     }
02250     int size ( void ) const { return emr.nSize; }
02256     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02257     {
02258       EMF_UNUSED(source);
02259       SetWorldTransform( dc, &xform );
02260     }
02261 #ifdef ENABLE_EDITING
02265     void edit ( void ) const
02266     {
02267       printf( "*SETWORLDTRANSFORM*\n" );
02268       edit_xform( "xform", xform );
02269     }
02270 #endif /* ENABLE_EDITING */
02271   };
02272
02274
02277   class EMRSETTEXTALIGN : public METARECORD, ::EMRSETTEXTALIGN {
02278   public:
02282     EMRSETTEXTALIGN ( UINT mode )
02283     {
02284       emr.iType = EMR_SETTEXTALIGN;
02285       emr.nSize = sizeof( ::EMRSETTEXTALIGN );
02286       iMode = mode;
02287     }
02292     EMRSETTEXTALIGN ( DATASTREAM& ds )
02293     {
02294       ds » emr » iMode;
02295     }
02299     bool serialize ( DATASTREAM ds )
02300     {
02301       ds « emr « iMode;
02302       return true;
02303     }
02307     int size ( void ) const { return emr.nSize; }
02313     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02314     {
02315       EMF_UNUSED(source);
02316       SetTextAlign( dc, iMode );
02317     }
02318 #ifdef ENABLE_EDITING
02322     void edit ( void ) const
02323     {
02324 #if defined(__LP64__)
02325     const char* FMT = "| unknown bits(0x%x)";
02326 #else
02327     const char* FMT = "| unknown bits(0x%lx)";
02328 #endif /* __x86_64__ */
02329       unsigned int known_bits = TA_BASELINE+TA_CENTER+TA_UPDATECP+TA_RTLREADING;
02330       unsigned int unknown_bits = ~known_bits;
02331
02332       printf( "*SETTEXTALIGN*\n" );
02333       printf( "\tiMode\t: " );
02334       if ( iMode & TA_UPDATECP )
02335     printf( "TA_UPDATECP" );
02336       else
02337     printf( "TA_NOUPDATECP" );
02338       if ( iMode & TA_CENTER )
```

```
02339     printf( " | TA_CENTER" );
02340       else if ( iMode & TA_RIGHT )
02341     printf( " | TA_RIGHT" );
02342       else
02343     printf( " | TA_LEFT" );
02344       if ( iMode & TA_BASELINE )
02345     printf( " | TA_BASELINE" );
02346       else if ( iMode & TA_BOTTOM )
02347     printf( " | TA_BOTTOM" );
02348       else
02349     printf( " | TA_TOP" );
02350       if ( iMode & TA_RTLREADING )
02351     printf( " | TA_RTLREADING" );
02352       if ( iMode & unknown_bits )
02353     printf( FMT, iMode & unknown_bits );
02354       printf( "\n" );
02355     }
02356 #endif /* ENABLE_EDITING */
02357   };
02358
02360
02363   class EMRSETTEXTCOLOR : public METARECORD, ::EMRSETTEXTCOLOR {
02364   public:
02368     EMRSETTEXTCOLOR ( COLORREF color )
02369     {
02370       emr.iType = EMR_SETTEXTCOLOR;
02371       emr.nSize = sizeof( ::EMRSETTEXTCOLOR );
02372       crColor = color;
02373     }
02378     EMRSETTEXTCOLOR ( DATASTREAM& ds )
02379     {
02380       ds » emr » crColor;
02381     }
02385     bool serialize ( DATASTREAM ds )
02386     {
02387       ds « emr « crColor;
02388       return true;
02389     }
02393     int size ( void ) const { return emr.nSize; }
02399     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02400     {
02401       EMF_UNUSED(source);
02402       SetTextColor( dc, crColor );
02403     }
02404 #ifdef ENABLE_EDITING
02408     void edit ( void ) const
02409     {
02410       printf( "*SETTEXTCOLOR*\n" );
02411       edit_color( "crColor", crColor );
02412     }
02413 #endif /* ENABLE_EDITING */
02414   };
02415
02417
02420   class EMRSETBKCOLOR : public METARECORD, ::EMRSETBKCOLOR {
02421   public:
02425     EMRSETBKCOLOR ( COLORREF color )
02426     {
02427       emr.iType = EMR_SETBKCOLOR;
02428       emr.nSize = sizeof( ::EMRSETBKCOLOR );
02429       crColor = color;
02430     }
02435     EMRSETBKCOLOR ( DATASTREAM& ds )
02436     {
02437       ds » emr » crColor;
02438     }
02442     bool serialize ( DATASTREAM ds )
02443     {
02444       ds « emr « crColor;
02445       return true;
02446     }
02450     int size ( void ) const { return emr.nSize; }
02456     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02457     {
02458       EMF_UNUSED(source);
02459       SetBkColor( dc, crColor );
02460     }
02461 #ifdef ENABLE_EDITING
02465     void edit ( void ) const
02466     {
02467       printf( "*SETBKCOLOR*\n" );
02468       edit_color( "crColor", crColor );
02469     }
02470 #endif /* ENABLE_EDITING */
02471   };
02472
02474
```

```
02478   class EMRSETBKMODE : public METARECORD, ::EMRSETBKMODE {
02479   public:
02483     EMRSETBKMODE ( DWORD mode )
02484     {
02485       emr.iType = EMR_SETBKMODE;
02486       emr.nSize = sizeof( ::EMRSETBKMODE );
02487       iMode = mode;
02488     }
02493     EMRSETBKMODE ( DATASTREAM& ds )
02494     {
02495       ds » emr » iMode;
02496     }
02500     bool serialize ( DATASTREAM ds )
02501     {
02502       ds « emr « iMode;
02503       return true;
02504     }
02508     int size ( void ) const { return emr.nSize; }
02514     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02515     {
02516       EMF_UNUSED(source);
02517       SetBkMode( dc, iMode );
02518     }
02519 #ifdef ENABLE_EDITING
02523     void edit ( void ) const
02524     {
02525 #if defined(__LP64__)
02526     const char* FMT = "unknown(%d)\n";
02527 #else
02528     const char* FMT = "unknown(%ld)\n";
02529 #endif /* __x86_64__ */
02530       printf( "*SETBKMODE*\n" );
02531       printf( "\tiMode\t: " );
02532       switch ( iMode ) {
02533       case TRANSPARENT: printf( "TRANSPARENT\n" ); break;
02534       case OPAQUE: printf( "OPAQUE\n" ); break;
02535       default: printf( FMT, iMode );
02536       }
02537     }
02538 #endif /* ENABLE_EDITING */
02539   };
02540
02542
02545   class EMRSETPOLYFILLMODE : public METARECORD, ::EMRSETPOLYFILLMODE {
02546   public:
02550     EMRSETPOLYFILLMODE ( DWORD mode )
02551     {
02552       emr.iType = EMR_SETPOLYFILLMODE;
02553       emr.nSize = sizeof( ::EMRSETPOLYFILLMODE );
02554       iMode = mode;
02555     }
02560     EMRSETPOLYFILLMODE ( DATASTREAM& ds )
02561     {
02562       ds » emr » iMode;
02563     }
02567     bool serialize ( DATASTREAM ds )
02568     {
02569       ds « emr « iMode;
02570       return true;
02571     }
02575     int size ( void ) const { return emr.nSize; }
02581     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02582     {
02583       EMF_UNUSED(source);
02584       SetPolyFillMode( dc, iMode );
02585     }
02586 #ifdef ENABLE_EDITING
02590     void edit ( void ) const
02591     {
02592 #if defined(__LP64__)
02593     const char* FMT = "unknown(%d)\n";
02594 #else
02595     const char* FMT = "unknown(%ld)\n";
02596 #endif /* __x86_64__ */
02597       printf( "*SETPOLYFILLMODE*\n" );
02598       printf( "\tiMode: " );
02599       switch ( iMode ) {
02600       case ALTERNATE: printf( "ALTERNATE\n" ); break;
02601       case WINDING: printf( "WINDING\n" ); break;
02602       default: printf( FMT, iMode );
02603       }
02604     }
02605 #endif /* ENABLE_EDITING */
02606   };
02607
02609
02613   class EMRSETMAPMODE : public METARECORD, ::EMRSETMAPMODE {
```

```
02614   public:
02618     EMRSETMAPMODE ( DWORD mode )
02619     {
02620       emr.iType = EMR_SETMAPMODE;
02621       emr.nSize = sizeof( ::EMRSETMAPMODE );
02622       iMode = mode;
02623     }
02628     EMRSETMAPMODE ( DATASTREAM& ds )
02629     {
02630       ds » emr » iMode;
02631     }
02635     bool serialize ( DATASTREAM ds )
02636     {
02637       ds « emr « iMode;
02638       return true;
02639     }
02643     int size ( void ) const { return emr.nSize; }
02649     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02650     {
02651       EMF_UNUSED(source);
02652       SetMapMode( dc, iMode );
02653     }
02654 #ifdef ENABLE_EDITING
02658     void edit ( void ) const
02659     {
02660 #if defined(__LP64__)
02661     const char* FMT = "unknown(%d)\n";
02662 #else
02663     const char* FMT = "unknown(%ld)\n";
02664 #endif /* __x86_64__ */
02665       printf( "*SETMAPMODE*\n" );
02666       printf( "\tiMode\t: " );
02667       switch ( iMode ) {
02668       case MM_TEXT: printf( "MM_TEXT\n" ); break;
02669       case MM_LOMETRIC: printf( "MM_LOMETRIC\n" ); break;
02670       case MM_HIMETRIC: printf( "MM_HIMETRIC\n" ); break;
02671       case MM_LOENGLISH: printf( "MM_LOENGLISH\n" ); break;
02672       case MM_HIENGLISH: printf( "MM_HIENGLISH\n" ); break;
02673       case MM_TWIPS: printf( "MM_TWIPS\n" ); break;
02674       case MM_ISOTROPIC: printf( "MM_ISOTROPIC\n" ); break;
02675       case MM_ANISOTROPIC: printf( "MM_ANISOTROPIC\n" ); break;
02676       default: printf( FMT, iMode );
02677       }
02678     }
02679 #endif /* ENABLE_EDITING */
02680   };
02681
02683
02686   class EMRSELECTOBJECT : public METARECORD, ::EMRSELECTOBJECT {
02687   public:
02691     EMRSELECTOBJECT ( HGDIOBJ object )
02692     {
02693       emr.iType = EMR_SELECTOBJECT;
02694       emr.nSize = sizeof( ::EMRSELECTOBJECT );
02695       ihObject = object;
02696     }
02701     EMRSELECTOBJECT ( DATASTREAM& ds )
02702     {
02703       ds » emr » ihObject;
02704     }
02708     bool serialize ( DATASTREAM ds )
02709     {
02710       ds « emr « ihObject;
02711       return true;
02712     }
02716     int size ( void ) const { return emr.nSize; }
02722     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
02723 #ifdef ENABLE_EDITING
02727     void edit ( void ) const
02728     {
02729 #if defined(__LP64__)
02730       const char* FMT = "\tihObject\t: 0x%x\n";
02731 #else
02732       const char* FMT = "\tihObject\t: 0x%lx\n";
02733 #endif /* __x86_64__ */
02734       printf( "*SELECTOBJECT*\n" );
02735       printf( FMT, ihObject );
02736     }
02737 #endif /* ENABLE_EDITING */
02738   };
02739
02741
02744   class EMRDELETEOBJECT : public METARECORD, ::EMRDELETEOBJECT {
02745   public:
02749     EMRDELETEOBJECT ( HGDIOBJ object )
02750     {
02751       emr.iType = EMR_DELETEOBJECT;
```

```
02752       emr.nSize = sizeof( ::EMRDELETEOBJECT );
02753       ihObject = object;
02754     }
02759     EMRDELETEOBJECT ( DATASTREAM& ds )
02760     {
02761       ds » emr » ihObject;
02762     }
02766     bool serialize ( DATASTREAM ds )
02767     {
02768       ds « emr « ihObject;
02769       return true;
02770     }
02774     int size ( void ) const { return emr.nSize; }
02780     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
02781 #ifdef ENABLE_EDITING
02785     void edit ( void ) const
02786     {
02787 #if defined(__LP64__)
02788       const char* FMT = "\tihObject\t: 0x%x\n";
02789 #else
02790       const char* FMT = "\tihObject\t: 0x%lx\n";
02791 #endif /* __x86_64__ */
02792       printf( "*DELETEOBJECT*\n" );
02793       printf( FMT, ihObject );
02794     }
02795 #endif /* ENABLE_EDITING */
02796   };
02797
02799
02802   class EMRMOVETOEX : public METARECORD, ::EMRMOVETOEX {
02803   public:
02808     EMRMOVETOEX ( INT x, INT y )
02809     {
02810       emr.iType = EMR_MOVETOEX;
02811       emr.nSize = sizeof( ::EMRMOVETOEX );
02812       ptl.x = x;
02813       ptl.y = y;
02814     }
02819     EMRMOVETOEX ( DATASTREAM& ds )
02820     {
02821       ds » emr » ptl;
02822     }
02826     bool serialize ( DATASTREAM ds )
02827     {
02828       ds « emr « ptl;
02829       return true;
02830     }
02834     int size ( void ) const { return emr.nSize; }
02840     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02841     {
02842       EMF_UNUSED(source);
02843       MoveToEx( dc,  ptl.x, ptl.y, 0 );
02844     }
02845 #ifdef ENABLE_EDITING
02849     void edit ( void ) const
02850     {
02851       printf( "*MOVETOEX*\n" );
02852       edit_pointl( "ptl", ptl );
02853     }
02854 #endif /* ENABLE_EDITING */
02855   };
02856
02858
02861   class EMRLINETO : public METARECORD, ::EMRLINETO {
02862   public:
02867     EMRLINETO ( INT x, INT y )
02868     {
02869       emr.iType = EMR_LINETO;
02870       emr.nSize = sizeof( ::EMRLINETO );
02871       ptl.x = x;
02872       ptl.y = y;
02873     }
02878     EMRLINETO ( DATASTREAM& ds )
02879     {
02880       ds » emr » ptl;
02881     }
02885     bool serialize ( DATASTREAM ds )
02886     {
02887       ds « emr « ptl;
02888       return true;
02889     }
02893     int size ( void ) const { return emr.nSize; }
02899     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02900     {
02901       EMF_UNUSED(source);
02902       LineTo( dc,  ptl.x, ptl.y );
02903     }
```

```
02904 #ifdef ENABLE_EDITING
02908     void edit ( void ) const
02909     {
02910       printf( "*LINETO*\n" );
02911       edit_pointl( "ptl", ptl );
02912     }
02913 #endif /* ENABLE_EDITING */
02914   };
02915
02917
02920   class EMRARC : public METARECORD, ::EMRARC {
02921   public:
02933     EMRARC ( INT left, INT top, INT right, INT bottom, INT xstart,
02934          INT ystart, INT xend, INT yend )
02935     {
02936       emr.iType = EMR_ARC;
02937       emr.nSize = sizeof( ::EMRARC );
02938       rclBox.left = left;
02939       rclBox.right = right;
02940       rclBox.bottom = bottom;
02941       rclBox.top = top;
02942       ptlStart.x = xstart;
02943       ptlStart.y = ystart;
02944       ptlEnd.x = xend;
02945       ptlEnd.y = yend;
02946     }
02951     EMRARC ( DATASTREAM& ds )
02952     {
02953       ds » emr » rclBox » ptlStart » ptlEnd;
02954     }
02958     bool serialize ( DATASTREAM ds )
02959     {
02960       ds « emr « rclBox « ptlStart « ptlEnd;
02961       return true;
02962     }
02966     int size ( void ) const { return emr.nSize; }
02972     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02973     {
02974       EMF_UNUSED(source);
02975       Arc( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom,
02976        ptlStart.x, ptlStart.y, ptlEnd.x, ptlEnd.y );
02977     }
02978 #ifdef ENABLE_EDITING
02982     void edit ( void ) const
02983     {
02984       printf( "*ARC*\n" );
02985       edit_rectl( "rclBox\t", rclBox );
02986       edit_pointl( "ptlStart", ptlStart );
02987       edit_pointl( "ptlEnd\t", ptlEnd );
02988     }
02989 #endif /* ENABLE_EDITING */
02990   };
02991
02993
02996   class EMRARCTO : public METARECORD, ::EMRARCTO {
02997   public:
03009     EMRARCTO ( INT left, INT top, INT right, INT bottom, INT xstart,
03010          INT ystart, INT xend, INT yend )
03011     {
03012       emr.iType = EMR_ARCTO;
03013       emr.nSize = sizeof( ::EMRARCTO );
03014       rclBox.left = left;
03015       rclBox.right = right;
03016       rclBox.bottom = bottom;
03017       rclBox.top = top;
03018       ptlStart.x = xstart;
03019       ptlStart.y = ystart;
03020       ptlEnd.x = xend;
03021       ptlEnd.y = yend;
03022     }
03027     EMRARCTO ( DATASTREAM& ds )
03028     {
03029       ds » emr » rclBox » ptlStart » ptlEnd;
03030     }
03034     bool serialize ( DATASTREAM ds )
03035     {
03036       ds « emr « rclBox « ptlStart « ptlEnd;
03037       return true;
03038     }
03042     int size ( void ) const { return emr.nSize; }
03048     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03049     {
03050       EMF_UNUSED(source);
03051       ArcTo( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom,
03052          ptlStart.x, ptlStart.y, ptlEnd.x, ptlEnd.y );
03053     }
03054 #ifdef ENABLE_EDITING
```

```
03058     void edit ( void ) const
03059     {
03060       printf( "*ARCTO*\n" );
03061       edit_rectl( "rclBox\t", rclBox );
03062       edit_pointl( "ptlStart", ptlStart );
03063       edit_pointl( "ptlEnd\t", ptlEnd );
03064     }
03065 #endif /* ENABLE_EDITING */
03066   };
03067
03069
03072   class EMRRECTANGLE : public METARECORD, ::EMRRECTANGLE {
03073   public:
03080     EMRRECTANGLE ( INT left, INT top, INT right, INT bottom )
03081     {
03082       emr.iType = EMR_RECTANGLE;
03083       emr.nSize = sizeof( ::EMRRECTANGLE );
03084       rclBox.left = left;
03085       rclBox.right = right;
03086       rclBox.bottom = bottom;
03087       rclBox.top = top;
03088     }
03093     EMRRECTANGLE ( DATASTREAM& ds )
03094     {
03095       ds » emr » rclBox;
03096     }
03100     bool serialize ( DATASTREAM ds )
03101     {
03102       ds « emr « rclBox;
03103       return true;
03104     }
03108     int size ( void ) const { return emr.nSize; }
03114     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03115     {
03116       EMF_UNUSED(source);
03117       Rectangle( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom );
03118     }
03119 #ifdef ENABLE_EDITING
03123     void edit ( void ) const
03124     {
03125       printf( "*RECTANGLE*\n" );
03126       edit_rectl( "rclBox", rclBox );
03127     }
03128 #endif /* ENABLE_EDITING */
03129   };
03130
03132
03135   class EMRELLIPSE : public METARECORD, ::EMRELLIPSE {
03136   public:
03144     EMRELLIPSE ( INT left, INT top, INT right, INT bottom )
03145     {
03146       emr.iType = EMR_ELLIPSE;
03147       emr.nSize = sizeof( ::EMRELLIPSE );
03148       rclBox.left = left;
03149       rclBox.right = right;
03150       rclBox.bottom = bottom;
03151       rclBox.top = top;
03152     }
03157     EMRELLIPSE ( DATASTREAM& ds )
03158     {
03159       ds » emr » rclBox;
03160     }
03164     bool serialize ( DATASTREAM ds )
03165     {
03166       ds « emr « rclBox;
03167       return true;
03168     }
03172     int size ( void ) const { return emr.nSize; }
03178     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03179     {
03180       EMF_UNUSED(source);
03181       Ellipse( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom );
03182     }
03183 #ifdef ENABLE_EDITING
03187     void edit ( void ) const
03188     {
03189       printf( "*ELLIPSE*\n" );
03190       edit_rectl( "rclBox", rclBox );
03191     }
03192 #endif /* ENABLE_EDITING */
03193   };
03194
03196
03199   class EMRPOLYLINE : public METARECORD, ::EMRPOLYLINE {
03200     POINTL* lpoints{nullptr};
03201   public:
03207     EMRPOLYLINE ( const RECTL* bounds, const POINT* points, INT n )
```

```
03208     {
03209       cptl = n;
03210       aptl[0].x = 0;        // Really unused
03211       aptl[0].y = 0;
03212 
03213       emr.iType = EMR_POLYLINE;
03214       // The (cptl - 1) below is to account for aptl, which isn't written out
03215       emr.nSize = sizeof( ::EMRPOLYLINE ) + sizeof( POINTL ) * ( cptl - 1);
03216 
03217       lpoints = new POINTL[cptl];
03218 
03219       for (int i=0; i<n; i++) {
03220     lpoints[i].x = points[i].x;
03221     lpoints[i].y = points[i].y;
03222       }
03223 
03224       rclBounds = *bounds;
03225     }
03229     ~EMRPOLYLINE ( )
03230     {
03231       if ( lpoints ) delete[] lpoints;
03232     }
03237     EMRPOLYLINE ( DATASTREAM& ds )
03238     {
03239       ds » emr » rclBounds » cptl;
03240 
03241       if ( emr.nSize - (sizeof(::EMRPOLYLINE)-sizeof(POINTL) ) <
03242            sizeof(POINTL) * cptl ) {
03243         throw std::runtime_error( "Invalid record size" );
03244       }
03245 
03246       std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
03247       POINTLARRAY points( buffer.get(), cptl );
03248 
03249       ds » points;
03250 
03251       lpoints = buffer.release();
03252     }
03256     bool serialize ( DATASTREAM ds )
03257     {
03258       ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
03259       return true;
03260     }
03264     int size ( void ) const { return emr.nSize; }
03270     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03271     {
03272       EMF_UNUSED(source);
03273       // According to the wine windef.h header, POINT and POINTL are equivalent
03274       Polyline( dc, (POINT*)lpoints, cptl );
03275     }
03276 #ifdef ENABLE_EDITING
03280     void edit ( void ) const
03281     {
03282       printf( "*POLYLINE*\n" );
03283       edit_rectl( "rclBounds", rclBounds );
03284       edit_pointlarray( "\t", cptl, lpoints );
03285     }
03286 #endif /* ENABLE_EDITING */
03287   };
03288 
03290 
03293   class EMRPOLYLINE16 : public METARECORD, ::EMRPOLYLINE16 {
03294     POINT16* lpoints{ nullptr };
03295   public:
03301     EMRPOLYLINE16 ( const RECTL* bounds, const POINT16* points, INT n )
03302     {
03303       cpts = n;
03304       apts[0].x = 0;        // Really unused
03305       apts[0].y = 0;
03306 
03307       emr.iType = EMR_POLYLINE16;
03308       // The (cptl - 1) below is to account for aptl, which isn't written out
03309       emr.nSize = sizeof( ::EMRPOLYLINE16 ) + sizeof( POINT16 ) * ( cpts - 1);
03310 
03311       lpoints = new POINT16[cpts];
03312 
03313       for (int i=0; i<n; i++) {
03314     lpoints[i].x = points[i].x;
03315     lpoints[i].y = points[i].y;
03316       }
03317 
03318       rclBounds = *bounds;
03319     }
03326     EMRPOLYLINE16 ( const RECTL* bounds, const POINT* points, INT n )
03327     {
03328       cpts = n;
03329       apts[0].x = 0;        // Really unused
```

```
03330       apts[0].y = 0;
03331
03332       emr.iType = EMR_POLYLINE16;
03333       // The (cptl - 1) below is to account for aptl, which isn't written out
03334       emr.nSize = sizeof( ::EMRPOLYLINE16 ) + sizeof( POINT16 ) * ( cpts - 1);
03335
03336       lpoints = new POINT16[cpts];
03337
03338       for (int i=0; i<n; i++) {
03339     lpoints[i].x = points[i].x;
03340     lpoints[i].y = points[i].y;
03341       }
03342
03343       rclBounds = *bounds;
03344     }
03348     ~EMRPOLYLINE16 ( )
03349     {
03350       if ( lpoints ) delete[] lpoints;
03351     }
03356     EMRPOLYLINE16 ( DATASTREAM& ds )
03357     {
03358       ds » emr » rclBounds » cpts;
03359
03360       if ( emr.nSize - (sizeof(::EMRPOLYLINE16)-sizeof(POINT16) ) <
03361            sizeof(POINT16) * cpts ) {
03362         throw std::runtime_error( "Invalid record size" );
03363       }
03364
03365       std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
03366
03367       POINT16ARRAY points( buffer.get(), cpts );
03368
03369       ds » points;
03370
03371       lpoints = buffer.release();
03372     }
03376     bool serialize ( DATASTREAM ds )
03377     {
03378       ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
03379       return true;
03380     }
03384     int size ( void ) const { return emr.nSize; }
03390     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03391     {
03392       EMF_UNUSED(source);
03393       // According to the wine windef.h header, POINT and POINTL are equivalent
03394       Polyline16( dc, lpoints, cpts );
03395     }
03396 #ifdef ENABLE_EDITING
03400     void edit ( void ) const
03401     {
03402       printf( "*POLYLINE16*\n" );
03403       edit_rectl( "rclBounds", rclBounds );
03404       edit_point16array( "\t", cpts, lpoints );
03405     }
03406 #endif /* ENABLE_EDITING */
03407   };
03408
03410
03413   class EMRPOLYGON : public METARECORD, ::EMRPOLYGON {
03414     POINTL* lpoints{ nullptr };
03415   public:
03421     EMRPOLYGON ( const RECTL* bounds, const POINT* points, INT n )
03422     {
03423       cptl = n;
03424       aptl[0].x = 0;        // Really unused
03425       aptl[0].y = 0;
03426
03427       emr.iType = EMR_POLYGON;
03428       // The (cptl-1) below is to account for aptl, which isn't written out
03429       emr.nSize = sizeof( ::EMRPOLYGON ) + sizeof( POINTL ) * (cptl-1);
03430
03431       lpoints = new POINTL[cptl];
03432
03433       for (int i=0; i<n; i++) {
03434     lpoints[i].x = points[i].x;
03435     lpoints[i].y = points[i].y;
03436       }
03437
03438       rclBounds = *bounds;
03439     }
03444     EMRPOLYGON ( DATASTREAM& ds )
03445     {
03446       ds » emr » rclBounds » cptl;
03447
03448       if ( emr.nSize - (sizeof(::EMRPOLYGON) - sizeof(POINTL)) <
03449            cptl * sizeof(POINTL) ) {
```

```
03450         throw std::runtime_error( "Invalid record size" );
03451       }
03452
03453       std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
03454
03455       POINTLARRAY points( buffer.get(), cptl );
03456
03457       ds » points;
03458
03459       lpoints = buffer.release();
03460     }
03464     ~EMRPOLYGON ( )
03465     {
03466       if ( lpoints ) delete[] lpoints;
03467     }
03471     bool serialize ( DATASTREAM ds )
03472     {
03473       ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
03474       return true;
03475     }
03479     int size ( void ) const { return emr.nSize; }
03485     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03486     {
03487       EMF_UNUSED(source);
03488       // According to the wine windef.h header, POINT and POINTL are equivalent
03489       Polygon( dc, (POINT*)lpoints, cptl );
03490     }
03491 #ifdef ENABLE_EDITING
03495     void edit ( void ) const
03496     {
03497       printf( "*POLYGON*\n" );
03498       edit_rectl( "rclBounds", rclBounds );
03499       edit_pointlarray( "\t", cptl, lpoints );
03500     }
03501 #endif /* ENABLE_EDITING */
03502   };
03503
03505
03508   class EMRPOLYGON16 : public METARECORD, ::EMRPOLYGON16 {
03509     POINT16* lpoints{ nullptr };
03510   public:
03516     EMRPOLYGON16 ( const RECTL* bounds, const POINT* points, INT16 n )
03517     {
03518       cpts = n;
03519       apts[0].x = 0;        // Really unused
03520       apts[0].y = 0;
03521
03522       emr.iType = EMR_POLYGON16;
03523       // The (cptl-1) below is to account for aptl, which isn't written out
03524       emr.nSize = sizeof( ::EMRPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1);
03525
03526       lpoints = new POINT16[cpts];
03527
03528       for (int i=0; i<n; i++) {
03529     lpoints[i].x = points[i].x;
03530     lpoints[i].y = points[i].y;
03531       }
03532
03533       rclBounds = *bounds;
03534     }
03541     EMRPOLYGON16 ( const RECTL* bounds, const POINT16* points, INT16 n )
03542     {
03543       cpts = n;
03544       apts[0].x = 0;        // Really unused
03545       apts[0].y = 0;
03546
03547       emr.iType = EMR_POLYGON16;
03548       // The (cptl-1) below is to account for aptl, which isn't written out
03549       emr.nSize = sizeof( ::EMRPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1);
03550
03551       lpoints = new POINT16[cpts];
03552
03553       for (int i=0; i<n; i++) {
03554     lpoints[i].x = points[i].x;
03555     lpoints[i].y = points[i].y;
03556       }
03557
03558       rclBounds = *bounds;
03559     }
03564     EMRPOLYGON16 ( DATASTREAM& ds )
03565     {
03566       ds » emr » rclBounds » cpts;
03567
03568       if ( emr.nSize - (sizeof(::EMRPOLYGON16) - sizeof(POINT16)) <
03569            cpts * sizeof(POINT16) ) {
03570         throw std::runtime_error( "Invalid record size" );
03571       }
```

```
03572
03573       std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
03574
03575       POINT16ARRAY points( buffer.get(), cpts );
03576
03577       ds » points;
03578
03579       lpoints = buffer.release();
03580     }
03584     ~EMRPOLYGON16 ( )
03585     {
03586       if ( lpoints ) delete[] lpoints;
03587     }
03591     bool serialize ( DATASTREAM ds )
03592     {
03593       ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
03594       return true;
03595     }
03599     int size ( void ) const { return emr.nSize; }
03605     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03606     {
03607       EMF_UNUSED(source);
03608       // According to the wine windef.h header, POINT and POINTL are equivalent
03609       Polygon16( dc, lpoints, cpts );
03610     }
03611 #ifdef ENABLE_EDITING
03615     void edit ( void ) const
03616     {
03617       printf( "*POLYGON16*\n" );
03618       edit_rectl( "rclBounds", rclBounds );
03619       edit_point16array( "\t", cpts, lpoints );
03620     }
03621 #endif /* ENABLE_EDITING */
03622   };
03623
03625
03628   class EMRPOLYPOLYGON : public METARECORD, ::EMRPOLYPOLYGON {
03629     DWORD* lcounts{ nullptr };
03630     POINTL* lpoints{ nullptr };
03631   public:
03638     EMRPOLYPOLYGON ( const RECTL* bounds, const POINT* points, const INT* counts,
03639              UINT polygons )
03640     {
03641       nPolys = polygons;
03642       // Count the number of points in points
03643       int n = 0;
03644       for ( unsigned int i = 0; i < nPolys; i++ )
03645     n += counts[i];
03646
03647       cptl = n;
03648       aPolyCounts[0] = 0;   // Really unused
03649       aptl[0].x = 0;
03650       aptl[0].y = 0;
03651
03652       emr.iType = EMR_POLYPOLYGON;
03653       // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03654       // aren't directly written out
03655       emr.nSize = sizeof( ::EMRPOLYPOLYGON ) + sizeof( POINTL ) * (cptl-1)
03656     + sizeof( DWORD ) * (nPolys-1);
03657
03658       lcounts = new DWORD[nPolys];
03659
03660       for ( unsigned int i = 0; i < nPolys; i++ )
03661     lcounts[i] = counts[i];
03662
03663       lpoints = new POINTL[cptl];
03664
03665       for (int i=0; i<n; i++) {
03666     lpoints[i].x = points[i].x;
03667     lpoints[i].y = points[i].y;
03668       }
03669
03670       rclBounds = *bounds;
03671     }
03675     ~EMRPOLYPOLYGON ( )
03676     {
03677       if ( lcounts ) delete[] lcounts;
03678       if ( lpoints ) delete[] lpoints;
03679     }
03684     EMRPOLYPOLYGON ( DATASTREAM& ds )
03685     {
03686       ds » emr » rclBounds » nPolys » cptl;
03687
03688       if ( emr.nSize - ( sizeof( ::EMRPOLYPOLYGON ) - sizeof(POINTL) - sizeof(DWORD) ) <
03689            sizeof( POINTL ) * cptl + sizeof( DWORD ) * nPolys ) {
03690         throw std::runtime_error( "Invalid record size" );
03691       }
```

```
03692
03693       std::unique_ptr<DWORD[]> cbuffer( new DWORD[nPolys] );
03694
03695       DWORDARRAY counts( cbuffer.get(), nPolys );
03696
03697       ds » counts;
03698
03699       // Counts have to add up to less than the number of points
03700       // we have. DWORD is unsigned so we most care about overflow.
03701       DWORD n{0}, n_old{0};
03702       for ( DWORD c{0}; c < nPolys; ++c ) {
03703         n_old = n;
03704         n += cbuffer[c];
03705         if ( n < n_old ) {
03706           throw std::runtime_error( "Unsigned overflow" );
03707         }
03708       }
03709       if ( n > cptl ) {
03710         throw std::runtime_error( "Too few points" );
03711       }
03712
03713       std::unique_ptr<POINTL[]> pbuffer( new POINTL[cptl] );
03714
03715       POINTLARRAY points( pbuffer.get(), cptl );
03716
03717       ds » points;
03718
03719       // Don't do this until we won't have any more exceptions.
03720       lcounts = cbuffer.release();
03721       lpoints = pbuffer.release();
03722     }
03726     bool serialize ( DATASTREAM ds )
03727     {
03728       ds « emr « rclBounds « nPolys « cptl « DWORDARRAY( lcounts, nPolys )
03729      « POINTLARRAY( lpoints, cptl );
03730       return true;
03731     }
03735     int size ( void ) const { return emr.nSize; }
03741     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03742     {
03743       EMF_UNUSED(source);
03744       // According to the wine windef.h header, POINT and POINTL are equivalent
03745       // (but DWORD and INT are not)
03746       std::vector<INT> countsv( lcounts, lcounts + nPolys );
03747
03748       PolyPolygon( dc, (POINT*)lpoints, countsv.data(), nPolys );
03749     }
03750 #ifdef ENABLE_EDITING
03754     void edit ( void ) const
03755     {
03756 #if defined(__LP64__)
03757       const char* FMT0 = "\tnPolys\t\t: %d\n";
03758       const char* FMT1 = "\tcptl\t\t: %d\n";
03759       const char* FMT2 = "%d\n";
03760       const char* FMT3 = "\t\t\t  %d\n";
03761       const char* FMT4 = "%d, %d\n";
03762       const char* FMT5 = "\t\t\t  %d, %d\n";
03763 #else
03764       const char* FMT0 = "\tnPolys\t\t: %ld\n";
03765       const char* FMT1 = "\tcptl\t\t: %ld\n";
03766       const char* FMT2 = "%ld\n";
03767       const char* FMT3 = "\t\t\t  %ld\n";
03768       const char* FMT4 = "%ld, %ld\n";
03769       const char* FMT5 = "\t\t\t  %ld, %ld\n";
03770 #endif /* __x86_64__ */
03771       printf( "*POLYPOLYGON*\n" );
03772       edit_rectl( "rclBounds", rclBounds );
03773       printf( FMT0, nPolys );
03774       printf( FMT1, cptl );
03775       printf( "\taPolyCounts\t: " );
03776       if ( nPolys > 0 )
03777     printf( FMT2, lcounts[0] );
03778       else
03779     puts( "" );
03780       for ( unsigned int i = 1; i < nPolys; i++ )
03781     printf( FMT3, lcounts[i] );
03782       printf( "\tapts\t\t: " );
03783       if ( cptl > 0 )
03784     printf( FMT4, lpoints[0].x, lpoints[0].y );
03785       else
03786     puts( "" );
03787       for ( unsigned int i = 1; i < cptl; i++ )
03788     printf( FMT5, lpoints[i].x, lpoints[i].y );
03789     }
03790 #endif /* ENABLE_EDITING */
03791   };
03792
```

```
03794
03797   class EMRPOLYPOLYGON16 : public METARECORD, ::EMRPOLYPOLYGON16 {
03798     DWORD* lcounts{ nullptr };
03799     POINT16* lpoints{ nullptr };
03800   public:
03807     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT* points,
03808                const INT* counts, UINT polygons )
03809     {
03810       nPolys = polygons;
03811       // Count the number of points in points
03812       int n = 0;
03813       for ( unsigned int i = 0; i < nPolys; i++ )
03814     n += counts[i];
03815
03816       cpts = n;
03817       aPolyCounts[0] = 0;   // Really unused
03818       apts[0].x = 0;
03819       apts[0].y = 0;
03820
03821       emr.iType = EMR_POLYPOLYGON16;
03822       // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03823       // aren't directly written out
03824       emr.nSize = sizeof( ::EMRPOLYPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1)
03825     + sizeof( DWORD ) * (nPolys-1);
03826
03827       lcounts = new DWORD[nPolys];
03828
03829       for ( unsigned int i = 0; i < nPolys; i++ )
03830     lcounts[i] = counts[i];
03831
03832       lpoints = new POINT16[cpts];
03833
03834       for (int i=0; i<n; i++) {
03835     lpoints[i].x = points[i].x;
03836     lpoints[i].y = points[i].y;
03837       }
03838
03839       rclBounds = *bounds;
03840     }
03848     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT16* points,
03849                const INT* counts, UINT16 polygons )
03850     {
03851       nPolys = polygons;
03852       // Count the number of points in points
03853       int n = 0;
03854       for ( unsigned int i = 0; i < nPolys; i++ )
03855     n += counts[i];
03856
03857       cpts = n;
03858       aPolyCounts[0] = 0;   // Really unused
03859       apts[0].x = 0;
03860       apts[0].y = 0;
03861
03862       emr.iType = EMR_POLYPOLYGON16;
03863       // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03864       // aren't directly written out
03865       emr.nSize = sizeof( ::EMRPOLYPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1)
03866     + sizeof( DWORD ) * (nPolys-1);
03867
03868       lcounts = new DWORD[nPolys];
03869
03870       for ( unsigned int i = 0; i < nPolys; i++ )
03871     lcounts[i] = counts[i];
03872
03873       lpoints = new POINT16[cpts];
03874
03875       for (int i=0; i<n; i++) {
03876     lpoints[i].x = points[i].x;
03877     lpoints[i].y = points[i].y;
03878       }
03879
03880       rclBounds = *bounds;
03881     }
03885     ~EMRPOLYPOLYGON16 ( )
03886     {
03887       if ( lcounts ) delete[] lcounts;
03888       if ( lpoints ) delete[] lpoints;
03889     }
03894     EMRPOLYPOLYGON16 ( DATASTREAM& ds )
03895     {
03896       ds » emr » rclBounds » nPolys » cpts;
03897
03898       if ( emr.nSize - ( sizeof( ::EMRPOLYPOLYGON16 ) - sizeof(POINT16) - sizeof(DWORD) ) <
03899            sizeof( POINT16 ) * cpts + sizeof( DWORD ) * nPolys ) {
03900         throw std::runtime_error( "Invalid record size" );
03901       }
03902
```

```
03903       std::unique_ptr<DWORD[]> cbuffer( new DWORD[nPolys] );
03904
03905       DWORDARRAY counts( cbuffer.get(), nPolys );
03906
03907       ds » counts;
03908
03909       // Counts have to add up to less than the number of points
03910       // we have. DWORD is unsigned so we most care about overflow.
03911       DWORD n{0}, n_old{0};
03912       for ( DWORD c{0}; c < nPolys; ++c ) {
03913         n_old = n;
03914         n += cbuffer[c];
03915         if ( n < n_old ) {
03916           throw std::runtime_error( "Unsigned overflow" );
03917         }
03918       }
03919       if ( n > cpts ) {
03920         throw std::runtime_error( "Too few points" );
03921       }
03922
03923       std::unique_ptr<POINT16[]> pbuffer( new POINT16[cpts] );
03924
03925       POINT16ARRAY points( pbuffer.get(), cpts );
03926
03927       ds » points;
03928
03929       lcounts = cbuffer.release();
03930       lpoints = pbuffer.release();
03931     }
03935     bool serialize ( DATASTREAM ds )
03936     {
03937       ds « emr « rclBounds « nPolys « cpts « DWORDARRAY( lcounts, nPolys )
03938      « POINT16ARRAY( lpoints, cpts );
03939       return true;
03940     }
03944     int size ( void ) const { return emr.nSize; }
03950     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03951     {
03952       EMF_UNUSED(source);
03953       // According to the wine windef.h header, POINT and POINTL are equivalent
03954       // (but DWORD and INT are not)
03955       std::vector<INT> counts( lcounts, lcounts + nPolys );
03956
03957       PolyPolygon16( dc, lpoints, counts.data(), nPolys );
03958     }
03959 #ifdef ENABLE_EDITING
03963     void edit ( void ) const
03964     {
03965 #if defined(__LP64__)
03966       const char* FMT0 = "\tnPolys\t\t: %d\n";
03967       const char* FMT1 = "\tcptl\t\t: %d\n";
03968       const char* FMT2 = "%d\n";
03969       const char* FMT3 = "\t\t\t  %d\n";
03970 #else
03971       const char* FMT0 = "\tnPolys\t\t: %ld\n";
03972       const char* FMT1 = "\tcptl\t\t: %ld\n";
03973       const char* FMT2 = "%ld\n";
03974       const char* FMT3 = "\t\t\t  %ld\n";
03975 #endif /* __x86_64__ */
03976       printf( "*POLYPOLYGON16*\n" );
03977       edit_rectl( "rclBounds", rclBounds );
03978       printf( FMT0, nPolys );
03979       printf( FMT1, cpts );
03980       printf( "\taPolyCounts\t: " );
03981       if ( nPolys > 0 )
03982     printf( FMT2, lcounts[0] );
03983       else
03984     puts( "" );
03985       for ( unsigned int i = 1; i < nPolys; i++ )
03986     printf( FMT3, lcounts[i] );
03987       printf( "\tapts\t\t: " );
03988       if ( cpts > 0 )
03989     printf( "%d, %d\n", lpoints[0].x, lpoints[0].y );
03990       else
03991     puts( "" );
03992       for ( unsigned int i = 1; i < cpts; i++ )
03993     printf( "\t\t\t  %d, %d\n", lpoints[i].x, lpoints[i].y );
03994     }
03995 #endif /* ENABLE_EDITING */
03996   };
03997
03999
04002   class EMRPOLYBEZIER : public METARECORD, ::EMRPOLYBEZIER {
04003     POINTL* lpoints{ nullptr };
04004   public:
04010     EMRPOLYBEZIER ( const RECTL* bounds, const POINT* points, INT n )
04011     {
```

```
04012       cptl = n;
04013       aptl[0].x = 0;        // Really unused
04014       aptl[0].y = 0;
04015
04016       emr.iType = EMR_POLYBEZIER;
04017       // The (cptl-1) below is to account for aptl, which isn't written out
04018       emr.nSize = sizeof( ::EMRPOLYBEZIER ) + sizeof( POINTL ) * (cptl-1);
04019
04020       lpoints = new POINTL[cptl];
04021
04022       for (int i=0; i<n; i++) {
04023     lpoints[i].x = points[i].x;
04024     lpoints[i].y = points[i].y;
04025       }
04026
04027       rclBounds = *bounds;
04028     }
04033     EMRPOLYBEZIER ( DATASTREAM& ds )
04034     {
04035       ds » emr » rclBounds » cptl;
04036
04037       if ( emr.nSize - (sizeof( ::EMRPOLYBEZIER ) - sizeof(POINTL)) <
04038            sizeof( POINTL ) * cptl ) {
04039         throw std::runtime_error( "Invalid record size" );
04040       }
04041
04042       std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
04043
04044       POINTLARRAY points( buffer.get(), cptl );
04045
04046       ds » points;
04047
04048       lpoints = buffer.release();
04049     }
04053     ~EMRPOLYBEZIER ( )
04054     {
04055       if ( lpoints ) delete[] lpoints;
04056     }
04060     bool serialize ( DATASTREAM ds )
04061     {
04062       ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
04063       return true;
04064     }
04068     int size ( void ) const { return emr.nSize; }
04074     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04075     {
04076       EMF_UNUSED(source);
04077       // According to the wine windef.h header, POINT and POINTL are equivalent
04078       PolyBezier( dc, (POINT*)lpoints, cptl );
04079     }
04080 #ifdef ENABLE_EDITING
04084     void edit ( void ) const
04085     {
04086       printf( "*POLYBEZIER*\n" );
04087       edit_rectl( "rclBounds", rclBounds );
04088       edit_pointlarray( "\t", cptl, lpoints );
04089     }
04090 #endif /* ENABLE_EDITING */
04091   };
04092
04094
04097   class EMRPOLYBEZIER16 : public METARECORD, ::EMRPOLYBEZIER16 {
04098     POINT16* lpoints{ nullptr };
04099   public:
04105     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT16* points, INT n )
04106     {
04107       cpts = n;
04108       apts[0].x = 0;        // Really unused
04109       apts[0].y = 0;
04110
04111       emr.iType = EMR_POLYBEZIER16;
04112       // The (cptl-1) below is to account for aptl, which isn't written out
04113       emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04114
04115       lpoints = new POINT16[cpts];
04116
04117       for (int i=0; i<n; i++) {
04118     lpoints[i].x = points[i].x;
04119     lpoints[i].y = points[i].y;
04120       }
04121
04122       rclBounds = *bounds;
04123     }
04130     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT* points, INT n )
04131     {
04132       cpts = n;
04133       apts[0].x = 0;        // Really unused
```

```
04134       apts[0].y = 0;
04135
04136       emr.iType = EMR_POLYBEZIER16;
04137       // The (cptl-1) below is to account for aptl, which isn't written out
04138       emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04139
04140       lpoints = new POINT16[cpts];
04141
04142       for (int i=0; i<n; i++) {
04143     lpoints[i].x = points[i].x;
04144     lpoints[i].y = points[i].y;
04145       }
04146
04147       rclBounds = *bounds;
04148     }
04153     EMRPOLYBEZIER16 ( DATASTREAM& ds )
04154     {
04155       ds » emr » rclBounds » cpts;
04156
04157       if ( emr.nSize - (sizeof( ::EMRPOLYBEZIER16 ) - sizeof(POINT16)) <
04158            sizeof( POINT16 ) * cpts ) {
04159         throw std::runtime_error( "Invalid record size" );
04160       }
04161
04162       std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04163
04164       POINT16ARRAY points( buffer.get(), cpts );
04165
04166       ds » points;
04167
04168       lpoints = buffer.release();
04169     }
04173     ~EMRPOLYBEZIER16 ( )
04174     {
04175       if ( lpoints ) delete[] lpoints;
04176     }
04180     bool serialize ( DATASTREAM ds )
04181     {
04182       ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04183       return true;
04184     }
04188     int size ( void ) const { return emr.nSize; }
04194     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04195     {
04196       EMF_UNUSED(source);
04197       // According to the wine windef.h header, POINT and POINTL are equivalent
04198       PolyBezier16( dc, lpoints, cpts );
04199     }
04200 #ifdef ENABLE_EDITING
04204     void edit ( void ) const
04205     {
04206       printf( "*POLYBEZIER16*\n" );
04207       edit_rectl( "rclBounds", rclBounds );
04208       edit_point16array( "\t", cpts, lpoints );
04209     }
04210 #endif /* ENABLE_EDITING */
04211   };
04212
04214
04217   class EMRPOLYBEZIERTO : public METARECORD, ::EMRPOLYBEZIER {
04218     POINTL* lpoints{ nullptr };
04219   public:
04225     EMRPOLYBEZIERTO ( const RECTL* bounds, const POINT* points, INT n )
04226     {
04227       cptl = n;
04228       aptl[0].x = 0;        // Really unused
04229       aptl[0].y = 0;
04230
04231       emr.iType = EMR_POLYBEZIERTO;
04232       // The (cptl-1) below is to account for aptl, which isn't written out
04233       emr.nSize = sizeof( ::EMRPOLYBEZIERTO ) + sizeof( POINTL ) * (cptl-1);
04234
04235       lpoints = new POINTL[cptl];
04236
04237       for (int i=0; i<n; i++) {
04238     lpoints[i].x = points[i].x;
04239     lpoints[i].y = points[i].y;
04240       }
04241
04242       rclBounds = *bounds;
04243     }
04248     EMRPOLYBEZIERTO ( DATASTREAM& ds )
04249     {
04250       ds » emr » rclBounds » cptl;
04251
04252       if ( emr.nSize - (sizeof( ::EMRPOLYBEZIERTO ) - sizeof(POINTL)) <
04253            sizeof( POINTL ) * cptl ) {
```

```
04254         throw std::runtime_error( "Invalid record size" );
04255       }
04256
04257       std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
04258
04259       POINTLARRAY points( buffer.get(), cptl );
04260
04261       ds » points;
04262
04263       lpoints = buffer.release();
04264     }
04268     ~EMRPOLYBEZIERTO ( )
04269     {
04270       if ( lpoints ) delete[] lpoints;
04271     }
04275     bool serialize ( DATASTREAM ds )
04276     {
04277       ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
04278       return true;
04279     }
04283     int size ( void ) const { return emr.nSize; }
04289     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04290     {
04291       EMF_UNUSED(source);
04292       // According to the wine windef.h header, POINT and POINTL are equivalent
04293       PolyBezierTo( dc, (POINT*)lpoints, cptl );
04294     }
04295 #ifdef ENABLE_EDITING
04299     void edit ( void ) const
04300     {
04301       printf( "*POLYBEZIERTO*\n" );
04302       edit_rectl( "rclBounds", rclBounds );
04303       edit_pointlarray( "\t", cptl, lpoints );
04304     }
04305 #endif /* ENABLE_EDITING */
04306   };
04307
04309
04312   class EMRPOLYBEZIERTO16 : public METARECORD, ::EMRPOLYBEZIER16 {
04313     POINT16* lpoints{ nullptr };
04314   public:
04320     EMRPOLYBEZIERTO16 ( const RECTL* bounds, const POINT16* points, INT n )
04321     {
04322       cpts = n;
04323       apts[0].x = 0;        // Really unused
04324       apts[0].y = 0;
04325
04326       emr.iType = EMR_POLYBEZIERTO16;
04327       // The (cptl-1) below is to account for aptl, which isn't written out
04328       emr.nSize = sizeof( ::EMRPOLYBEZIERTO16 ) + sizeof( POINT16 ) * (cpts-1);
04329
04330       lpoints = new POINT16[cpts];
04331
04332       for (int i=0; i<n; i++) {
04333     lpoints[i].x = points[i].x;
04334     lpoints[i].y = points[i].y;
04335       }
04336
04337       rclBounds = *bounds;
04338     }
04345     EMRPOLYBEZIERTO16 ( const RECTL* bounds, const POINT* points, INT n )
04346     {
04347       cpts = n;
04348       apts[0].x = 0;        // Really unused
04349       apts[0].y = 0;
04350
04351       emr.iType = EMR_POLYBEZIERTO16;
04352       // The (cptl-1) below is to account for aptl, which isn't written out
04353       emr.nSize = sizeof( ::EMRPOLYBEZIERTO16 ) + sizeof( POINT16 ) * (cpts-1);
04354
04355       lpoints = new POINT16[cpts];
04356
04357       for (int i=0; i<n; i++) {
04358     lpoints[i].x = points[i].x;
04359     lpoints[i].y = points[i].y;
04360       }
04361
04362       rclBounds = *bounds;
04363     }
04368     EMRPOLYBEZIERTO16 ( DATASTREAM& ds )
04369     {
04370       ds » emr » rclBounds » cpts;
04371
04372       if ( emr.nSize - (sizeof( ::EMRPOLYBEZIERTO16 ) - sizeof(POINT16)) <
04373            sizeof( POINT16 ) * cpts ) {
04374         throw std::runtime_error( "Invalid record size" );
04375       }
```

```
04376
04377       std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04378
04379       POINT16ARRAY points( buffer.get(), cpts );
04380
04381       ds » points;
04382
04383       lpoints = buffer.release();
04384     }
04388     ~EMRPOLYBEZIERTO16 ( )
04389     {
04390       if ( lpoints ) delete[] lpoints;
04391     }
04395     bool serialize ( DATASTREAM ds )
04396     {
04397       ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04398       return true;
04399     }
04403     int size ( void ) const { return emr.nSize; }
04409     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04410     {
04411       EMF_UNUSED(source);
04412       // According to the wine windef.h header, POINT and POINTL are equivalent
04413       PolyBezierTo16( dc, lpoints, cpts );
04414     }
04415 #ifdef ENABLE_EDITING
04419     void edit ( void ) const
04420     {
04421       printf( "*POLYBEZIERTO16*\n" );
04422       edit_rectl( "rclBounds", rclBounds );
04423       edit_point16array( "\t", cpts, lpoints );
04424     }
04425 #endif /* ENABLE_EDITING */
04426   };
04427
04429
04432   class EMRPOLYLINETO : public METARECORD, ::EMRPOLYLINETO {
04433     POINTL* lpoints{ nullptr };
04434   public:
04440     EMRPOLYLINETO ( const RECTL* bounds, const POINT* points, INT n )
04441     {
04442       cptl = n;
04443       aptl[0].x = 0;
04444       aptl[0].y = 0;
04445
04446       emr.iType = EMR_POLYLINETO;
04447       // The (cptl-1) below is to account for aptl, which isn't written out
04448       emr.nSize = sizeof( ::EMRPOLYLINETO ) + sizeof( POINTL ) * (cptl-1);
04449
04450       lpoints = new POINTL[cptl];
04451
04452       for (int i=0; i<n; i++) {
04453     lpoints[i].x = points[i].x;
04454     lpoints[i].y = points[i].y;
04455       }
04456
04457       rclBounds = *bounds;
04458     }
04463     EMRPOLYLINETO ( DATASTREAM& ds )
04464     {
04465       ds » emr » rclBounds » cptl;
04466
04467       if ( emr.nSize - (sizeof( ::EMRPOLYLINETO ) - sizeof(POINTL)) <
04468            sizeof( POINTL ) * cptl ) {
04469         throw std::runtime_error( "Invalid record size" );
04470       }
04471
04472       std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
04473
04474       POINTLARRAY points( buffer.get(), cptl );
04475
04476       ds » points;
04477
04478       lpoints = buffer.release();
04479     }
04483     ~EMRPOLYLINETO ( )
04484     {
04485       if ( lpoints ) delete[] lpoints;
04486     }
04490     bool serialize ( DATASTREAM ds )
04491     {
04492       ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
04493       return true;
04494     }
04498     int size ( void ) const { return emr.nSize; }
04504     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04505     {
```

```
04506       EMF_UNUSED(source);
04507       // According to the wine windef.h header, POINT and POINTL are equivalent
04508       PolylineTo( dc, (POINT*)lpoints, cptl );
04509     }
04510 #ifdef ENABLE_EDITING
04514     void edit ( void ) const
04515     {
04516       printf( "*POLYLINETO*\n" );
04517       edit_rectl( "rclBounds", rclBounds );
04518       edit_pointlarray( "\t", cptl, lpoints );
04519     }
04520 #endif /* ENABLE_EDITING */
04521   };
04522
04524
04527   class EMRPOLYLINETO16 : public METARECORD, ::EMRPOLYLINETO16 {
04528     POINT16* lpoints{ nullptr };
04529   public:
04535     EMRPOLYLINETO16 ( const RECTL* bounds, const POINT16* points, INT n )
04536     {
04537       cpts = n;
04538       apts[0].x = 0;
04539       apts[0].y = 0;
04540
04541       emr.iType = EMR_POLYLINETO16;
04542       // The (cptl-1) below is to account for aptl, which isn't written out
04543       emr.nSize = sizeof( ::EMRPOLYLINETO16 ) + sizeof( POINT16 ) * (cpts-1);
04544
04545       lpoints = new POINT16[cpts];
04546
04547       for (int i=0; i<n; i++) {
04548     lpoints[i].x = points[i].x;
04549     lpoints[i].y = points[i].y;
04550       }
04551
04552       rclBounds = *bounds;
04553     }
04560     EMRPOLYLINETO16 ( const RECTL* bounds, const POINT* points, INT n )
04561     {
04562       cpts = n;
04563       apts[0].x = 0;
04564       apts[0].y = 0;
04565
04566       emr.iType = EMR_POLYLINETO16;
04567       // The (cptl-1) below is to account for aptl, which isn't written out
04568       emr.nSize = sizeof( ::EMRPOLYLINETO16 ) + sizeof( POINT16 ) * (cpts-1);
04569
04570       lpoints = new POINT16[cpts];
04571
04572       for (int i=0; i<n; i++) {
04573     lpoints[i].x = points[i].x;
04574     lpoints[i].y = points[i].y;
04575       }
04576
04577       rclBounds = *bounds;
04578     }
04583     EMRPOLYLINETO16 ( DATASTREAM& ds )
04584     {
04585       ds » emr » rclBounds » cpts;
04586
04587       if ( emr.nSize - (sizeof( ::EMRPOLYLINETO16 ) - sizeof(POINT16)) <
04588            sizeof( POINT16 ) * cpts ) {
04589         throw std::runtime_error( "Invalid record size" );
04590       }
04591
04592       std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04593
04594       POINT16ARRAY points( buffer.get(), cpts );
04595
04596       ds » points;
04597
04598       lpoints = buffer.release();
04599     }
04603     ~EMRPOLYLINETO16 ( )
04604     {
04605       if ( lpoints ) delete[] lpoints;
04606     }
04610     bool serialize ( DATASTREAM ds )
04611     {
04612       ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04613       return true;
04614     }
04618     int size ( void ) const { return emr.nSize; }
04624     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04625     {
04626       EMF_UNUSED(source);
04627       // According to the wine windef.h header, POINT and POINTL are equivalent
```

```
04628       PolylineTo16( dc, lpoints, cpts );
04629     }
04630 #ifdef ENABLE_EDITING
04634     void edit  ( void ) const
04635     {
04636       printf( "*POLYLINETO16*\n" );
04637       edit_rectl( "rclBounds", rclBounds );
04638       edit_point16array( "\t", cpts, lpoints );
04639     }
04640 #endif /* ENABLE_EDITING */
04641   };
04642
04644
04649   class EMREXTTEXTOUTA : public METARECORD, ::EMREXTTEXTOUTA {
04650     PSTR string_a{ nullptr };
04651     int string_size;
04652
04653     INT* dx_i{ nullptr };
04654   public:
04664     EMREXTTEXTOUTA ( const RECTL* bounds, DWORD graphicsMode, FLOAT xScale,
04665              FLOAT yScale, const PEMRTEXT text, LPCSTR string,
04666              const INT* dx )
04667     {
04668       emr.iType = EMR_EXTTEXTOUTA;
04669       emr.nSize = sizeof( ::EMREXTTEXTOUTA );
04670
04671       rclBounds = *bounds;
04672
04673       iGraphicsMode = graphicsMode;
04674       exScale = xScale;
04675       eyScale = yScale;
04676
04677       emrtext = *text;
04678
04679       string_size = ROUND_TO_LONG( emrtext.nChars );
04680
04681       string_a = new CHAR[ string_size ];
04682
04683       memset( string_a, 0, sizeof(CHAR) * string_size );
04684
04685       for ( unsigned int i=0; i<emrtext.nChars; i++ )
04686     string_a[i] = *string++;
04687
04688       emrtext.offString = emr.nSize;
04689       emr.nSize += string_size * sizeof(CHAR);
04690 #if 0
04691 /*
04692 Test only - Problem: Windows requires this dx to be set - at least from 2K on
04693 but to calculate real dx values is hard
04694 For pstoedit - this is "fixed" now by estimating dx in pstoedit
04695 */
04696       if ( !dx ) {
04697     int * dxn = new  int [string_size];
04698     for (unsigned int i=0; i < string_size; i++) dxn[i] = 10;
04699     dx = dxn;
04700       }
04701 #endif
04702
04703       if ( dx ) {
04704
04705     dx_i = new INT[ emrtext.nChars ];
04706
04707     for ( unsigned int i=0; i<emrtext.nChars; i++ )
04708       dx_i[i] = *dx++;
04709
04710     emrtext.offDx = emr.nSize;
04711     emr.nSize += emrtext.nChars * sizeof(INT);
04712       }
04713       else {
04714     emrtext.offDx = 0;
04715     dx_i = 0;
04716       }
04717     }
04722     EMREXTTEXTOUTA ( DATASTREAM& ds )
04723     {
04724       ds » emr » rclBounds » iGraphicsMode » exScale » eyScale » emrtext;
04725
04726       if ( emrtext.nChars > 0 and emrtext.offString == 0 ) {
04727         throw std::runtime_error( "Invalid text specification" );
04728       }
04729
04730       if ( emrtext.nChars > emr.nSize - emrtext.offString ) {
04731         throw std::runtime_error( "Invalid text specification" );
04732       }
04733
04734       std::unique_ptr<char[]> cbuffer;
04735       std::unique_ptr<INT[]>  ibuffer;
```

```
04736
04737       if ( emrtext.offString != 0 ) {
04738     string_size = ROUND_TO_LONG( emrtext.nChars );
04739
04740         cbuffer.reset( new char[string_size] );
04741
04742     memset( cbuffer.get(), 0, sizeof(CHAR) * string_size );
04743
04744     CHARSTR string( cbuffer.get(), string_size );
04745
04746     ds » string;
04747       }
04748
04749       if ( emrtext.offDx ) {
04750         ibuffer.reset( new INT[emrtext.nChars] );
04751
04752         INTARRAY dx_is( ibuffer.get(), emrtext.nChars );
04753
04754     ds » dx_is;
04755       }
04756
04757       string_a = cbuffer.release();
04758       dx_i     = ibuffer.release();
04759     }
04764     ~EMREXTTEXTOUTA ( )
04765     {
04766       if ( string_a ) delete[] string_a;
04767       if ( dx_i ) delete[] dx_i;
04768     }
04772     bool serialize ( DATASTREAM ds )
04773     {
04774       ds « emr « rclBounds « iGraphicsMode « exScale « eyScale
04775      « emrtext « CHARSTR( string_a, string_size );
04776       if ( dx_i )
04777     ds « INTARRAY( dx_i, emrtext.nChars );
04778       return true;
04779     }
04783     int size ( void ) const { return emr.nSize; }
04789     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04790     {
04791       EMF_UNUSED(source);
04792       RECT rect;
04793       rect.left = emrtext.rcl.left;
04794       rect.top = emrtext.rcl.top;
04795       rect.right = emrtext.rcl.right;
04796       rect.bottom = emrtext.rcl.bottom;
04797
04798       ExtTextOutA( dc, emrtext.ptlReference.x, emrtext.ptlReference.y,
04799            emrtext.fOptions, &rect, string_a, emrtext.nChars,
04800            dx_i );
04801     }
04802 #ifdef ENABLE_EDITING
04806     void edit ( void ) const
04807     {
04808 #if defined(__LP64__)
04809     const char* FMT0 = "unknown(%d)\n";
04810     const char* FMT1 = "\tptlReference\t: (%d,%d)\n";
04811     const char* FMT2 = "\tnChars\t\t: %d\n";
04812     const char* FMT3 = "\toffString\t: %d\n";
04813     const char* FMT4 = "\toffDx\t\t: %d\n";
04814 #else
04815     const char* FMT0 = "unknown(%ld)\n";
04816     const char* FMT1 = "\tptlReference\t: (%ld,%ld)\n";
04817     const char* FMT2 = "\tnChars\t\t: %ld\n";
04818     const char* FMT3 = "\toffString\t: %ld\n";
04819     const char* FMT4 = "\toffDx\t\t: %ld\n";
04820 #endif /* __x86_64__ */
04821       printf( "*EXTTEXTOUTA*\n" );
04822       edit_rectl( "rclBounds", rclBounds );
04823       printf( "\tiGraphicsMode\t: " );
04824       switch ( iGraphicsMode ) {
04825       case GM_COMPATIBLE: printf( "GM_COMPATIBLE\n" ); break;
04826       case GM_ADVANCED: printf( "GM_ADVANCED\n" ); break;
04827       default: printf( FMT0, iGraphicsMode );
04828       }
04829       printf( "\texScale\t\t: %f\n", exScale );
04830       printf( "\teyScale\t\t: %f\n", eyScale );
04831       printf( FMT1, emrtext.ptlReference.x, emrtext.ptlReference.y );
04832       printf( FMT2, emrtext.nChars );
04833       printf( FMT3, emrtext.offString );
04834       printf( "\tfOptions\t: " );
04835       if ( emrtext.fOptions == 0 )
04836     printf( "None" );
04837       else {
04838     if ( emrtext.fOptions & ETO_GRAYED ) {
04839       printf( "ETO_GRAYED" );
04840       if ( emrtext.fOptions & ~ETO_GRAYED )
```

```
04841         printf( " | " );
04842       }
04843       if ( emrtext.fOptions & ETO_OPAQUE ) {
04844         printf( "ETO_OPAQUE" );
04845         if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE) )
04846           printf( " | " );
04847       }
04848       if ( emrtext.fOptions & ETO_CLIPPED ) {
04849         printf( "ETO_CLIPPED" );
04850         if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED ) )
04851           printf( " | " );
04852       }
04853       if ( emrtext.fOptions & ETO_GLYPH_INDEX ) {
04854         printf( "ETO_GLYPH_INDEX" );
04855         if ( emrtext.fOptions &
04856              ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX) )
04857           printf( " | " );
04858       }
04859       if ( emrtext.fOptions & ETO_RTLREADING ) {
04860         printf( "ETO_RTLREADING" );
04861         if ( emrtext.fOptions &
04862              ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX |
04863            ETO_RTLREADING) )
04864           printf( " | " );
04865       }
04866       if ( emrtext.fOptions & ETO_IGNORELANGUAGE )
04867         printf( "ETO_IGNORELANGUAGE" );
04868         }
04869         printf( "\n" );
04870         edit_rectl( "rcl\t", emrtext.rcl );
04871         printf( FMT4, emrtext.offDx );
04872         printf( "\tString:\n\t\t" );
04873         if ( emrtext.nChars > 0 ) {
04874           for ( DWORD i = 0; i < emrtext.nChars; ++i ) {
04875             putchar( string_a[i] );
04876           }
04877         }
04878         else {
04879           printf( "<empty>" );
04880         }
04881         putchar( '\n' );
04882         if ( emrtext.offDx != 0 ) {
04883       printf( "\tOffsets:\n\t\t" );
04884       for ( unsigned int i = 0; i < emrtext.nChars; i++ )
04885         printf( "%d ", dx_i[i] );
04886       printf( "\n" );
04887         }
04888       }
04889 #endif /* ENABLE_EDITING */
04890   };
04892
04897   class EMREXTTEXTOUTW : public METARECORD, ::EMREXTTEXTOUTW {
04898     PWSTR string_a{ nullptr };
04899     int string_size;
04900
04901     INT* dx_i{ nullptr };
04902   public:
04912     EMREXTTEXTOUTW ( const RECTL* bounds, DWORD graphicsMode, FLOAT xScale,
04913               FLOAT yScale, const PEMRTEXT text, LPCWSTR string,
04914               const INT* dx )
04915     {
04916       emr.iType = EMR_EXTTEXTOUTW;
04917       emr.nSize = sizeof( ::EMREXTTEXTOUTW );
04918
04919       rclBounds = *bounds;
04920
04921       iGraphicsMode = graphicsMode;
04922       exScale = xScale;
04923       eyScale = yScale;
04924
04925       emrtext = *text;
04926
04927       string_size = ROUND_TO_LONG( emrtext.nChars );
04928
04929       string_a = new WCHAR[ string_size ];
04930
04931       memset( string_a, 0, sizeof(WCHAR) * string_size );
04932
04933       for ( unsigned int i=0; i<emrtext.nChars; i++ )
04934     string_a[i] = *string++;
04935
04936       emrtext.offString = emr.nSize;
04937       emr.nSize += string_size * sizeof(WCHAR);
04938 #if 0
04939 /*
04940 Test only - Problem: Windows requires this dx to be set - at least from 2K on
04941 but to calculate real dx values is hard
```

```
04942 For pstoedit - this is "fixed" now by estimating dx in pstoedit
04943 */
04944       if ( !dx ) {
04945     int * dxn = new  int [string_size];
04946     for (unsigned int i=0; i < string_size; i++) dxn[i] = 10;
04947     dx = dxn;
04948       }
04949 #endif
04950
04951       if ( dx ) {
04952
04953     dx_i = new INT[ emrtext.nChars ];
04954
04955     for ( unsigned int i=0; i<emrtext.nChars; i++ )
04956       dx_i[i] = *dx++;
04957
04958     emrtext.offDx = emr.nSize;
04959     emr.nSize += emrtext.nChars * sizeof(INT);
04960       }
04961       else {
04962     emrtext.offDx = 0;
04963     dx_i = 0;
04964       }
04965     }
04970     EMREXTTEXTOUTW ( DATASTREAM& ds )
04971     {
04972       ds » emr » rclBounds » iGraphicsMode » exScale » eyScale » emrtext;
04973
04974       if ( emrtext.nChars > 0 and emrtext.offString == 0 ) {
04975         throw std::runtime_error( "Invalid text specification" );
04976       }
04977
04978       if ( emrtext.nChars > emr.nSize - emrtext.offString ) {
04979         throw std::runtime_error( "Invalid text specification" );
04980       }
04981
04982       std::unique_ptr<WCHAR[]> cbuffer;
04983       std::unique_ptr<INT[]>   ibuffer;
04984
04985       if ( emrtext.offString != 0 ) { // So, what is the point of this check?
04986     string_size = ROUND_TO_LONG( emrtext.nChars );
04987
04988         cbuffer.reset( new WCHAR[string_size] );
04989
04990         memset( cbuffer.get(), 0, sizeof(WCHAR) * string_size );
04991
04992         WCHARSTR string( cbuffer.get(), string_size );
04993
04994     ds » string;
04995       }
04996
04997       if ( emrtext.offDx ) {
04998         ibuffer.reset( new INT[ emrtext.nChars ] );
04999
05000     INTARRAY dx_is( ibuffer.get(), emrtext.nChars );
05001
05002     ds » dx_is;
05003       }
05004
05005       string_a = cbuffer.release();
05006       dx_i     = ibuffer.release();
05007     }
05012     ~EMREXTTEXTOUTW ( )
05013     {
05014       if ( string_a ) delete[] string_a;
05015       if ( dx_i ) delete[] dx_i;
05016     }
05020     bool serialize ( DATASTREAM ds )
05021     {
05022       ds « emr « rclBounds « iGraphicsMode « exScale « eyScale
05023      « emrtext « WCHARSTR( string_a, string_size );
05024       if ( dx_i )
05025     ds « INTARRAY( dx_i, emrtext.nChars );
05026       return true;
05027     }
05031     int size ( void ) const { return emr.nSize; }
05037     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05038     {
05039       EMF_UNUSED(source);
05040       RECT rect;
05041       rect.left = emrtext.rcl.left;
05042       rect.top = emrtext.rcl.top;
05043       rect.right = emrtext.rcl.right;
05044       rect.bottom = emrtext.rcl.bottom;
05045
05046       ExtTextOutW( dc, emrtext.ptlReference.x, emrtext.ptlReference.y,
05047            emrtext.fOptions, &rect, string_a, emrtext.nChars,
```

```
05048           dx_i );
05049     }
05050 #ifdef ENABLE_EDITING
05054     void edit ( void ) const
05055     {
05056 #if defined(__LP64__)
05057     const char* FMT0 = "unknown(%d)\n";
05058     const char* FMT1 = "\tptlReference\t: (%d,%d)\n";
05059     const char* FMT2 = "\tnChars\t\t: %d\n";
05060     const char* FMT3 = "\toffString\t: %d\n";
05061     const char* FMT4 = "\toffDx\t\t: %d\n";
05062 #else
05063     const char* FMT0 = "unknown(%ld)\n";
05064     const char* FMT1 = "\tptlReference\t: (%ld,%ld)\n";
05065     const char* FMT2 = "\tnChars\t\t: %ld\n";
05066     const char* FMT3 = "\toffString\t: %ld\n";
05067     const char* FMT4 = "\toffDx\t\t: %ld\n";
05068 #endif /* __x86_64__ */
05069       printf( "*EXTTEXTOUTW*\n" );
05070       edit_rectl( "rclBounds", rclBounds );
05071       printf( "\tiGraphicsMode\t: " );
05072       switch ( iGraphicsMode ) {
05073       case GM_COMPATIBLE: printf( "GM_COMPATIBLE\n" ); break;
05074       case GM_ADVANCED: printf( "GM_ADVANCED\n" ); break;
05075       default: printf( FMT0, iGraphicsMode );
05076       }
05077       printf( "\texScale\t\t: %f\n", exScale );
05078       printf( "\teyScale\t\t: %f\n", eyScale );
05079       printf( FMT1, emrtext.ptlReference.x, emrtext.ptlReference.y );
05080       printf( FMT2, emrtext.nChars );
05081       printf( FMT3, emrtext.offString );
05082       printf( "\tfOptions\t: " );
05083       if ( emrtext.fOptions == 0 )
05084     printf( "None" );
05085       else {
05086     if ( emrtext.fOptions & ETO_GRAYED ) {
05087       printf( "ETO_GRAYED" );
05088       if ( emrtext.fOptions & ~ETO_GRAYED )
05089         printf( " | " );
05090     }
05091     if ( emrtext.fOptions & ETO_OPAQUE ) {
05092       printf( "ETO_OPAQUE" );
05093       if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE) )
05094         printf( " | " );
05095     }
05096     if ( emrtext.fOptions & ETO_CLIPPED ) {
05097       printf( "ETO_CLIPPED" );
05098       if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED ) )
05099         printf( " | " );
05100     }
05101     if ( emrtext.fOptions & ETO_GLYPH_INDEX ) {
05102       printf( "ETO_GLYPH_INDEX" );
05103       if ( emrtext.fOptions &
05104            ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX) )
05105         printf( " | " );
05106     }
05107     if ( emrtext.fOptions & ETO_RTLREADING ) {
05108       printf( "ETO_RTLREADING" );
05109       if ( emrtext.fOptions &
05110            ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX |
05111          ETO_RTLREADING) )
05112         printf( " | " );
05113     }
05114     if ( emrtext.fOptions & ETO_IGNORELANGUAGE )
05115       printf( "ETO_IGNORELANGUAGE" );
05116       }
05117       printf( "\n" );
05118       edit_rectl( "rcl\t", emrtext.rcl );
05119       printf( FMT4, emrtext.offDx );
05120
05121       if ( emrtext.nChars > 0 ) {
05122         // iconv_open arguments are TO, FROM (not the other way around).
05123         iconv_t cvt = iconv_open( "UTF-8", "UTF-16LE" );
05124         std::vector<char> utf8_buffer( emrtext.nChars );
05125         // Cannot predict the space necessary to hold the converted
05126         // string. So, we loop until conversion is complete.
05127         size_t size          = emrtext.nChars;
05128         size_t in_bytes_left = emrtext.nChars * sizeof(*string_a);
05129         size_t converted     = 0;
05130         char*  in_buffer     = (char*)string_a;
05131         while ( 1 ) {
05132           char* out_buffer      = &utf8_buffer[converted];
05133           size_t out_bytes_left = size - converted;
05134
05135           size_t n = iconv( cvt, &in_buffer, &in_bytes_left,
05136                             &out_buffer, &out_bytes_left );
05137
```

```
05138           converted = size - out_bytes_left;
05139
05140           if ( n == (size_t)-1 ) {
05141             if ( errno == E2BIG ) {
05142               size_t new_size = 2 * utf8_buffer.size();
05143               utf8_buffer.resize( new_size );
05144               size = utf8_buffer.size();
05145             }
05146             else {
05147               // Real conversion error.
05148               break;
05149             }
05150           }
05151           else {
05152             break;
05153           }
05154         }
05155
05156         iconv_close( cvt );
05157
05158         if ( converted == utf8_buffer.size() )
05159           utf8_buffer.push_back( '\0' );
05160         else
05161           utf8_buffer[converted] = '\0';
05162
05163         printf( "\tString:\n\t\t%s\n",  utf8_buffer.data() );
05164       }
05165       else {
05166         puts( "\tString:\n\t\t<empty>\n" );
05167       }
05168
05169       if ( emrtext.offDx != 0 and emrtext.nChars > 0 ) {
05170     printf( "\tOffsets:\n\t\t" );
05171     for ( unsigned int i = 0; i < emrtext.nChars; i++ )
05172       printf( "%d ", dx_i[i] );
05173     printf( "\n" );
05174       }
05175     }
05176 #endif /* ENABLE_EDITING */
05177   };
05178
05180
05183   class EMRSETPIXELV : public METARECORD, ::EMRSETPIXELV {
05184   public:
05190     EMRSETPIXELV ( INT x, INT y, COLORREF color )
05191     {
05192       emr.iType = EMR_SETPIXELV;
05193       emr.nSize = sizeof( ::EMRSETPIXELV );
05194       ptlPixel.x = x;
05195       ptlPixel.y = y;
05196       crColor = color;
05197     }
05202     EMRSETPIXELV ( DATASTREAM& ds )
05203     {
05204       ds » emr » ptlPixel » crColor;
05205     }
05209     bool serialize ( DATASTREAM ds )
05210     {
05211       ds « emr « ptlPixel « crColor;
05212       return true;
05213     }
05217     int size ( void ) const { return emr.nSize; }
05223     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05224     {
05225       EMF_UNUSED(source);
05226       SetPixel( dc, ptlPixel.x, ptlPixel.y, crColor );
05227     }
05228 #ifdef ENABLE_EDITING
05232     void edit ( void ) const
05233     {
05234       printf( "*SETPIXELV*\n" );
05235       edit_pointl( "ptlPixel", ptlPixel );
05236       edit_color( "crColor\t", crColor );
05237     }
05238 #endif /* ENABLE_EDITING */
05239   };
05240
05241   class PEN;
05242   class EXTPEN;
05243   class BRUSH;
05244   class FONT;
05245   class PALETTE;
05246
05248
05251   class EMRCREATEPEN : public METARECORD, public ::EMRCREATEPEN
05252   {
05253   public:
```

```
05258     EMRCREATEPEN ( PEN* pen, HGDIOBJ handle );
05263     EMRCREATEPEN ( DATASTREAM& ds );
05267     bool serialize ( DATASTREAM ds )
05268     {
05269       ds « emr « ihPen « lopn;
05270       return true;
05271     }
05275     int size ( void ) const { return emr.nSize; }
05281     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05282 #ifdef ENABLE_EDITING
05286     void edit ( void ) const
05287     {
05288 #if defined(__LP64__)
05289       const char* FMT0 = "\tihPen\t\t: 0x%x\n";
05290       const char* FMT1 = "\tlopn.lopnWidth\t: %d, %d\n";
05291 #else
05292       const char* FMT0 = "\tihPen\t\t: 0x%lx\n";
05293       const char* FMT1 = "\tlopn.lopnWidth\t: %ld, %ld\n";
05294 #endif /* __x86_64__ */
05295       printf( "*CREATEPEN*\n" );
05296       printf( FMT0, ihPen );
05297       edit_pen_style( "lopn.lopnStyle", lopn.lopnStyle );
05298       printf( FMT1, lopn.lopnWidth.x, lopn.lopnWidth.y );
05299       edit_color( "lopn.lopnColor", lopn.lopnColor );
05300     }
05301 #endif /* ENABLE_EDITING */
05302   };
05303
05305
05309   class EMREXTCREATEPEN : public METARECORD, public ::EMREXTCREATEPEN
05310   {
05311   public:
05316     EMREXTCREATEPEN ( EXTPEN* pen, HGDIOBJ handle );
05321     EMREXTCREATEPEN ( DATASTREAM& ds );
05325     bool serialize ( DATASTREAM ds )
05326     {
05327       ds « emr « ihPen « offBmi « cbBmi « offBits « cbBits « elp;
05328       return true;
05329     }
05333     int size ( void ) const { return emr.nSize; }
05339     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05340 #ifdef ENABLE_EDITING
05344     void edit ( void ) const
05345     {
05346 #if defined(__LP64__)
05347       const char* FMT0 = "\tihPen\t\t\t: 0x%x\n";
05348       const char* FMT1 = "\toffBmi\t\t\t: %d\n";
05349       const char* FMT2 = "\tcbBmi\t\t\t: %d\n";
05350       const char* FMT3 = "\toffBits\t\t\t: %d\n";
05351       const char* FMT4 = "\tcbBits\t\t\t: %d\n";
05352       const char* FMT5 = "\telp.elpWidth\t\t: %d\n";
05353       const char* FMT6 = "\telp.elpNumEntries\t: %d\n";
05354 #else
05355       const char* FMT0 = "\tihPen\t\t\t: 0x%lx\n";
05356       const char* FMT1 = "\toffBmi\t\t\t: %ld\n";
05357       const char* FMT2 = "\tcbBmi\t\t\t: %ld\n";
05358       const char* FMT3 = "\toffBits\t\t\t: %ld\n";
05359       const char* FMT4 = "\tcbBits\t\t\t: %ld\n";
05360       const char* FMT5 = "\telp.elpWidth\t\t: %ld\n";
05361       const char* FMT6 = "\telp.elpNumEntries\t: %ld\n";
05362 #endif /* __x86_64__ */
05363       printf( "*EXTCREATEPEN*\n" );
05364       printf( FMT0, ihPen );
05365       printf( FMT1,  offBmi );
05366       printf( FMT2, cbBmi );
05367       printf( FMT3, offBits );
05368       printf( FMT4, cbBits );
05369       edit_pen_style( "elp.elpPenStyle\t", elp.elpPenStyle );
05370       printf( FMT5, elp.elpWidth );
05371       edit_brush_style( "elp.elpBrushStyle", elp.elpBrushStyle );
05372       edit_color( "elp.elpColor\t", elp.elpColor );
05373       edit_brush_hatch( "elp.elpHatch\t", elp.elpHatch );
05374       printf( FMT6, elp.elpNumEntries );
05375     }
05376 #endif /* ENABLE_EDITING */
05377   };
05378
05380
05383   class EMRCREATEBRUSHINDIRECT : public METARECORD, public ::EMRCREATEBRUSHINDIRECT
05384   {
05385   public:
05390     EMRCREATEBRUSHINDIRECT ( BRUSH* brush, HGDIOBJ handle );
05395     EMRCREATEBRUSHINDIRECT ( DATASTREAM& ds );
05399     bool serialize ( DATASTREAM ds )
05400     {
05401       ds « emr « ihBrush « lb;
05402       return true;
```

```
05403     }
05407     int size ( void ) const { return emr.nSize; }
05413     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05414 #ifdef ENABLE_EDITING
05418     void edit ( void ) const
05419     {
05420 #if defined(__LP64__)
05421       const char* FMT = "\tihBrush\t\t: 0x%x\n";
05422 #else
05423       const char* FMT = "\tihBrush\t\t: 0x%lx\n";
05424 #endif /* __x86_64__ */
05425       printf( "*CREATEBRUSHINDIRECT*\n" );
05426       printf( FMT, ihBrush );
05427       edit_brush_style( "lb.lbStyle", lb.lbStyle );
05428       edit_color( "lb.lbColor", lb.lbColor );
05429       edit_brush_hatch( "lb.lbHatch", lb.lbHatch );
05430     }
05431 #endif /* ENABLE_EDITING */
05432   };
05433
05435
05438   class EMREXTCREATEFONTINDIRECTW : public METARECORD, public ::EMREXTCREATEFONTINDIRECTW
05439   {
05440   public:
05445     EMREXTCREATEFONTINDIRECTW ( FONT* font, HGDIOBJ handle );
05450     EMREXTCREATEFONTINDIRECTW ( DATASTREAM& ds );
05454     bool serialize ( DATASTREAM ds )
05455     {
05456       // Since EMF records have to be multiples of 4 bytes, this
05457       // should perhaps be a general thing, but we know it's currently
05458       // only a problem for this structure.
05459
05460       ds « emr « ihFont « elfw « PADDING( 2 );
05461
05462       return true;
05463     }
05467     int size ( void ) const { return emr.nSize; }
05473     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05474 #ifdef ENABLE_EDITING
05478     void edit ( void ) const
05479     {
05480 #if defined(__LP64__)
05481       const char* FMT0 = "\tihFont\t\t\t: %d\n";
05482       const char* FMT1 = "\tlfHeight\t\t: %d\n";
05483       const char* FMT2 = "\tlfWidth\t\t\t: %d\n";
05484       const char* FMT3 = "\tlfEscapement\t\t: %d\n";
05485       const char* FMT4 = "\tlfOrientation\t\t: %d\n";
05486       const char* FMT5 = "\telfVersion\t\t: %d\n";
05487       const char* FMT6 = "\telfStyleSize\t\t: %d\n";
05488       const char* FMT7 = "\telfMatch\t\t: %d\n";
05489       const char* FMT8 = "\telfCulture\t\t: %d\n";
05490 #else
05491       const char* FMT0 = "\tihFont\t\t\t: %ld\n";
05492       const char* FMT1 = "\tlfHeight\t\t: %ld\n";
05493       const char* FMT2 = "\tlfWidth\t\t\t: %ld\n";
05494       const char* FMT3 = "\tlfEscapement\t\t: %ld\n";
05495       const char* FMT4 = "\tlfOrientation\t\t: %ld\n";
05496       const char* FMT5 = "\telfVersion\t\t: %ld\n";
05497       const char* FMT6 = "\telfStyleSize\t\t: %ld\n";
05498       const char* FMT7 = "\telfMatch\t\t: %ld\n";
05499       const char* FMT8 = "\telfCulture\t\t: %ld\n";
05500 #endif /* __x86_64__ */
05501       printf( "*EXTCREATEFONTINDIRECTW*\n" );
05502       printf( FMT0, ihFont );
05503       printf( FMT1, elfw.elfLogFont.lfHeight );
05504       printf( FMT2, elfw.elfLogFont.lfWidth );
05505       printf( FMT3, elfw.elfLogFont.lfEscapement );
05506       printf( FMT4, elfw.elfLogFont.lfOrientation );
05507       printf( "\tlfWeight\t\t: " );
05508       switch ( elfw.elfLogFont.lfWeight ) {
05509       case FW_DONTCARE: printf( "FW_DONTCARE\n" ); break;
05510       case FW_THIN: printf( "FW_THIN\n" ); break;
05511       case FW_EXTRALIGHT: printf( "FW_EXTRALIGHT\n" ); break;
05512       case FW_LIGHT: printf( "FW_LIGHT\n" ); break;
05513       case FW_NORMAL: printf( "FW_NORMAL\n" ); break;
05514       case FW_MEDIUM: printf( "FW_MEDIUM\n" ); break;
05515       case FW_SEMIBOLD: printf( "FW_SEMIBOLD\n" ); break;
05516       case FW_BOLD: printf( "FW_BOLD\n" ); break;
05517       case FW_EXTRABOLD: printf( "FW_EXTRABOLD\n" ); break;
05518       case FW_BLACK: printf( "FW_BLACK\n" ); break;
05519       }
05520       printf( "\tlfItalic\t\t: %d\n", elfw.elfLogFont.lfItalic );
05521       printf( "\tlfUnderline\t\t: %d\n", elfw.elfLogFont.lfUnderline );
05522       printf( "\tlfStrikeOut\t\t: %d\n", elfw.elfLogFont.lfStrikeOut );
05523       printf( "\tlfCharSet\t\t: %d\n", elfw.elfLogFont.lfCharSet );
05524       printf( "\tlfOutPrecision\t\t: %d\n", elfw.elfLogFont.lfOutPrecision );
05525       printf( "\tlfClipPrecision\t\t: %d\n", elfw.elfLogFont.lfClipPrecision );
```

```
05526       printf( "\tlfQuality\t\t: %d\n", elfw.elfLogFont.lfQuality );
05527       printf( "\tlfPitchAndFamily\t: %d\n", elfw.elfLogFont.lfPitchAndFamily );
05528       int i = 0;
05529       printf( "\tlfFaceName\t\t: '" );
05530       while ( elfw.elfLogFont.lfFaceName[i] != 0 && i < LF_FACESIZE ) {
05531     putchar( elfw.elfLogFont.lfFaceName[i] );
05532     i++;
05533       }
05534       puts( "'" );
05535
05536       i = 0;
05537       printf( "\telfFullName\t\t: '" );
05538       while ( elfw.elfFullName[i] != 0 && i < LF_FULLFACESIZE ) {
05539     putchar( elfw.elfFullName[i] );
05540     i++;
05541       }
05542       puts( "'" );
05543
05544       i = 0;
05545       printf( "\telfStyle\t\t: '" );
05546       while ( elfw.elfStyle[i] != 0 && i < LF_FACESIZE ) {
05547     putchar( elfw.elfStyle[i] );
05548     i++;
05549       }
05550       puts( "'" );
05551
05552       printf( FMT5, elfw.elfVersion );
05553       printf( FMT6, elfw.elfStyleSize );
05554       printf( FMT7, elfw.elfMatch );
05555       printf( "\telfVendorId\t\t: '%s'\n", elfw.elfVendorId );
05556       printf( FMT8, elfw.elfCulture );
05557       printf( "\telfPanose\t\t:\n" );
05558       printf( "\t\tbFamilyType\t\t: %d\n", elfw.elfPanose.bFamilyType );
05559       printf( "\t\tbSerifStyle\t\t: %d\n", elfw.elfPanose.bSerifStyle );
05560       printf( "\t\tbWeight\t\t\t: %d\n", elfw.elfPanose.bWeight );
05561       printf( "\t\tbProportion\t\t: %d\n", elfw.elfPanose.bProportion );
05562       printf( "\t\tbContrast\t\t: %d\n", elfw.elfPanose.bContrast );
05563       printf( "\t\tbStrokeVariation\t: %d\n", elfw.elfPanose.bStrokeVariation );
05564       printf( "\t\tbArmStyle\t\t: %d\n", elfw.elfPanose.bArmStyle );
05565       printf( "\t\tbLetterform\t\t: %d\n", elfw.elfPanose.bLetterform );
05566       printf( "\t\tbMidline\t\t: %d\n", elfw.elfPanose.bMidline );
05567       printf( "\t\tbXHeight\t\t: %d\n", elfw.elfPanose.bXHeight );
05568     }
05569 #endif /* ENABLE_EDITING */
05570   };
05571
05573
05576   class EMRCREATEPALETTE : public METARECORD, public ::EMRCREATEPALETTE
05577   {
05578   public:
05583     EMRCREATEPALETTE ( PALETTE* palette, HGDIOBJ handle );
05588     EMRCREATEPALETTE ( DATASTREAM& ds );
05592     bool serialize ( DATASTREAM ds )
05593     {
05594       ds « emr « ihPal « lgpl;
05595       return true;
05596     }
05600     int size ( void ) const { return emr.nSize; }
05606     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05607 #ifdef ENABLE_EDITING
05611     void edit ( void ) const
05612     {
05613       printf( "*CREATEPALETTE* (not really handled by libEMF)\n" );
05614     }
05615 #endif /* ENABLE_EDITING */
05616   };
05617
05619
05622   class EMRFILLPATH : public METARECORD, ::EMRFILLPATH {
05623   public:
05627     EMRFILLPATH ( const RECTL* bounds )
05628     {
05629       emr.iType = EMR_FILLPATH;
05630       emr.nSize = sizeof( ::EMRFILLPATH );
05631       rclBounds = *bounds;
05632     }
05637     EMRFILLPATH ( DATASTREAM& ds )
05638     {
05639       ds » emr » rclBounds;
05640     }
05644     bool serialize ( DATASTREAM ds )
05645     {
05646       ds « emr « rclBounds;
05647       return true;
05648     }
05652     int size ( void ) const { return emr.nSize; }
05658     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
```

```
05659     {
05660       EMF_UNUSED(source);
05661       FillPath( dc );
05662     }
05663 #ifdef ENABLE_EDITING
05667     void edit ( void ) const
05668     {
05669       printf( "*FILLPATH*\n" );
05670       edit_rectl( "rclBounds", rclBounds );
05671     }
05672 #endif /* ENABLE_EDITING */
05673   };
05675
05678   class EMRSTROKEPATH : public METARECORD, ::EMRSTROKEPATH {
05679   public:
05683     EMRSTROKEPATH ( const RECTL* bounds )
05684     {
05685       emr.iType = EMR_STROKEPATH;
05686       emr.nSize = sizeof( ::EMRSTROKEPATH );
05687       rclBounds = *bounds;
05688     }
05693     EMRSTROKEPATH ( DATASTREAM& ds )
05694     {
05695       ds » emr » rclBounds;
05696     }
05700     bool serialize ( DATASTREAM ds )
05701     {
05702       ds « emr « rclBounds;
05703       return true;
05704     }
05708     int size ( void ) const { return emr.nSize; }
05714     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05715     {
05716       EMF_UNUSED(source);
05717       StrokePath( dc );
05718     }
05719 #ifdef ENABLE_EDITING
05723     void edit ( void ) const
05724     {
05725       printf( "*STROKEPATH*\n" );
05726       edit_rectl( "rclBounds", rclBounds );
05727     }
05728 #endif /* ENABLE_EDITING */
05729   };
05731
05734   class EMRSTROKEANDFILLPATH : public METARECORD, ::EMRSTROKEANDFILLPATH {
05735   public:
05739     EMRSTROKEANDFILLPATH ( const RECTL* bounds )
05740     {
05741       emr.iType = EMR_STROKEANDFILLPATH;
05742       emr.nSize = sizeof( ::EMRSTROKEANDFILLPATH );
05743       rclBounds = *bounds;
05744     }
05749     EMRSTROKEANDFILLPATH ( DATASTREAM& ds )
05750     {
05751       ds » emr » rclBounds;
05752     }
05756     bool serialize ( DATASTREAM ds )
05757     {
05758       ds « emr « rclBounds;
05759       return true;
05760     }
05764     int size ( void ) const { return emr.nSize; }
05770     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05771     {
05772       EMF_UNUSED(source);
05773       StrokeAndFillPath( dc );
05774     }
05775 #ifdef ENABLE_EDITING
05779     void edit ( void ) const
05780     {
05781       printf( "*STROKEANDFILLPATH*\n" );
05782       edit_rectl( "rclBounds", rclBounds );
05783     }
05784 #endif /* ENABLE_EDITING */
05785   };
05787
05790   class EMRBEGINPATH : public METARECORD, ::EMRBEGINPATH {
05791   public:
05795     EMRBEGINPATH ( void )
05796     {
05797       emr.iType = EMR_BEGINPATH;
05798       emr.nSize = sizeof( ::EMRBEGINPATH );
05799     }
05804     EMRBEGINPATH ( DATASTREAM& ds )
05805     {
05806       ds » emr;
```

```
05807     }
05811     bool serialize ( DATASTREAM ds )
05812     {
05813       ds « emr;
05814       return true;
05815     }
05819     int size ( void ) const { return emr.nSize; }
05825     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05826     {
05827       EMF_UNUSED(source);
05828       BeginPath( dc );
05829     }
05830 #ifdef ENABLE_EDITING
05834     void edit ( void ) const
05835     {
05836       printf( "*BEGINPATH*\n" );
05837     }
05838 #endif /* ENABLE_EDITING */
05839   };
05841
05844   class EMRENDPATH : public METARECORD, ::EMRENDPATH {
05845   public:
05849     EMRENDPATH ( void )
05850     {
05851       emr.iType = EMR_ENDPATH;
05852       emr.nSize = sizeof( ::EMRENDPATH );
05853     }
05858     EMRENDPATH ( DATASTREAM& ds )
05859     {
05860       ds » emr;
05861     }
05865     bool serialize ( DATASTREAM ds )
05866     {
05867       ds « emr;
05868       return true;
05869     }
05873     int size ( void ) const { return emr.nSize; }
05879     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05880     {
05881       EMF_UNUSED(source);
05882       EndPath( dc );
05883     }
05884 #ifdef ENABLE_EDITING
05888     void edit ( void ) const
05889     {
05890       printf( "*ENDPATH*\n" );
05891     }
05892 #endif /* ENABLE_EDITING */
05893   };
05895
05898   class EMRCLOSEFIGURE : public METARECORD, ::EMRCLOSEFIGURE {
05899   public:
05903     EMRCLOSEFIGURE ( void )
05904     {
05905       emr.iType = EMR_CLOSEFIGURE;
05906       emr.nSize = sizeof( ::EMRCLOSEFIGURE );
05907     }
05912     EMRCLOSEFIGURE ( DATASTREAM& ds )
05913     {
05914       ds » emr;
05915     }
05919     bool serialize ( DATASTREAM ds )
05920     {
05921       ds « emr;
05922       return true;
05923     }
05927     int size ( void ) const { return emr.nSize; }
05933     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05934     {
05935       EMF_UNUSED(source);
05936       CloseFigure( dc );
05937     }
05938 #ifdef ENABLE_EDITING
05942     void edit ( void ) const
05943     {
05944       printf( "*CLOSEFIGURE*\n" );
05945     }
05946 #endif /* ENABLE_EDITING */
05947   };
05949
05953   class EMRSAVEDC : public METARECORD, ::EMRSAVEDC {
05954   public:
05958     EMRSAVEDC ( void )
05959     {
05960       emr.iType = EMR_SAVEDC;
05961       emr.nSize = sizeof( ::EMRSAVEDC );
05962     }
```

```
05967     EMRSAVEDC ( DATASTREAM& ds )
05968     {
05969       ds » emr;
05970     }
05974     bool serialize ( DATASTREAM ds )
05975     {
05976       ds « emr;
05977       return true;
05978     }
05982     int size ( void ) const { return emr.nSize; }
05988     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05989     {
05990       EMF_UNUSED(source);
05991       SaveDC( dc );
05992     }
05993 #ifdef ENABLE_EDITING
05997     void edit ( void ) const
05998     {
05999       printf( "*SAVEDC*\n" );
06000     }
06001 #endif /* ENABLE_EDITING */
06002   };
06004
06007   class EMRRESTOREDC : public METARECORD, ::EMRRESTOREDC {
06008   public:
06012     EMRRESTOREDC ( INT n )
06013     {
06014       emr.iType = EMR_RESTOREDC;
06015       emr.nSize = sizeof( ::EMRRESTOREDC );
06016       iRelative = n;
06017     }
06022     EMRRESTOREDC ( DATASTREAM& ds )
06023     {
06024       ds » emr » iRelative;
06025     }
06029     bool serialize ( DATASTREAM ds )
06030     {
06031       ds « emr « iRelative;
06032       return true;
06033     }
06037     int size ( void ) const { return emr.nSize; }
06043     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06044     {
06045       EMF_UNUSED(source);
06046       RestoreDC( dc, iRelative );
06047     }
06048 #ifdef ENABLE_EDITING
06052     void edit ( void ) const
06053     {
06054 #if defined(__LP64__)
06055       const char* FMT = "\tiRelative: %d\n";
06056 #else
06057       const char* FMT = "\tiRelative: %ld\n";
06058 #endif /* __x86_64__ */
06059       printf( "*RESTOREDC*\n" );
06060       printf( FMT, iRelative );
06061     }
06062 #endif /* ENABLE_EDITING */
06063   };
06065
06068   class EMRSETMETARGN : public METARECORD, ::EMRSETMETARGN {
06069   public:
06073     EMRSETMETARGN ( void )
06074     {
06075       emr.iType = EMR_SETMETARGN;
06076       emr.nSize = sizeof( ::EMRSETMETARGN );
06077     }
06082     EMRSETMETARGN ( DATASTREAM& ds )
06083     {
06084       ds » emr;
06085     }
06089     bool serialize ( DATASTREAM ds )
06090     {
06091       ds « emr;
06092       return true;
06093     }
06097     int size ( void ) const { return emr.nSize; }
06103     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06104     {
06105       EMF_UNUSED(source);
06106       SetMetaRgn( dc );
06107     }
06108 #ifdef ENABLE_EDITING
06112     void edit ( void ) const
06113     {
06114       printf( "*SETMETARGN*\n" );
06115     }
```

```
06116 #endif /* ENABLE_EDITING */
06117   };
06118
06120
06123   class PEN : public GRAPHICSOBJECT, public LOGPEN {
06124   public:
06128     PEN ( const LOGPEN* lpen )
06129     {
06130       lopnStyle = lpen->lopnStyle;
06131       lopnWidth = lpen->lopnWidth;
06132       lopnColor = lpen->lopnColor;
06133     }
06137     OBJECTTYPE getType ( void ) const { return O_PEN; }
06144     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06145     {
06146       contexts[dc] = emf_handle;
06147       return new EMRCREATEPEN( this, emf_handle );
06148     }
06149   };
06150
06152
06155   class EXTPEN : public GRAPHICSOBJECT, public EXTLOGPEN {
06156   public:
06160     EXTPEN ( const EXTLOGPEN* lpen )
06161     {
06162       elpPenStyle = lpen->elpPenStyle;
06163       elpWidth = lpen->elpWidth;
06164       elpBrushStyle = lpen->elpBrushStyle;
06165       elpColor = lpen->elpColor;
06166       elpHatch = lpen->elpHatch;
06167       elpNumEntries = 0;
06168       elpStyleEntry[0] = 0;
06169     }
06173     OBJECTTYPE getType ( void ) const { return O_EXTPEN; }
06180     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06181     {
06182       contexts[dc] = emf_handle;
06183       return new EMREXTCREATEPEN( this, emf_handle );
06184     }
06185   };
06186
06188
06191   class BRUSH : public GRAPHICSOBJECT, public LOGBRUSH {
06192   public:
06196     BRUSH ( const LOGBRUSH* lbrush )
06197     {
06198       lbStyle = lbrush->lbStyle;
06199       lbColor = lbrush->lbColor;
06200       lbHatch = lbrush->lbHatch;
06201     }
06205     OBJECTTYPE getType ( void ) const { return O_BRUSH; }
06212     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06213     {
06214       contexts[dc] = emf_handle;
06215       return new EMRCREATEBRUSHINDIRECT( this, emf_handle );
06216     }
06217   };
06218
06220
06223   class FONT : public GRAPHICSOBJECT, public EXTLOGFONTW {
06224   public:
06228     FONT ( const LOGFONTW* lfont )
06229     {
06230       this->elfLogFont = *lfont;
06231       // There are a lot more entries in the EXTLOGFONTW structure than
06232       // the API has values for, so we invent them here
06233       memset( &elfFullName, 0, sizeof elfFullName );
06234       memset( &elfStyle, 0, sizeof elfStyle );
06235       elfVersion = ELF_VERSION;
06236       elfStyleSize = 0;
06237       elfMatch = 0;
06238       elfReserved = 0;
06239       memset( &elfVendorId, 0, sizeof elfVendorId );
06240       elfCulture = ELF_CULTURE_LATIN;
06241       memset( &elfPanose, 1, sizeof(PANOSE) );
06242     }
06246     OBJECTTYPE getType ( void ) const { return O_FONT; }
06253     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06254     {
06255       contexts[dc] = emf_handle;
06256       return new EMREXTCREATEFONTINDIRECTW( this, emf_handle );
06257     }
06258   };
06259
06261
06264   class PALETTE : public GRAPHICSOBJECT, public LOGPALETTE {
06265   public:
```

```
06269     PALETTE ( const LOGPALETTE* lpalette )
06270     {
06271       EMF_UNUSED(lpalette);
06272       palVersion = 0;
06273       palNumEntries = 0;
06274       PALETTEENTRY zero_entry = { 0, 0, 0, 0 };
06275       palPalEntry[0] = zero_entry;
06276     }
06280     OBJECTTYPE getType ( void ) const { return O_PALETTE; }
06287     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06288     {
06289       contexts[dc] = emf_handle;
06290       return new EMRCREATEPALETTE( this, emf_handle );
06291     }
06292   };
06293
06295
06298   class EMRSETMITERLIMIT : public METARECORD, ::EMRSETMITERLIMIT {
06299   public:
06303     EMRSETMITERLIMIT ( FLOAT limit )
06304     {
06305       emr.iType = EMR_SETMITERLIMIT;
06306       emr.nSize = sizeof( ::EMRSETMITERLIMIT );
06307       eMiterLimit = limit;
06308     }
06313     EMRSETMITERLIMIT ( DATASTREAM& ds )
06314     {
06315        int miter_limit;
06316        ds » emr » miter_limit;
06317        eMiterLimit = float(miter_limit);
06318     }
06322     bool serialize ( DATASTREAM ds )
06323     {
06324        ds « emr « (int)eMiterLimit;
06325        return true;
06326     }
06330     int size ( void ) const { return emr.nSize; }
06336     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06337     {
06338       EMF_UNUSED(source);
06339       SetMiterLimit( dc, eMiterLimit, 0 );
06340     }
06341 #ifdef ENABLE_EDITING
06345     void edit ( void ) const
06346     {
06347       printf( "*SETMITERLIMIT*\n" );
06348       printf( "\teMiterLimit\t: %f\n", eMiterLimit );
06349     }
06350 #endif /* ENABLE_EDITING */
06351   };
06352
06354
06360   class METAFILEDEVICECONTEXT : public OBJECT {
06368     void init ( const RECT* size, LPCWSTR description_w ) {
06369
06370       // Evidently, metafile handles are numbered from 1, so don't
06371       // ever use 0.
06372
06373       handles.push_back( true );
06374
06375       // Keep some of our graphics state in a header record
06376
06377       header = new ENHMETAHEADER ( description_w );
06378       records.push_back( header );
06379
06380       // Compute the size and position of the metafile on the "page"
06381
06382       if ( size ) {
06383     update_frame = false;
06384
06385     header->rclFrame.left = size->left;
06386     header->rclFrame.top = size->top;
06387     header->rclFrame.right = size->right;
06388     header->rclFrame.bottom = size->bottom;
06389
06390     header->rclBounds.left =
06391       size->left * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06392     header->rclBounds.top =
06393       size->top * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06394     header->rclBounds.right =
06395       size->right * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06396     header->rclBounds.bottom =
06397       size->bottom * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06398       }
06399       else {
06400     update_frame = true;
06401
```

```
06402     header->rclBounds.left = -10;
06403     header->rclBounds.top = -10;
06404     header->rclBounds.right = 10;
06405     header->rclBounds.bottom = 10;
06406 
06407     header->rclFrame.left = (LONG)floor( (float)header->rclBounds.left *
06408       header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06409     header->rclFrame.top = (LONG)floor( (float)header->rclBounds.top *
06410       header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06411     header->rclFrame.right = (LONG)ceil( (float)header->rclBounds.right *
06412       header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06413     header->rclFrame.bottom = (LONG)ceil( (float)header->rclBounds.bottom *
06414       header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06415       }
06416 
06417       // Some default graphics state (are they really, though?)
06418 
06419       SIZEL default_resolution = { RESOLUTION, RESOLUTION };
06420       resolution = default_resolution;
06421       SIZEL default_viewport_ext = { 1, 1 };
06422       viewport_ext = default_viewport_ext;
06423       POINT default_viewport_org = { 0, 0 };
06424       viewport_org = default_viewport_org;
06425       SIZEL default_window_ext = { 1, 1 };
06426       window_ext = default_window_ext;
06427       POINT default_window_org = { 0, 0 };
06428       window_org = default_window_org;
06429 
06430       min_device_point = viewport_org;
06431       max_device_point = viewport_org;
06432 
06433       pen = (PEN*)globalObjects.find( BLACK_PEN | ENHMETA_STOCK_OBJECT );
06434       brush = (BRUSH*)globalObjects.find( BLACK_BRUSH | ENHMETA_STOCK_OBJECT );
06435       font = (FONT*)globalObjects.find( DEVICE_DEFAULT_FONT | ENHMETA_STOCK_OBJECT);
06436       palette = (PALETTE*)globalObjects.find( DEFAULT_PALETTE|ENHMETA_STOCK_OBJECT);
06437 
06438       text_alignment = TA_BASELINE;
06439       text_color = RGB(0,0,0);
06440       bk_color = RGB(0xff,0xff,0xff);
06441       bk_mode = OPAQUE;
06442       polyfill_mode = ALTERNATE;
06443       map_mode = MM_TEXT;
06444       miter_limit = 10.f;
06445 
06446       handle = globalObjects.add( this );
06447     }
06448 
06449   public:
06453     ::FILE* fp;
06458     DATASTREAM ds;
06462     ENHMETAHEADER* header;
06466     std::vector< EMF::METARECORD* > records;
06467 
06468     // Keep a small set of graphics state information
06469     SIZEL resolution;
06470     SIZEL viewport_ext;
06471     POINT viewport_org;
06472     SIZEL window_ext;
06473     POINT window_org;
06474     bool update_frame;
06475     POINT min_device_point;
06476     POINT max_device_point;
06477     POINT point;
06478     PEN* pen;
06479     BRUSH* brush;
06480     FONT* font;
06481     PALETTE* palette;
06482     UINT text_alignment;
06483     COLORREF text_color;
06484     COLORREF bk_color;
06485     INT bk_mode;
06486     INT polyfill_mode;
06487     INT map_mode;
06488     FLOAT miter_limit;
06489 
06495     std::vector< bool > handles;
06496 
06502     std::map< HGDIOBJ, HGDIOBJ > emf_handles;
06503 
06514       METAFILEDEVICECONTEXT ( FILE* fp_, const RECT* size,
06515                   LPCWSTR description_w )
06516     : fp(fp_), ds( fp_ )
06517     {
06518       init( size, description_w );
06519     }
06524     virtual ~METAFILEDEVICECONTEXT ( )
06525     {
```

```
06526       // Purge all the metarecords (if there are any) {this include the
06527       // header record, too}
06528       if ( records.size() > 0 )
06529     deleteMetafile();
06530     }
06534     OBJECTTYPE getType ( void ) const { return O_METAFILEDEVICECONTEXT; }
06539     DWORD nextHandle ( void )
06540     {
06541       for ( unsigned int i = 1; i < handles.size(); i++ ) {
06542     if ( !handles[i] ) {
06543       handles[i] = true;
06544       return i;
06545     }
06546       }
06547       handles.push_back( true );
06548       // Well, it appears that even StockObject handles count for something.
06549       // Not sure what the right value here is, then.
06550       header->nHandles = handles.size();
06551       return handles.size()-1;
06552     }
06556     void clearHandle ( DWORD handle )
06557     {
06558       if ( handle < handles.size() ) {
06559         handles[handle] = false;
06560       }
06561     }
06567     void appendRecord ( METARECORD* record )
06568     {
06569       records.push_back( record );
06570
06571       header->nBytes += record->size();
06572       header->nRecords++;
06573     }
06579     void appendHandle ( METARECORD* record )
06580     {
06581       records.push_back( record );
06582
06583       header->nBytes += record->size();
06584       header->nRecords++;
06585     }
06590     void deleteMetafile ( void )
06591     {
06592       for ( auto r = records.begin(); r != records.end(); r++ ) {
06593     delete *r;
06594       }
06595       records.clear();
06596     }
06601     void mergePoint ( const LONG& x, const LONG& y )
06602     {
06603       POINT p;
06604       p.x = x;
06605       p.y = y;
06606       mergePoint( p );
06607     }
06612     void mergePoint( const POINT& p )
06613     {
06614       POINT device_point;
06615
06616       // *** Note, it's possible for the global transformation matrix to
06617       // affect this too. ***
06618
06619       int window_width  = window_ext.cx <= 0 ? 1 : window_ext.cx;
06620       int window_height = window_ext.cy <= 0 ? 1 : window_ext.cy;
06621
06622       device_point.x = (LONG)( (float)( p.x - window_org.x ) / window_width *
06623     viewport_ext.cx + viewport_org.x );
06624
06625       device_point.y = (LONG)( (float)( p.y - window_org.y ) / window_height *
06626     viewport_ext.cy + viewport_org.y );
06627
06628       // If the user didn't specify a bounding rectangle in the constructor,
06629       // compute one from this data, too.
06630       if ( device_point.x < min_device_point.x ) {
06631     min_device_point.x = device_point.x;
06632     if ( update_frame ) {
06633       header->rclBounds.left = min_device_point.x - 10;
06634           int device_width = header->szlDevice.cx <= 0 ? 1 : header->szlDevice.cx;
06635       header->rclFrame.left = (LONG)floor( (float)header->rclBounds.left *
06636         header->szlMillimeters.cx * 100 / device_width );
06637     }
06638       }
06639       else if ( device_point.x > max_device_point.x ) {
06640     max_device_point.x = device_point.x;
06641     if ( update_frame ) {
06642       header->rclBounds.right = max_device_point.x + 10;
06643           int device_width = header->szlDevice.cx <= 0 ? 1 : header->szlDevice.cx;
06644       header->rclFrame.right = (LONG)ceil( (float)header->rclBounds.right *
```

```
06645         header->szlMillimeters.cx * 100 / device_width );
06646     }
06647       }
06648
06649       if ( device_point.y < min_device_point.y ) {
06650     min_device_point.y = device_point.y;
06651     if ( update_frame ) {
06652       header->rclBounds.top = min_device_point.y - 10;
06653           int device_height = header->szlDevice.cy <= 0 ? 1 : header->szlDevice.cy;
06654       header->rclFrame.top = (LONG)floor( (float)header->rclBounds.top *
06655         header->szlMillimeters.cy * 100 / device_height );
06656     }
06657       }
06658       else if ( device_point.y > max_device_point.y ) {
06659     max_device_point.y = device_point.y;
06660     if ( update_frame ) {
06661       header->rclBounds.bottom = max_device_point.y + 10;
06662           int device_height = header->szlDevice.cy <= 0 ? 1 : header->szlDevice.cy;
06663       header->rclFrame.bottom = (LONG)ceil( (float)header->rclBounds.bottom *
06664         header->szlMillimeters.cy * 100 / device_height );
06665     }
06666       }
06667     }
06668   };
06669
06670 } // close EMF namespace
06671
06672 #undef EMF_UNUSED
06673 #endif /* _LIBEMF_H */
```

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