

libemf

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## 1 Hierarchical Index

### 1.1 Class Hierarchy

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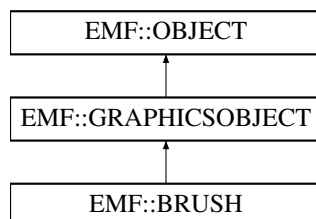
## 4 Data Structure Documentation

### 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

<i>lbrush</i>	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**

<i>dc</i>	handle of device context into which this object is being selected.
<i>emf_handle</i>	the EMF handle associated with the <a href="#">BRUSH</a> .

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

<i>array</i>	pointer to array of bytes
<i>n</i>	number of bytes in array

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

<i>string</i>	pointer to array of single byte characters.
<i>length</i>	number of bytes in array.

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 &szel)
- [DATASTREAM](#) & [operator>>](#) (SIZEL &szel)
- [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

<i>fp</i>	optional file pointer (but must be assigned before any output occurs.)
-----------	--

#### 4.4.3 Member Function Documentation

##### [operator<<\(\)](#) [1/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
```

```
const ::EMR & emr ) [inline]
```

Output an Enhanced Metafile Record header.

#### Parameters

<i>emr</i>	Enhanced Metafile Record header to output.
------------	--

#### **operator<<()** [2/31]

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

Output an Enhanced Metafile Text Record.

#### Parameters

<i>text</i>	Enhanced Metafile Text Record to output.
-------------	--

#### **operator<<()** [3/31]

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

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

#### Parameters

<i>byte</i>	byte to output.
-------------	-----------------

#### **operator<<()** [4/31]

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

Output an array of BYTES.

#### Parameters

<i>array</i>	array of BYTES to output.
--------------	---------------------------

References [EMF::BYTEARRAY::array\\_](#), and [EMF::BYTEARRAY::n\\_](#).

#### **operator<<()** [5/31]

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

Output a single byte character string.

#### Parameters

<i>charstr</i>	structure to output.
----------------	----------------------

References [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

<i>dword</i>	double word (long) to output.
--------------	-------------------------------

#### **operator<<()** [7/31]

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

Output an array of double words (longs).

#### Parameters

<i>array</i>	array of double words (longs) to output.
--------------	--

References [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

<i>font</i>	Extended Logical Font definition to output.
-------------	---

#### **operator<<()** [9/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
```

```
const EXTLOGPEN & pen ) [inline]
```

Output an Extended Logical Pen definition.

#### Parameters

<i>pen</i>	Extended Logical Pen definition to output.
------------	--

#### **operator<<()** [10/31]

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

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

#### Parameters

<i>float</i> $\leftrightarrow$ —	single precision float to output.
-------------------------------------	-----------------------------------

#### **operator<<()** [11/31]

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

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

#### Parameters

<i>int</i> $\leftrightarrow$ —	(long) int to output.
-----------------------------------	-----------------------

#### **operator<<()** [12/31]

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

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

#### Parameters

<i>word</i>	(short, 16-bit) word to output.
-------------	---------------------------------

#### **operator<<()** [13/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (  

```



```
const INTARRAY & array ) [inline]
```

Output an array of (long) ints.

#### Parameters

<i>array</i>	array of (long) ints to output.
--------------	---------------------------------

References [EMF::INTARRAY::ints\\_](#), and [EMF::INTARRAY::n\\_](#).

#### **operator<<()** [14/31]

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

Output a Logical Brush definition.

#### Parameters

<i>brush</i>	Logical Brush definition to output.
--------------	-------------------------------------

#### **operator<<()** [15/31]

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

Output a Logical Font definition (using WCHAR strings).

#### Parameters

<i>font</i>	Logical Font definition to output.
-------------	------------------------------------

#### **operator<<()** [16/31]

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

Output a Logical Palette.

#### Parameters

<i>palette</i>	Logical Palette to output.
----------------	----------------------------

#### **operator<<()** [17/31]

```
DATASTREAM & EMF::DATASTREAM::operator<< (
```

```
const LOGPEN & pen ) [inline]
```

Output a Logical Pen definition.

#### Parameters

<i>pen</i>	Logical Pen definition to output.
------------	-----------------------------------

#### **operator<<()** [18/31]

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

Output a long int to the stream (swabbed).

#### Parameters

<i>long</i> ↔	long int to output.
—	

#### **operator<<()** [19/31]

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

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

#### Parameters

<i>padding</i>	simple padding structure (length and number of nulls).
----------------	--

References [EMF::PADDING::padding\\_](#), and [EMF::PADDING::size\\_](#).

#### **operator<<()** [20/31]

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

Output a Panose structure.

#### Parameters

<i>panose</i>	Panose structure to output.
---------------	-----------------------------

**operator<<()** [21/31]

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

Output a POINT structure.

**Parameters**

<i>point</i>	POINT to output.
--------------	------------------

**operator<<()** [22/31]

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

Output a POINT16 structure.

**Parameters**

<i>point</i>	POINT16 to output.
--------------	--------------------

**operator<<()** [23/31]

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

Output an array of POINT16s.

**Parameters**

<i>array</i>	array of POINT16s to output.
--------------	------------------------------

References [EMF::POINT16ARRAY::n\\_](#), and [EMF::POINT16ARRAY::points\\_](#).

**operator<<()** [24/31]

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

Output a POINTL structure.

**Parameters**

<i>pointl</i>	POINTL to output.
---------------	-------------------

**operator<<()** [25/31]

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

Output an array of POINTLs.

**Parameters**

<i>array</i>	array of POINTLs to output.
--------------	-----------------------------

References [EMF::POINTLARRAY::n\\_](#), and [EMF::POINTLARRAY::points\\_](#).

**operator<<()** [26/31]

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

Output a RECTL structure.

**Parameters**

<i>rectl</i>	structure to output.
--------------	----------------------

**operator<<()** [27/31]

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

Output a SIZEL structure.

**Parameters**

<i>sizel</i>	structure to output.
--------------	----------------------

**operator<<()** [28/31]

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

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

**Parameters**

<i>uint</i>	(long) unsigned int to output.
-------------	--------------------------------

**operator<<()** [29/31]

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

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

**Parameters**

<i>wcharstr</i>	structure to output.
-----------------	----------------------

References [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**

<i>word</i>	(short) word to output.
-------------	-------------------------

**operator<<()** [31/31]

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

Output an XFORM structure.

**Parameters**

<i>xform</i>	XFORM to output.
--------------	------------------

**operator>>()** [1/30]

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

Input an Enhanced Metafile Record header.

**Parameters**

<i>emr</i>	destination of Enhanced Metafile Record header.
------------	---

**operator>>()** [2/30]

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

Input an Enhanced Metafile Text Record.

**Parameters**

<i>text</i>	destination of Enhanced Metafile Text Record.
-------------	---

**operator>>()** [3/30]

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

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

**Parameters**

<i>byte</i>	destination for input byte.
-------------	-----------------------------

**operator>>()** [4/30]

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

Input an array of BYTES.

**Parameters**

<i>array</i>	destination of array of input BYTES.
--------------	--------------------------------------

References [EMF::BYTEARRAY::array\\_](#), and [EMF::BYTEARRAY::n\\_](#).

**operator>>()** [5/30]

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

Input a single byte character string.

**Parameters**

<i>charstr</i>	destination of input CHAR string.
----------------	-----------------------------------

References [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**

<i>dword</i>	destination for double word (long).
--------------	-------------------------------------

**operator>>()** [7/30]

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

Input an array of double words (longs).

**Parameters**

<i>array</i>	destination of array of input double words (longs).
--------------	---

References [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**

<i>font</i>	destination of Extended Logical Font definition.
-------------	--

**operator>>()** [9/30]

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

Input an Extended Logical Pen definition.

**Parameters**

<i>pen</i>	destination of Extended Logical Pen definition.
------------	---

**operator>>()** [10/30]

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

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

**Parameters**

<i>float_</i> ↔ —	destination for single precision float.
----------------------	---

**operator>>()** [11/30]

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

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

**Parameters**

<i>int_</i> ↔ —	destination for (long) int.
--------------------	-----------------------------

**operator>>()** [12/30]

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

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

**Parameters**

<i>word</i>	destination for (short, 16-bit) word.
-------------	---------------------------------------

**operator>>()** [13/30]

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

Input an array of (long) ints.

**Parameters**

<i>array</i>	destination of array of input (long) ints.
--------------	--

References [EMF::INTARRAY::ints\\_](#), and [EMF::INTARRAY::n\\_](#).



**operator>>()** [14/30]

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

Input a Logical Brush definition.

**Parameters**

<i>brush</i>	destination of Logical Brush definition.
--------------	--

**operator>>()** [15/30]

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

Input a Logical Font definition (using WCHAR strings).

**Parameters**

<i>font</i>	destination of Logical Font definition.
-------------	---

**operator>>()** [16/30]

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

Input a Logical Palette.

**Parameters**

<i>palette</i>	destination of input Logical Palette.
----------------	---------------------------------------

**operator>>()** [17/30]

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

Input a Logical Pen definition.

**Parameters**

<i>pen</i>	destination of Logical Pen definition.
------------	--

**operator>>()** [18/30]

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

Input a long int from the stream (swabbed).

**Parameters**

<i>long</i> ↔ _	destination for long int.
--------------------	---------------------------

**operator>>()** [19/30]

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

Input a Panose structure.

**Parameters**

<i>panose</i>	destinatino of input Panose structure.
---------------	--

**operator>>()** [20/30]

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

Input a POINT structure.

**Parameters**

<i>point</i>	destination of input POINT.
--------------	-----------------------------

**operator>>()** [21/30]

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

Input a POINT16 structure.

**Parameters**

<i>point</i>	destination of input POINT16.
--------------	-------------------------------

**operator>>()** [22/30]

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

Input an array of POINT16s.

**Parameters**

<i>array</i>	destination of array of input POINT16s.
--------------	---

References [EMF::POINT16ARRAY::n\\_](#), and [EMF::POINT16ARRAY::points\\_](#).

**operator>>()** [23/30]

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

Input a POINTL structure.

**Parameters**

<i>pointl</i>	destination of input POINTL.
---------------	------------------------------

**operator>>()** [24/30]

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

Input an array of POINTLs.

**Parameters**

<i>array</i>	destination of array of input POINTLs.
--------------	--

References [EMF::POINTLARRAY::n\\_](#), and [EMF::POINTLARRAY::points\\_](#).

**operator>>()** [25/30]

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

Input a RECTL structure.

**Parameters**

<i>rectl</i>	destination of input RECTL.
--------------	-----------------------------

**operator>>()** [26/30]

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

Input a SIZEL structure.

**Parameters**

<i>szel</i>	destination of input SIZEL.
-------------	-----------------------------

**operator>>()** [27/30]

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

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

**Parameters**

<i>uint</i>	destination for (long) unsigned int.
-------------	--------------------------------------

**operator>>()** [28/30]

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

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

**Parameters**

<i>wcharstr</i>	destination of input WCHAR string.
-----------------	------------------------------------

References [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**

<i>word</i>	destination for (short) word.
-------------	-------------------------------

**operator>>()** [30/30]

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

Input an XFORM structure.

#### Parameters

<i>xform</i>	destination of input XFORM.
--------------	-----------------------------

#### setStream()

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

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

#### Parameters

<i>fp</i>	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

<i>dwords</i>	pointer to double words.
<i>n</i>	number double words in array.

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

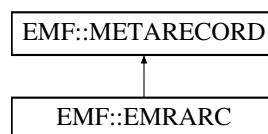
- libemf.h

## 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

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

#### EMRARC() [2/2]

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

Construct an Arc record from the input datastream.

##### Parameters

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

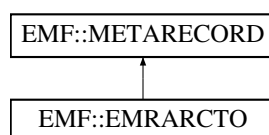
- libemf.h

## 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

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

#### EMRARCTO() [2/2]

```
EMF::EMRARCTO::EMRARCTO (
```

```
DATASTREAM & ds ) [inline]
```

Construct an ArcTo record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

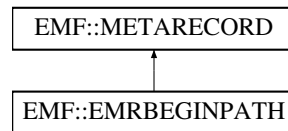
- libemf.h

## 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**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

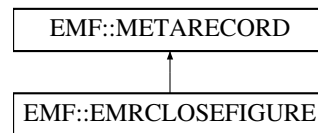
- libemf.h

## 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**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

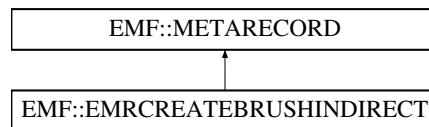
- libemf.h

## 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

<i>brush</i>	an instance of a <a href="#">BRUSH</a> object.
<i>handle</i>	the <a href="#">BRUSH</a> object's handle.

**EMRCREATEBRUSHINDIRECT()** [2/2]

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

Create a CreateBrushIndirect record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

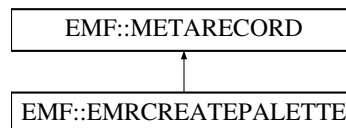
- libemf.h
- libemf.cpp

## 4.11 EMF::EMRCREATEPALETTE Class Reference

EMF Palette.

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

Inheritance diagram for EMF::EMRCREATEPALETTE:



### Public Member Functions

- [EMRCREATEPALETTE](#) ([PALETTE](#) \*palette, HGDI OBJ 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,
    HGDI OBJ handle )
  
```

**Parameters**

<i>palette</i>	an instance of a <a href="#">PALETTE</a> object.
<i>handle</i>	the <a href="#">PALETTE</a> object's handle.

**EMRCREATEPALETTE() [2/2]**

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

Construct a CreatePalette record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

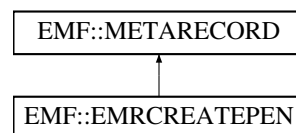
- libemf.h
- libemf.cpp

**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**

<i>pen</i>	an instance of a <a href="#">PEN</a> object.
<i>handle</i>	the <a href="#">PEN</a> object's handle.

**EMRCREATEPEN() [2/2]**

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

Construct a CreatePen record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

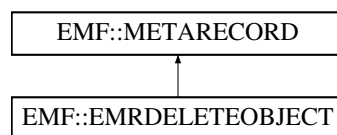
- libemf.h
- libemf.cpp

**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**

<i>object</i>	the object to delete.
---------------	-----------------------

**EMRDELETEOBJECT() [2/2]**

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

Construct a DeleteObject record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

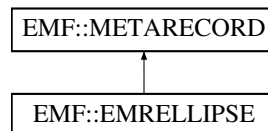
- libemf.h
- libemf.cpp

**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**

<i>left</i>	x position of left extrema of ellipse.
<i>top</i>	y position of top extrema of ellipse.
<i>right</i>	x position of right extrema of ellipse.
<i>bottom</i>	y position of bottom extrema of ellipse.

**EMRELLIPSE() [2/2]**

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

Construct an Ellipse record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

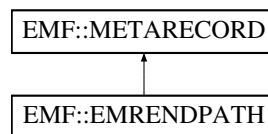
- libemf.h

**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

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

## Parameters

<i>ds</i>	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:

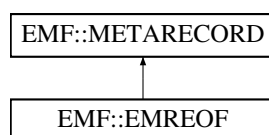
- libemf.h

**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

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

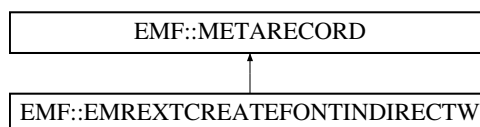
- libemf.h

**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

<i>font</i>	an instance of a <a href="#">FONT</a> object.
<i>handle</i>	the <a href="#">FONT</a> object's handle.

#### EMREXTCREATEFONTINDIRECTW() [2/2]

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

Construct a CreateFontIndirectW record from the input stream.

Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

### serialize()

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

#### Parameters

<i>ds</i>	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:

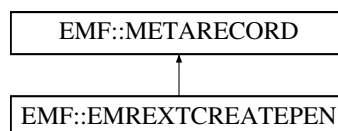
- libemf.h
- libemf.cpp

## 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

<i>pen</i>	an instance of a <a href="#">PEN</a> object.
<i>handle</i>	the <a href="#">PEN</a> object's handle.

#### EMREXTCREATEPEN() [2/2]

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

Construct a ExtCreatePen record from the input stream.

##### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

**serialize()**

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

## Parameters

<i>ds</i>	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:

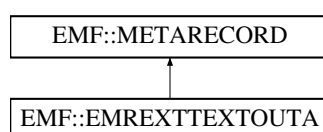
- libemf.h
- libemf.cpp

**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

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

#### [EMREXTTEXTOUTA\(\)](#) [2/2]

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

Construct a ExtTextOutA record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

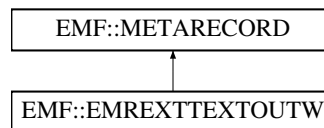
- libemf.h

## 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

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

**EMREXTTEXTOUTW()** [2/2]

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

Construct a ExtTextOutA record from the input stream.

## Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

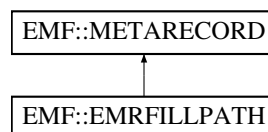
- libemf.h

**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

<i>bounds</i>	overall bounding box of polygon.
---------------	----------------------------------

#### EMRFILLPATH() [2/2]

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

Create a FillPath record from input stream.

##### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

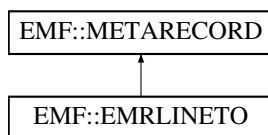
- libemf.h

**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

<i>x</i>	x position to draw line to in logical coordinates.
<i>y</i>	y position to draw line to in logical coordinates.

#### EMRLINETO() [2/2]

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

Construct a LineTo record from the input stream.

Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

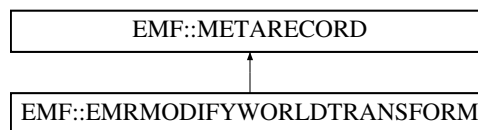
- libemf.h

**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

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

#### EMRMODIFYWORLDTRANSFORM() [2/2]

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

Construct a ModifyWorldTransform from the input datastream.

##### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

#### Parameters

<i>ds</i>	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:

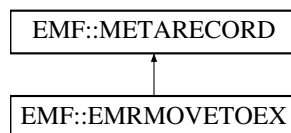
- libemf.h

## 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**

<i>x</i>	new x position in logical coordinates.
<i>y</i>	new y position in logical coordinates.

**EMRMOVETOEX()** [2/2]

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

Construct a MoveToEx record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

#### Parameters

<i>ds</i>	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:

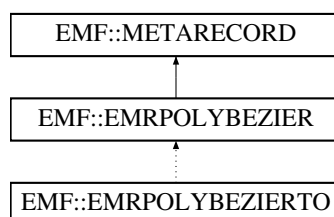
- libemf.h

## 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**

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYBEZIER() [2/2]**

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

Construct a PolyBezier record from the input stream.

**Parameters**

<i>ds</i>	Metafile datastream.
-----------	----------------------

**~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

Reimplemented in [EMF::EMRPOLYBEZIERTO](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

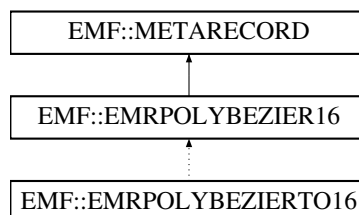
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

#### EMRPOLYBEZIER16() [2/3]

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

Convenience constructor with POINTs.

##### Parameters

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

### EMRPOLYBEZIER16() [3/3]

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

Construct a PolyBezier record from the input stream.

#### Parameters

<i>ds</i>	Metafile datastream.
-----------	----------------------

### ~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

Reimplemented in [EMF::EMRPOLYBEZIERTO16](#).

### serialize()

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

#### Parameters

<i>ds</i>	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:

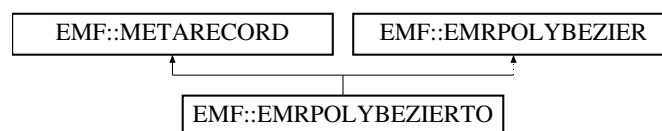
- libemf.h

**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

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYBEZIERTO()** [2/2]

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

Construct a PolyBezier record from the input stream.

## Parameters

<i>ds</i>	Metafile datastream.
-----------	----------------------

**~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

## Parameters

<i>ds</i>	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:

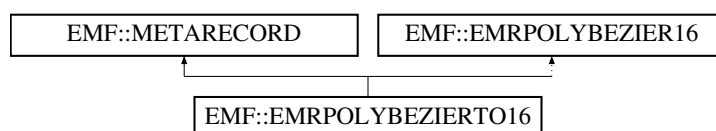
- libemf.h

**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

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

#### EMRPOLYBEZIERTO16() [2/3]

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

Convenience constructor with POINTs.

##### Parameters

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

#### EMRPOLYBEZIERTO16() [3/3]

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

Construct a PolyBezier record from the input stream.

##### Parameters

<i>ds</i>	Metafile datastream.
-----------	----------------------

## ~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

##### Parameters

<i>ds</i>	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:

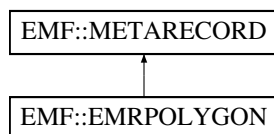
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>n</i>	number of vertices in points.



**EMRPOLYGON()** [2/2]

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

Construct a Polygon record from the input stream.

**Parameters**

<i>ds</i>	Metafile datastream.
-----------	----------------------

**~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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

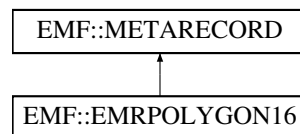
- libemf.h

**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

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYGON16()** [2/3]

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

Additional constructor which takes a POINT16 array.

## Parameters

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYGON16()** [3/3]

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

Construct a Polygon record from the input stream.

## Parameters

<i>ds</i>	Metafile datastream.
-----------	----------------------

**~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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

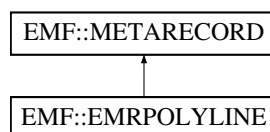
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polyline.
<i>points</i>	array of polyline vertices.
<i>n</i>	number of vertices in points.

#### ~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**

<i>ds</i>	Metafile datastream.
-----------	----------------------

**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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

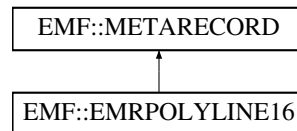
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polyline.
<i>points</i>	array of polyline vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYLINE16()** [2/3]

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

Constructor with POINTs.

**Parameters**

<i>bounds</i>	overall bounding box of polyline.
<i>points</i>	array of polyline vertices.
<i>n</i>	number of vertices in points.

**~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**

<i>ds</i>	Metafile datastream.
-----------	----------------------

**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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.



Implements [EMF::METARECORD](#).

### serialize()

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

#### Parameters

<i>ds</i>	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:

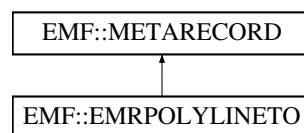
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

#### EMRPOLYLINETO() [2/2]

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

Construct a PolylineTo record from the input stream.

##### Parameters

<i>ds</i>	Metafile datastream.
-----------	----------------------

#### ~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

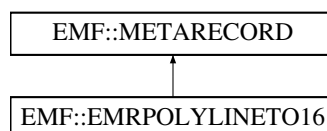
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

#### [EMRPOLYLINETO16\(\)](#) [2/3]

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

Convenience constructor with POINTs.

#### Parameters

<i>bounds</i>	overall bounding box of polybezier curve.
<i>points</i>	array of polybezier vertices.
<i>n</i>	number of vertices in points.

**EMRPOLYLINETO16()** [3/3]

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

Construct a PolylineTo record from the input stream.

**Parameters**

<i>ds</i>	Metafile datastream.
-----------	----------------------

**~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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

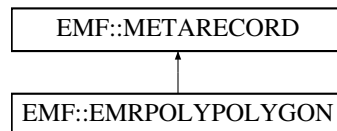
- libemf.h

**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

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>counts</i>	array of number of vertices in each polygon.
<i>polygons</i>	number of polygons.

**~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

<i>ds</i>	Metafile datastream.
-----------	----------------------

**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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

## Parameters

<i>ds</i>	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:

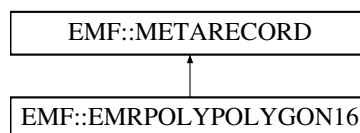
- libemf.h

**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

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>counts</i>	array of number of vertices in each polygon.
<i>polygons</i>	number of polygons.

#### 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

<i>bounds</i>	overall bounding box of polygon.
<i>points</i>	array of polygon vertices.
<i>counts</i>	array of number of vertices in each polygon.
<i>polygons</i>	number of polygons.

#### ~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

<i>ds</i>	Metafile datastream.
-----------	----------------------

## 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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

### Parameters

<i>ds</i>	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:

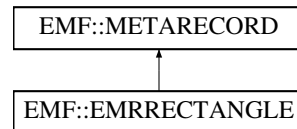
- libemf.h

## 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

<i>left</i>	x position of left side of rectangle.
<i>top</i>	y position of top side of rectangle.
<i>right</i>	x position of right edge of rectangle.
<i>bottom</i>	y position of bottom edge of rectangle.

**EMRRECTANGLE()** [2/2]

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

Construct a Rectangle record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

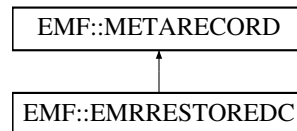
- libemf.h

## 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.

##### EMRRESTOREDC() [2/2]

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

Construct an Restoredc record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

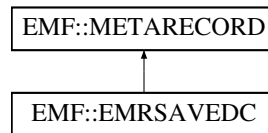
- libemf.h

## 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**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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

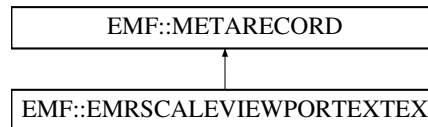


## 4.40 EMF::EMRSCALEVIEWPORTEXTEX Class Reference

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

<i>x_num</i>	numerator of x scale
<i>x_den</i>	denominator of x scale
<i>y_num</i>	numerator of y scale
<i>y_den</i>	denominator of y scale

**EMRSCALEVIEWPORTEXTEx() [2/2]**

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

Construct a ScaleViewportExtEx record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

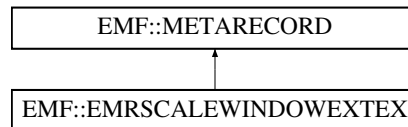
- libemf.h

## 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

<i>x_num</i>	numerator of x scale
<i>x_den</i>	denominator of x scale
<i>y_num</i>	numerator of y scale
<i>y_den</i>	denominator of y scale

**EMRSCALEWINDOWEXTEx()** [2/2]

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

Construct a ScaleWindowExtEx record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

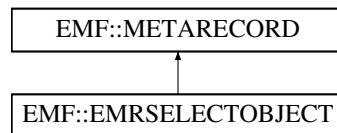
- libemf.h

## 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

<i>object</i>	the object to make active.
---------------	----------------------------

##### EMRSELECTOBJECT() [2/2]

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

Construct a SelectObject record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

References [EMF::METAFILEDEVICECONTEXT::emf\\_handles](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

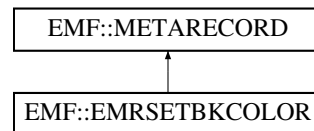
- libemf.h
- libemf.cpp

## 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

<i>color</i>	background color
--------------	------------------

##### EMRSETBKCOLOR() [2/2]

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

Construct a SetBkColor record from the input datastream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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

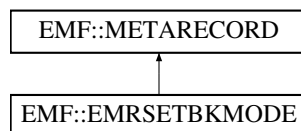


## 4.44 EMF::EMRSETBKMODE Class Reference

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

<i>mode</i>	background mode.
-------------	------------------

##### EMRSETBKMODE() [2/2]

```
EMF::EMRSETBKMODE::EMRSETBKMODE (
```

```
DATASTREAM & ds ) [inline]
```

Construct a SetBkMode record from the input datastream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

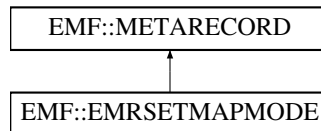
- libemf.h

## 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

<i>mode</i>	window mapping mode
-------------	---------------------

##### EMRSETMAPMODE() [2/2]

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

Construct a SetMapMode record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

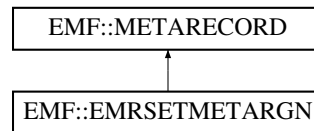
- libemf.h

## 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**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

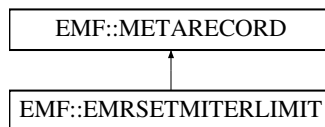
- libemf.h

## 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

<i>limit</i>	miter length limit.
--------------	---------------------

##### EMRSETMITERLIMIT() [2/2]

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

Construct a SetMiterLimit record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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

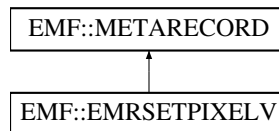


## 4.48 EMF::EMRSETPIXELV Class Reference

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

<i>x</i>	x position at which to draw pixel.
<i>y</i>	y position at which to draw pixel.
<i>color</i>	color of pixel.

**EMRSETPIXELV()** [2/2]

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

Construct a SetPixelV record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

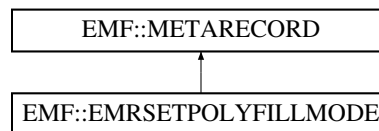
- libemf.h

## 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

<i>mode</i>	background mode.
-------------	------------------

##### EMRSETPOLYFILLMODE() [2/2]

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

Construct a SetPolyFillMode record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

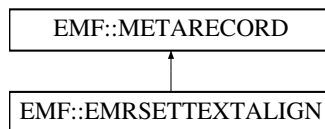
- libemf.h

## 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

<i>mode</i>	text alignment mode.
-------------	----------------------

##### EMRSETTEXTALIGN() [2/2]

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

Construct a SetTextAlign record from the input datastream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### **serialize()**

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

#### Parameters

<i>ds</i>	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:

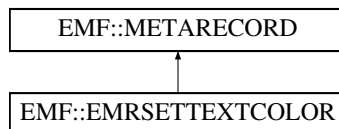
- libemf.h

## 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

<i>color</i>	text foreground color
--------------	-----------------------

##### EMRSETTEXTCOLOR() [2/2]

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

Construct a SetTextColor record from the input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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

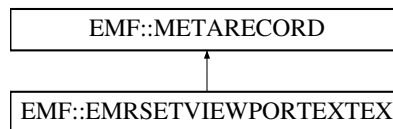


## 4.52 EMF::EMRSETVIEWPORTEXTEx Class Reference

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

<i>cx</i>	width of viewport in device coordinates
<i>cy</i>	height of viewport in device coordinates

## EMRSETVIEWPORTEXTEx() [2/2]

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

Construct a SetViewportExtEx record from the input stream.

### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

### Parameters

<i>ds</i>	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:

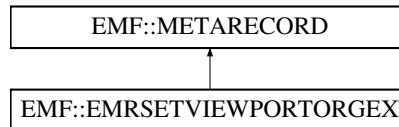
- libemf.h

## 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

<i>x</i>	x position of the viewport in device coordinates
<i>y</i>	y position of the viewport in device coordinates

**EMRSETVIEWPORTORGEX()** [2/2]

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

Construct a SetVieportOrgEx record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

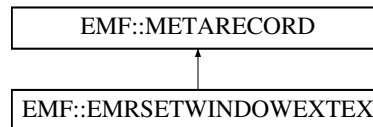
- libemf.h

## 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

<i>cx</i>	width of window in logical coordinates.
<i>cy</i>	height of window in logical coordinates.

## EMRSETWINDOWEXTEx() [2/2]

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

Construct a SetWindowExtEx record from the input stream.

### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

### Parameters

<i>ds</i>	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:

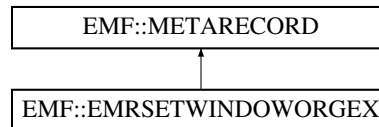
- libemf.h

## 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

<i>x</i>	x coordinate of window origin in logical coordinates
<i>y</i>	y coordinate of window origin in logical coordinates

## EMRSETWINDOWORGEX() [2/2]

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

Construct a SetWindowOrgEx record from the input stream.

### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

### serialize()

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

### Parameters

<i>ds</i>	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

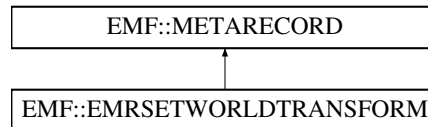


## 4.56 EMF::EMRSETWORLDTRANSFORM Class Reference

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

<i>transform</i>	the new transformation
------------------	------------------------

**EMRSETWORLDTRANSFORM()** [2/2]

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

Construct a SetWorldTransform record from the input stream.

**Parameters**

<i>ds</i>	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**

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

**serialize()**

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

**Parameters**

<i>ds</i>	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:

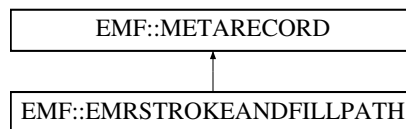
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polygon.
---------------	----------------------------------

##### EMRSTROKEANDFILLPATH() [2/2]

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

Create a StrokeandfillPath record from input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### serialize()

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

#### Parameters

<i>ds</i>	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:

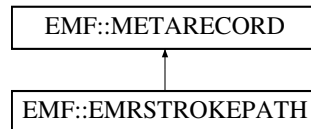
- libemf.h

## 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

<i>bounds</i>	overall bounding box of polygon.
---------------	----------------------------------

##### EMRSTROKEPATH() [2/2]

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

Create a StrokePath record from input stream.

#### Parameters

<i>ds</i>	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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	device context for execute.

Implements [EMF::METARECORD](#).

#### **serialize()**

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

#### Parameters

<i>ds</i>	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:

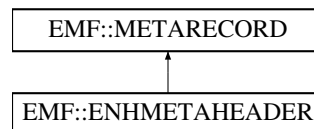
- libemf.h

## 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

<i>description</i>	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.
--------------------	---

## ~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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	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

<i>ds</i>	Metafile datastream.
-----------	----------------------

Implements [EMF::METARECORD](#).

#### size()

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

Internally computed size of this record.

Implements [EMF::METARECORD](#).

Referenced by [EMF::METAFILEDEVICECONTEXT::nextHandle\(\)](#).



**unserialize()**

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

Read a header record from the datastream.

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

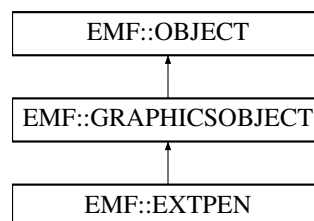
- libemf.h

**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

<i>lpen</i>	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

<i>dc</i>	handle of device context into which this object is being selected.
<i>emf_handle</i>	the EMF handle associated with the <a href="#">PEN</a> .

Implements [EMF::GRAPHICSOBJECT](#).

References [EMF::GRAPHICSOBJECT::contexts](#).

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

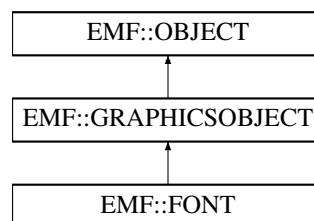
- libemf.h

## 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

<i>lfont</i>	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

<i>dc</i>	handle of device context into which this object is being selected.
<i>emf_handle</i>	the EMF handle associated with the <a href="#">FONT</a> .

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\\_setviewporttextex](#) (DATASTREAM &ds)  
*Create a new EMRSETVIEWPORTEXTEX record.*
- static EMF::METARECORD \* [new\\_setwindowtextex](#) (DATASTREAM &ds)  
*Create a new EMRSETWINDOWEXTEX record.*
- static EMF::METARECORD \* [new\\_scaleviewporttextex](#) (DATASTREAM &ds)  
*Create a new SCALEVIEWPORTEXTEX record.*
- static EMF::METARECORD \* [new\\_scalewindowtextex](#) (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

<i>object</i>	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**

<i>handle</i>	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**

<i>iType</i>	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

<i>object</i>	pointer to object to delete.
---------------	------------------------------

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

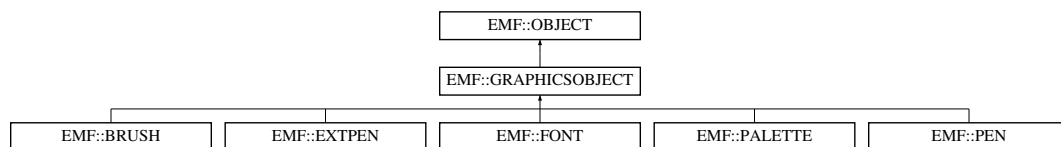
- libemf.h
- libemf.cpp

## 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

<i>dc</i>	the handle to the device context.
<i>handle</i>	(appears not to used. Note the handle is really assigned at serialization time.)

Implemented in [EMF::PEN](#), [EMF::EXTPEN](#), [EMF::BRUSH](#), [EMF::FONT](#), and [EMF::PALETTE](#).

### 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::PEN::newEMR\(\)](#), [EMF::EXTPEN::newEMR\(\)](#), [EMF::BRUSH::newEMR\(\)](#), [EMF::FONT::newEMR\(\)](#), and [EMF::PALETTE::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

<i>ints</i>	pointer to ints.
<i>n</i>	number ints in array.

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

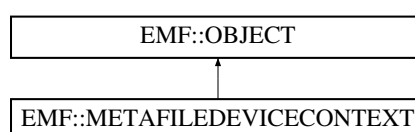
- libemf.h

## 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

<i>fp_</i>	stdio pointer to an open file. May be null.
<i>size</i>	the rectangle describing the position and size of the metafile on the "page". May be null.
<i>description_w</i>	a UNICODE string describing the metafile. The format must be "some text\0some more text\0\0". May be null.

## ~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

<i>record</i>	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

<i>record</i>	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](#), [header](#), and [EMF::ENHMETAHEADER::size\(\)](#).

#### 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.

##### 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::EMRSELECTOBJECT::execute\(\)](#), [EMF::EMRDELETEOBJECT::execute\(\)](#), [EMF::EMRCREATEPEN::execute\(\)](#), [EMF::EMREXTCREATEPEN::execute\(\)](#), [EMF::EMRCREATEBRUSHINDIRECT::execute\(\)](#), and [EMF::EMREXTCREATEFONTINDIRECT::execute\(\)](#).

##### fp

`::FILE* EMF::METAFILEDEVICECONTEXT::fp`

If it is a file-based metafile, then this pointer is not null.

##### 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`

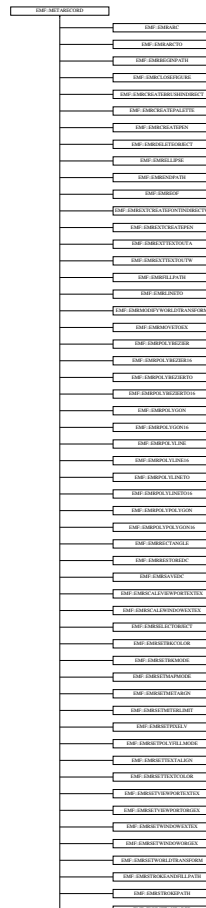


## 4.66 EMF::METARECORD Class Reference

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

<i>source</i>	the device context from which this record is taken.
<i>dc</i>	the destination context.

Implemented in [EMF::ENHMETAHEADER](#), [EMF::EMREOF](#), [EMF::EMRSETVIEWPORTORGEX](#), [EMF::EMRSETWINDOWORGEX](#), [EMF::EMRSETVIEWPORTEXTEX](#), [EMF::EMRSCALEVIEWPORTEXTEX](#), [EMF::EMRSETWINDOWEXTEx](#), [EMF::EMRSCALEWINDOWEXTEx](#), [EMF::EMRMODIFYWORLDTRANSFORM](#), [EMF::EMRSETWORLDTRANSFORM](#), [EMF::EMRSETTEXTALIGN](#), [EMF::EMRSETTEXTCOLOR](#), [EMF::EMRSETBKCOLOR](#), [EMF::EMRSETBKMODE](#), [EMF::EMRSETPOLYFILLMODE](#), [EMF::EMRSETMAPMODE](#), [EMF::EMRSELECTOBJECT](#), [EMF::EMRDELETEOBJECT](#), [EMF::EMRMOVETOEX](#), [EMF::EMRLINETO](#), [EMF::EMRARC](#), [EMF::EMRARCTO](#), [EMF::EMRRECTANGLE](#), [EMF::EMRELLIPSE](#), [EMF::EMRPOLYLINE](#), [EMF::EMRPOLYLINE16](#), [EMF::EMRPOLYGON](#), [EMF::EMRPOLYGON16](#), [EMF::EMRPOLYPOLYGON](#), [EMF::EMRPOLYPOLYGON16](#), [EMF::EMRPOLYBEZIER](#), [EMF::EMRPOLYBEZIER16](#), [EMF::EMRPOLYBEZIERTO](#), [EMF::EMRPOLYBEZIERTO16](#), [EMF::EMRPOLYLINETO](#), [EMF::EMRPOLYLINETO16](#), [EMF::EMREXTTEXTOUTA](#), [EMF::EMREXTTEXTOUTW](#), [EMF::EMRSETPIXELV](#), [EMF::EMRCREATEPEN](#), [EMF::EMREXTCREATEPEN](#), [EMF::EMRCREATEBRUSHINDIRECT](#), [EMF::EMREXTCREATEFONTINDIRECTW](#), [EMF::EMRCREATEPALETTE](#), [EMF::EMRFILLPATH](#), [EMF::EMRSTROKEPATH](#), [EMF::EMRSTROKEANDFILLPATH](#), [EMF::EMRBEGINPATH](#), [EMF::EMRENDPATH](#), [EMF::EMRCLOSEFIGURE](#), [EMF::EMRSAVEDC](#), [EMF::EMRRESTOREDC](#), [EMF::EMRSETMETARGN](#), and [EMF::EMRSETMITERLIMIT](#).

### 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

<i>ds</i>	the datastream to write oneself to.
-----------	-------------------------------------

Implemented in [EMF::ENHMETAHEADER](#), [EMF::EMREOF](#), [EMF::EMRSETVIEWPORTORGEX](#), [EMF::EMRSETWINDOWORGEX](#), [EMF::EMRSETVIEWPORTEXTEX](#), [EMF::EMRSCALEVIEWPORTEXTEX](#), [EMF::EMRSETWINDOWEXTEx](#), [EMF::EMRSCALEWINDOWEXTEx](#), [EMF::EMRMODIFYWORLDTRANSFORM](#), [EMF::EMRSETWORLDTRANSFORM](#), [EMF::EMRSETTEXTALIGN](#), [EMF::EMRSETTEXTCOLOR](#), [EMF::EMRSETBKCOLOR](#), [EMF::EMRSETBKMODE](#), [EMF::EMRSETPOLYFILLMODE](#), [EMF::EMRSETMAPMODE](#), [EMF::EMRSELECTOBJECT](#), [EMF::EMRDELETEOBJECT](#), [EMF::EMRMOVETOEX](#), [EMF::EMRLINETO](#), [EMF::EMRARC](#), [EMF::EMRARCTO](#), [EMF::EMRRECTANGLE](#), [EMF::EMRELLIPSE](#), [EMF::EMRPOLYLINE](#), [EMF::EMRPOLYLINE16](#), [EMF::EMRPOLYGON](#), [EMF::EMRPOLYGON16](#), [EMF::EMRPOLYPOLYGON](#), [EMF::EMRPOLYPOLYGON16](#), [EMF::EMRPOLYBEZIER](#), [EMF::EMRPOLYBEZIER16](#), [EMF::EMRPOLYBEZIERTO](#), [EMF::EMRPOLYBEZIERTO16](#), [EMF::EMRPOLYLINETO](#), [EMF::EMRPOLYLINETO16](#), [EMF::EMREXTTEXTOUTA](#), [EMF::EMREXTTEXTOUTW](#), [EMF::EMRSETPIXELV](#), [EMF::EMRCREATEPEN](#), [EMF::EMREXTCREATEPEN](#), [EMF::EMRCREATEBRUSHINDIRECT](#), [EMF::EMREXTCREATEFONTINDIRECTW](#), [EMF::EMRCREATEPALETTE](#), [EMF::EMRFILLPATH](#), [EMF::EMRSTROKEPATH](#), [EMF::EMRSTROKEANDFILLPATH](#), [EMF::EMRBEGINPATH](#), [EMF::EMRENDPATH](#), [EMF::EMRCLOSEFIGURE](#), [EMF::EMRSAVEDC](#), [EMF::EMRRESTOREDC](#), [EMF::EMRSETMETARGN](#), and [EMF::EMRSETMITERLIMIT](#).

## 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::ENHMETAHEADER](#), [EMF::EMREOF](#), [EMF::EMRSETVIEWPORTORGEX](#), [EMF::EMRSETWINDOWORGEX](#), [EMF::EMRSETVIEWPORTEXTEX](#), [EMF::EMRSCALEVIEWPORTEXTEX](#), [EMF::EMRSETWINDOWEXTEx](#), [EMF::EMRSCALEWINDOWEXTEx](#), [EMF::EMRMODIFYWORLDTRANSFORM](#), [EMF::EMRSETWORLDTRANSFORM](#), [EMF::EMRSETTEXTALIGN](#), [EMF::EMRSETTEXTCOLOR](#), [EMF::EMRSETBKCOLOR](#), [EMF::EMRSETBKMODE](#), [EMF::EMRSETPOLYFILLMODE](#), [EMF::EMRSETMAPMODE](#), [EMF::EMRSELECTOBJECT](#), [EMF::EMRDELETEOBJECT](#), [EMF::EMRMOVETOEX](#), [EMF::EMRLINETO](#), [EMF::EMRARC](#), [EMF::EMRARCTO](#), [EMF::EMRRECTANGLE](#), [EMF::EMRELLIPSE](#), [EMF::EMRPOLYLINE](#), [EMF::EMRPOLYLINE16](#), [EMF::EMRPOLYGON](#), [EMF::EMRPOLYGON16](#), [EMF::EMRPOLYPOLYGON](#), [EMF::EMRPOLYPOLYGON16](#), [EMF::EMRPOLYBEZIER](#), [EMF::EMRPOLYBEZIER16](#), [EMF::EMRPOLYBEZIERTO](#), [EMF::EMRPOLYBEZIERTO16](#), [EMF::EMRPOLYLINETO](#), [EMF::EMRPOLYLINETO16](#), [EMF::EMREXTTEXTOUTA](#), [EMF::EMREXTTEXTOUTW](#), [EMF::EMRSETPIXELV](#), [EMF::EMRCREATEPEN](#), [EMF::EMREXTCREATEPEN](#), [EMF::EMRCREATEBRUSHINDIRECT](#), [EMF::EMREXTCREATEFONTINDIRECTW](#), [EMF::EMRCREATEPALETTE](#), [EMF::EMRFILLPATH](#), [EMF::EMRSTROKEPATH](#), [EMF::EMRSTROKEANDFILLPATH](#), [EMF::EMRBEGINPATH](#), [EMF::EMRENDPATH](#), [EMF::EMRCLOSEFIGURE](#), [EMF::EMRSAVEDC](#), [EMF::EMRRESTOREDC](#), [EMF::EMRSETMETARGN](#), and [EMF::EMRSETMITERLIMIT](#).

Referenced by [EMF::METAFILEDEVICECONTEXT::appendHandle\(\)](#), and [EMF::METAFILEDEVICECONTEXT::appendRecord\(\)](#).

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

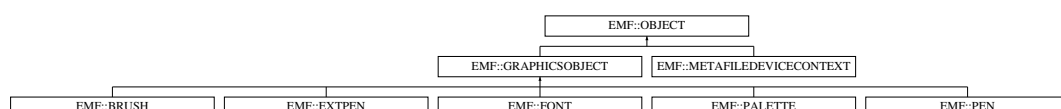
- libemf.h

## 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.

### 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::PEN](#), [EMF::EXTPEN](#), [EMF::BRUSH](#), [EMF::FONT](#), [EMF::PALETTE](#), and [EMF::METAFILEDEVICECONTEXT](#).

### 4.67.4 Field Documentation

#### handle

```
HGDIOBJ EMF::OBJECT::handle
```

The handle of a GDI object.

Referenced by [EMF::METAFILEDEVICECONTEXT::clearHandle\(\)](#).

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

<i>size</i>	number of bytes of padding to use.
-------------	------------------------------------

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

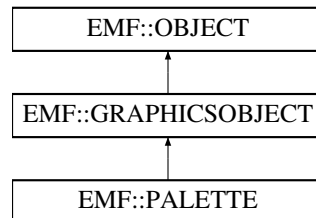
- libemf.h
- libemf.cpp

## 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

<i>palette</i>	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

<i>dc</i>	handle of device context into which this object is being selected.
<i>emf_handle</i>	the EMF handle associated with the <a href="#">FONT</a> .

Implements [EMF::GRAPHICSOBJECT](#).

References [EMF::GRAPHICSOBJECT::contexts](#).

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

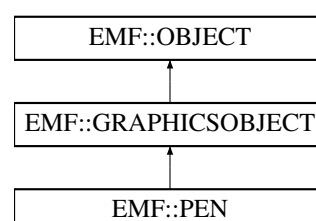
- libemf.h

## 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

<i>lpen</i>	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

<i>dc</i>	handle of device context into which this object is being selected.
<i>emf_handle</i>	the EMF handle associated with the <a href="#">PEN</a> .

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

<i>points</i>	pointer to array of POINT16s.
<i>n</i>	number POINT16s in array.

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

<i>points</i>	pointer to array of POINTLs.
<i>n</i>	number POINTLs in array.

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 (wchar) 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

<i>string</i>	pointer to string of WCHARS.
<i>length</i>	number of WCHARS in 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/wine.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_BASSETSD_H
00007 #define __WINE_BASSETSD_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 0xfffffffffffffff
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_BASSETSD_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, 0xC0,0,0,0,0,0,0x46)
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 u1 {
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_DATA, *PWIN32_FIND_DATA, *LPWIN32_FIND_DATA;
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 ONESTOPBITS 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_TXEMPTY 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
dwNumberOfBytesTransferred, 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 (*ENUMRESTYPEPROC) (HMODULE, LPSTR, LONG);
00652 typedef BOOL CALLBACK (*ENUMRESTYPEPROCW) (HMODULE, LPWSTR, LONG);
00653 typedef BOOL CALLBACK (*ENUMRESNAMEPROC) (HMODULE, LPCSTR, LPSTR, LONG);
00654 typedef BOOL CALLBACK (*ENUMRESNAMEPROCW) (HMODULE, LPCWSTR, LPWSTR, LONG);
00655 typedef BOOL CALLBACK (*ENUMRESLANGPROC) (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)

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```

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_RTSCSTS     ((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)
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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( LPCWSTR 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 );

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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, 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, LPSECURITY_ATTRIBUTES) ;
01104 HANDLE       WINAPI
CreateNamedPipeW (LPCWSTR, 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) ;

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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*);
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, LPCDCB);
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 LPWSTR        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);

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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 PCHAR       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);
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);

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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, PSID, WORD, DWORD, LPCSTR *, LPVOID);
01332 BOOL        WINAPI ReportEventW (HANDLE, WORD, WORD, 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)
01340 BOOL        WINAPI SetCommConfig (HANDLE, LPCOMMCONFIG, DWORD);
01341 BOOL        WINAPI SetCommBreak (HANDLE);
01342 BOOL        WINAPI SetCommMask (HANDLE, DWORD);
01343 BOOL        WINAPI SetCommState (HANDLE, LPPDCB);
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, 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);

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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);
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);

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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);

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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,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 UNT        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);

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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)0xffffffff)

```



```

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) & 0xffffffff00) | 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
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00619 #define ERROR_INSTALL_PACKAGE_INVALID 1620
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00624 #define ERROR_INSTALL_PACKAGE_REJECTED 1625
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00629 #define ERROR_UNSUPPORTED_TYPE 1630
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00633 #define ERROR_INSTALL_NOTUSED 1634
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00636 #define ERROR_PATCH_PACKAGE_UNSUPPORTED 1637
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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
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01090 #define ERROR_NO_PROMOTION_ACTIVE 8222
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01092 #define ERROR_DS_PROTOCOL_ERROR 8225
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01094 #define ERROR_DS_SIZELIMIT_EXCEEDED 8227
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01099 #define ERROR_DS_STRONG_AUTH_REQUIRED 8232
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01105 #define ERROR_DS_INAPPROPRIATE_MATCHING 8238
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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
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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
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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
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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
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01149 #define ERROR_DS_ATT_VAL_ALREADY_EXISTS 8323
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01154 #define ERROR_DS_NO_CHAINED_EVAL 8328
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01161 #define ERROR_DS_BAD_NAME_SYNTAX 8335
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01249	#define	ERROR_DS_CANT_REPLACE_HIDDEN_REC	8424

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01253 #define ERROR_DS_COUNTING_AB_INDICES_FAILED 8428
01254 #define ERROR_DS_HIERARCHY_TABLE_MALLOC_FAILED 8429
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01258 #define ERROR_DS_REFUSING_FSMO_ROLES 8433
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01262 #define ERROR_DS_DRA_INVALID_PARAMETER 8437
01263 #define ERROR_DS_DRA_BUSY 8438
01264 #define ERROR_DS_DRA_BAD_DN 8439
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01266 #define ERROR_DS_DRA_DN_EXISTS 8441
01267 #define ERROR_DS_DRA_INTERNAL_ERROR 8442
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01290 #define ERROR_DS_DRA_SOURCE_IS_PARTIAL_REPLICA 8465
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01301 #define ERROR_DS_WRONG_OM_OBJ_CLASS 8476
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01304 #define ERROR_DS_INVALID_LDAP_DISPLAY_NAME 8479
01305 #define ERROR_DS_NON_BASE_SEARCH 8480
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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_INASYNCALL 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

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```
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
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_NOTACCOLLECTION 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_OLDDDL 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_STATTC 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_ADVFE 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_STATTC 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_NOVIEWOBJECT 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
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```
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_REDUCE_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_WRONGSFORAPP 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_FAILEDTOSSETDACL 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
```



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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_LOOKUPACNAMEFAILED 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 FONTPMAPPER_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    iPixelFormat;
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_PAPER NAMES 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 GETPHYSPAGESSIZE         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 GETTECHNOLOGY            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_MERGEPEENNOT        14
00366 #define R2_MERGEPEEN           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) ((cmyk) >> 8))
00409 #define GetMValue(cmyk)         ((BYTE) ((cmyk) >> 16))
00410 #define GetCValue(cmyk)         ((BYTE) ((cmyk) >> 24))
00411
00412 #define CMYK(c,m,y,k)           (((COLORREF)(( (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_SRCODEPAGE 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

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```

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_WEIGHT_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;

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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            otmsSelection;
01011     UINT            otmsType;
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            otmsMinimumPEM;
01026     POINT           otmptSubscriptSize;
01027     POINT           otmptSubscriptOffset;
01028     POINT           otmptSuperscriptSize;
01029     POINT           otmptSuperscriptOffset;
01030     INT             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_TRUEETYPE       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 cpx;
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_RESULTS{
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_RESULTS, *LPGCP_RESULTS;
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_DISPFIL        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      cctl;
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      cctl;
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      cctl;
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 } EMRSCALEVIEWPORTETEX, *PEMRSCALEVIEWPORTETEX,
02320 EMRSCALEWINDOWETEX, *PEMRSCALEWINDOWETEX;
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, *PEMRSETICMMODE,
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 } EMRSETBRUSHORGEEX, *PEMRSETBRUSHORGEEX,
02355 EMRSETVIEWPORTORGEEX, *PEMRSETVIEWPORTORGEEX,
02356 EMRSETWINDOWORGEEX, *PEMRSETWINDOWORGEEX;
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 } EMRSETDIBITSTODEVICE, *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_SETWINDOWEXTTEX 9  
02486 #define EMR_SETWINDOWORGEX 10  
02487 #define EMR_SETVIEWPORTEXTTEX 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_OFFSETCCLIPRGN 26  
02503 #define EMR_MOVETOEX 27  
02504 #define EMR_SETMETARGN 28  
02505 #define EMR_EXCLUDECLIPRECT 29  
02506 #define EMR_INTERSECTCLIPRECT 30  
02507 #define EMR_SCALEVIEWPORTEXTTEX 31  
02508 #define EMR_SCALEWINDOWEXTTEX 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_POLYBEZIER16    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_IDENTIFER 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_LARGE FMT 10
02864 #define DMBIN_LARGE CAPACITY 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,LPOINT,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,LLOGFONTA,FONTENUMPROCEXA,LPARAM,DWORD);

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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, LPCTSTR);
03113 LONG     WINAPI GetBitmapBits(HBITMAP, LONG, LPVOID);
03114 BOOL     WINAPI GetBitmapDimensionEx(HBITMAP, LPCTSTR);
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_RESULTS*, DWORD);
03126 DWORD    WINAPI GetCharacterPlacementW(HDC, LPCWSTR, INT, INT, GCP_RESULTS*, 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);

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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,DWORD);
03244 HRGN         WINAPI PathToRegion(HDC);
03245 BOOL         WINAPI Pie(HDC,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);
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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);
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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 # ifdef _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 #else
00457 typedef UINT HANDLE;
00458 #define DECLARE_OLD_HANDLE(a) \
00459     typedef HANDLE a; \
00460     typedef a *P##a, *LP##a
00461 #endif
00462 #define DECLARE_HANDLE(a) \
00463     typedef a *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
00927     RtlVirtualUnwind (ULONG, ULONG64, ULONG64, RUNTIME_FUNCTION*, CONTEXT*, PVOID*, ULONG64*, KNONVOLATILE_CONTEXT_POINTERS*);
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  * FIXME:
01325  *
01326  * There is no official CONTEXT structure defined for the SPARC
01327  * architecture, so I just made one up.
01328  *
01329  * This structure is valid only for 32-bit SPARC architectures,
01330  * not for 64-bit SPARC.
01331  *
01332  * Note that this structure contains only the 'top-level' registers;
01333  * the rest of the register window chain is not visible.
01334  *
01335  * The layout follows the Solaris 'prgregset_t' structure.
01336  *
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 14;
01374     DWORD 15;
01375     DWORD 16;
01376     DWORD 17;
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 #define CONTEXT_E2K 0x4000000
01603 #define CONTEXT_CONTROL (CONTEXT_E2K | 0x00000001)
01604 #define CONTEXT_INTEGER (CONTEXT_E2K | 0x00000002)
01605 #define CONTEXT_FLOATING_POINT (CONTEXT_E2K | 0x00000004)
01606 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_E2K | 0x00000008)
01607
01608 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01609
01610 #define EXCEPTION_READ_FAULT 0
01611 #define EXCEPTION_WRITE_FAULT 1
01612 #define EXCEPTION_EXECUTE_FAULT 8
01613
01614 typedef struct _CONTEXT {
01615     ULONG ContextFlags;
01616
01617     /* This section is specified/returned if the ContextFlags word contains
01618        the flag CONTEXT_INTEGER. */
01619     ULONGLONG X0;
01620     ULONGLONG X1;
01621     ULONGLONG X2;
01622     ULONGLONG X3;
01623     ULONGLONG X4;
01624     ULONGLONG X5;
01625     ULONGLONG X6;
01626     ULONGLONG X7;
01627     ULONGLONG X8;
01628     ULONGLONG X9;
01629     ULONGLONG X10;
01630     ULONGLONG X11;
01631     ULONGLONG X12;
01632     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          0x40000000
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\t" \
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\t" \
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_AFIKAANS 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         0x01
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_EXTRANEIOUS_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
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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
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
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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
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
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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
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
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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
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
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_rsrcnt;
03171     DWORD    e32_restab;
03172     DWORD    e32_enttab;
03173     DWORD    e32_dirtab;
03174     DWORD    e32_dircnt;
03175     DWORD    e32_fpagetable;
03176     DWORD    e32_frextab;
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

```

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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(nthead) \
03355     ((PIMAGE_SECTION_HEADER) ((LPBYTE) &((PIMAGE_NT_HEADERS) (nthead))->OptionalHeader + \
03356     ((PIMAGE_NT_HEADERS) (nthead))->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

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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             struct {
03457                 WORD     TvIndex;
03458             } Sym;
03459             struct {
03460                 BYTE     Name[IMAGE_SIZEOF_SYMBOL];

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```

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_PCCode        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_TSHFT                        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))

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```

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 ||
03556                (x) == IMAGE_SYM_CLASS_ENUM_TAG)
03557 #endif
03558
03559 #ifndef INCREf
03560 #define INCREf(x) (((x) & ~N_BTMASK) « N_TSHIFT) | (IMAGE_SYM_DTYPE_POINTER « N_BTSHFT) | ((x) & N_BTMASK)
03561 #endif
03562 #ifndef DECREf
03563 #define DECREf(x) (((x) » N_TSHIFT) & ~N_BTMASK) | ((x) & N_BTMASK)
03564 #endif
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

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```
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    ulOffsetStart;
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 typedefs.
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 {0,0,0,0,5}
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  * TOKEN_DEFAULT_DACL
04364  */
04365
04366 typedef struct _TOKEN_DEFAULT_DACL {
04367     PACL DefaultDacl;
04368 } TOKEN_DEFAULT_DACL;
04369
04370 /*
04371  * TOKEN_SOURCE
04372  */
04373
04374 typedef struct _TOKEN_SOURCE {
04375     char Sourcename[8];
04376     LUID SourceIdentifier;
04377 } TOKEN_SOURCE;
04378
04379 /*
04380  * TOKEN_TYPE
04381  */
04382
04383 typedef enum tagTOKEN_TYPE {
04384     TokenPrimary = 1,
04385     TokenImpersonation
04386 } TOKEN_TYPE;
04387
04388 /*
04389  * SECURITY_IMPERSONATION_LEVEL
04390  */
04391
04392 typedef enum _SECURITY_IMPERSONATION_LEVEL {
04393     SecurityAnonymous,
04394     SecurityIdentification,
04395     SecurityImpersonation,
04396     SecurityDelegation
04397 } SECURITY_IMPERSONATION_LEVEL, *PSECURITY_IMPERSONATION_LEVEL;
04398
04399
04400
04401 typedef BOOLEAN SECURITY_CONTEXT_TRACKING_MODE,
04402     * PSECURITY_CONTEXT_TRACKING_MODE;
04403
04404 /*
04405  * Quality of Service
04406  */
04407
04408 typedef struct _SECURITY_QUALITY_OF_SERVICE {
04409     DWORD Length;
04410     SECURITY_IMPERSONATION_LEVEL ImpersonationLevel;
04411     SECURITY_CONTEXT_TRACKING_MODE ContextTrackingMode;
04412     BOOLEAN EffectiveOnly;
04413 } SECURITY_QUALITY_OF_SERVICE, *PSECURITY_QUALITY_OF_SERVICE;
04414
04415 /*
04416  * TOKEN_STATISTICS
04417  */

```



```
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 | 0xffff)
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 ACCESTIMEOUT dwFlags field */
00136 #define ATF_ONOFFFEEDBACK 0x00000002
00137 #define ATF_AVAILABLE     0x00000004
00138 #define ATF_TIMEOUTON     0x00000001
00139
00140 typedef struct tagACCESTIMEOUT
00141 {
00142     UINT    cbSize;
00143     DWORD   dwFlags;
00144     DWORD   iTimeOutMSec;
00145 } ACCESTIMEOUT, *PACCESTIMEOUT, *LPACCESTIMEOUT;
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 } MSLTHOOKSTRUCT, *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 } DRAWTEXT_PARAMS, *LPDRAWTEXT_PARAMS;
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_CURSOR 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_MENUW MAKEINTRESOURCEW(4)
00470 #define RT_MENU WINELIB_NAME_AW(RT_MENU)
00471 #define RT_DIALOGA MAKEINTRESOURCEA(5)
00472 #define RT_DIALOGW MAKEINTRESOURCEW(5)
00473 #define RT_DIALOG WINELIB_NAME_AW(RT_DIALOG)
00474 #define RT_STRINGA MAKEINTRESOURCEA(6)
00475 #define RT_STRINGW MAKEINTRESOURCEW(6)
00476 #define RT_STRING WINELIB_NAME_AW(RT_STRING)
00477 #define RT_FONTDIRA MAKEINTRESOURCEA(7)
00478 #define RT_FONTDIRW MAKEINTRESOURCEW(7)
00479 #define RT_FONTDIR WINELIB_NAME_AW(RT_FONTDIR)
00480 #define RT_FONTA MAKEINTRESOURCEA(8)
00481 #define RT_FONTW MAKEINTRESOURCEW(8)
00482 #define RT_FONT WINELIB_NAME_AW(RT_FONT)
00483 #define RT_ACCELERATORA MAKEINTRESOURCEA(9)
00484 #define RT_ACCELERATORW MAKEINTRESOURCEW(9)
00485 #define RT_ACCELERATOR WINELIB_NAME_AW(RT_ACCELERATOR)
00486 #define RT_RCDATAA MAKEINTRESOURCEA(10)
00487 #define RT_RCDATAW MAKEINTRESOURCEW(10)
00488 #define RT_RCDATA WINELIB_NAME_AW(RT_RCDATA)
00489 #define RT_MESSAGEA MAKEINTRESOURCEA(11)
00490 #define RT_MESSAGEW MAKEINTRESOURCEW(11)
00491 #define RT_MESSAGE WINELIB_NAME_AW(RT_MESSAGE)
00492 #define RT_GROUP_CURSORA MAKEINTRESOURCEA(12)
00493 #define RT_GROUP_CURSORW MAKEINTRESOURCEW(12)
00494 #define RT_GROUP_CURSOR WINELIB_NAME_AW(RT_GROUP_CURSOR)
00495 #define RT_GROUP_ICONA MAKEINTRESOURCEA(14)
00496 #define RT_GROUP_ICONW MAKEINTRESOURCEW(14)
00497 #define RT_GROUP_ICON WINELIB_NAME_AW(RT_GROUP_ICON)
00498 #define RT_VERSIONA MAKEINTRESOURCEA(16)
00499 #define RT_VERSIONW MAKEINTRESOURCEW(16)
00500 #define RT_VERSION WINELIB_NAME_AW(RT_VERSION)
00501 #define RT_DLGINCLUDEA MAKEINTRESOURCEA(17)
00502 #define RT_DLGINCLUDEW MAKEINTRESOURCEW(17)
00503 #define RT_DLGINCLUDE WINELIB_NAME_AW(RT_DLGINCLUDE)
00504 #define RT_PLUGPLAYA MAKEINTRESOURCEA(19)
00505 #define RT_PLUGPLAYW MAKEINTRESOURCEW(19)
00506 #define RT_PLUGPLAY WINELIB_NAME_AW(RT_PLUGPLAY)
00507 #define RT_VXDA MAKEINTRESOURCEA(20)
00508 #define RT_VXDW MAKEINTRESOURCEW(20)
00509 #define RT_VXD WINELIB_NAME_AW(RT_VXD)
00510 #define RT_ANICURSORA MAKEINTRESOURCEA(21)
00511 #define RT_ANICURSOW MAKEINTRESOURCEW(21)
00512 #define RT_ANICURSOR WINELIB_NAME_AW(RT_ANICURSOR)
00513 #define RT_ANIICONA MAKEINTRESOURCEA(22)
00514 #define RT_ANIICONW MAKEINTRESOURCEW(22)
00515 #define RT_ANIICON WINELIB_NAME_AW(RT_ANIICON)
00516 #define RT_HTMLA MAKEINTRESOURCEA(23)
00517 #define RT_HTMLW MAKEINTRESOURCEW(23)
00518 #define RT_HTML WINELIB_NAME_AW(RT_HTML)
00519
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_LOCALEEDIT          0x0020
00561 #define DS_SETFONT              0x0040
00562 #define DS_MODALFRAME           0x0080
00563 #define DS_NIDLEMSG             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_TRRTYPE               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_BTFSIZE 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_CVTHUMB       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_CVSCROLL       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_FILESYSCCHANGE 0x0034
00950 #define WM_ISACTIVEICON 0x0035
00951 #define WM_QUERYPARKICON 0x0036
00952 #define WM_QUERYDRAGICON 0x0037
00953 #define WM_QUEYSAVESTATE 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_LBUTTONDOWNBLCLK 0x0203
01066 #define WM_RBUTTONDOWN 0x0204
01067 #define WM_RBUTTONUP 0x0205
01068 #define WM_RBUTTONDOWNBLCLK 0x0206
01069 #define WM_MBUTTONDOWN 0x0207
01070 #define WM_MBUTTONUP 0x0208
01071 #define WM_MBUTTONDOWNBLCLK 0x0209
01072 #define WM_MOUSEWHEEL 0x020A
01073 #define WM_XBUTTONDOWN 0x020B
01074 #define WM_XBUTTONUP 0x020C
01075 #define WM_XBUTTONDOWNBLCLK 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_MDIESTROY 0x0221
01107 #define WM_MDIACTIVATE 0x0222
01108 #define WM_MDISTORE 0x0223
01109 #define WM_MDIEXT 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_DROPBJECT 0x022A
01119 #define WM_QUERYDROBJECT 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_CHANGECHAIN 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, *LPCCLIENTCREATESTRUCT;
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, *LPMDCREATESTRUCTA;
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, *LPMDCREATESTRUCTW;
01287
01288 DECL_WINELIB_TYPE_AW(MDICREATESTRUCT)
01289 DECL_WINELIB_TYPE_AW(LPMDCREATESTRUCT)
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_ERASEBKGDND       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 } MULTIKEYHELPAW, *PMULTIKEYHELPAW, *LPMULTIKEYHELPAW;
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 } WNDCLASSEX, *PWNDCLASSEX, *LPWNDCLASSEX;
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 } TPM_PARAMS, *LTPM_PARAMS;
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   *LPMENUITEMTEMPLATE;
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_PAGELLEFT   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_SETEXTSEL 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_SELENCANCEL 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

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```

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_MOVE_SIZE 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_CREATEWND, *LPCBT_CREATEWND;
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)

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```
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_GETTICONTITLEWRAP 25
02522 #define SPI_SETTICONTITLEWRAP 26
02523 #define SPI_GETMENUDROPALIGNMENT 27
02524 #define SPI_SETMENUDROPALIGNMENT 28
02525 #define SPI_SETDOUBLECLKWIDTH 29
02526 #define SPI_SETDOUBLECLKHEIGHT 30
02527 #define SPI_GETTICONTITLELOGFONT 31
02528 #define SPI_SETDOUBLECLICKTIME 32
02529 #define SPI_SETMOUSEBUTTONSWAP 33
02530 #define SPI_SETTICONTITLELOGFONT 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
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
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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 } NONCLIENTMETRICS, *PNONCLIENTMETRICS, *LPNONCLIENTMETRICS;
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 tagICONMETRICS {
02692     UINT cbSize;
02693     int  iHorzSpacing;
02694     int  iVertSpacing;
02695     int  iTitleWrap;
02696     LOGFONTA lfFont;
02697 } ICONMETRICS, *PICONMETRICS, *LPICONMETRICS;
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_EXCLUDEERGN 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 0x0000200L
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

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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

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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

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```

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_POSTMSG     0x2000
03354 #define DDL_DRIVES      0x4000
03355 #define DDL_EXCLUSIVE   0x8000
03356
03357 /* Shell hook values */
03358 #define HSHLL_WINDOWCREATED 1
03359 #define HSHLL_WINDOWDESTROYED 2
03360 #define HSHLL_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 /* "GDI OBJ" 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

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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(NOCDI)
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(NOCDI) */
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,MENUIITEMINFOA*);
03494 BOOL WINAPI GetMenuItemInfoW(HMENU,UINT,BOOL,MENUIITEMINFOW*);
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);

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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 MENUITEMINFO*);
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                                     LPTMPPARAMS);
03540 BOOL        WINAPI UnregisterDeviceNotification(HDEVNOTIFY);
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);

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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);
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, \

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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,LPCVOID);
03682 HWND WINAPI CreateWindowExW(DWORD,LPCWSTR,LPCWSTR,DWORD,INT,INT,
03683     INT,INT,HWND,HMENU,HINSTANCE,LPCVOID);
03684 #define CreateWindowEx WINELIB_NAME_AW(CreateWindowEx)
03685 HINSTANCE WINAPI CreateWindowStationA(LPSTR,DWORD,DWORD,LPSECURITY_ATTRIBUTES);
03686 HINSTANCE 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,LPCVOID);
03690 HWND WINAPI CreateMDIWindowW(LPCWSTR,LPCWSTR,DWORD,INT,INT,
03691     INT,INT,HWND,HINSTANCE,LPCVOID);
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,phook) \
03701     CallNextHookEx(*phook,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) \
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)

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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);
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);
03222 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);
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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      GetMessage WINELIB_NAME_AW(GetMessage)
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)
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 HWND        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, LPCSTR);
03917 BOOL        WINAPI InsertMenuW(HMENU, UINT, UINT, LPCWSTR);
03918 #define      InsertMenu WINELIB_NAME_AW(InsertMenu)
03919 BOOL        WINAPI InsertMenuItemA(HMENU, UINT, BOOL, const MENUITEMINFO*);
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, LPCSTR);
04001 BOOL        WINAPI ModifyMenuW (HMENU, 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) \

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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 WNDCLASSEXP *);
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*);

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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, 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      WINAPI wprintfA(LPSTR, LPCSTR, ...);
04164 INT      WINAPI wprintfW(LPWSTR, LPCWSTR, ...);
04165 #define      wprintf WINELIB_NAME_AW(wprintf)
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 wvsprintfA(LPSTR, UINT, LPCSTR, va_list);
04182 INT      WINAPI wvsprintfW(LPWSTR, UINT, LPCWSTR, va_list);
04183 #define      wvsprintf WINELIB_NAME_AW(wvsprintf)
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 {
00045 #if 1
00050     const int XMAX_PIXELS = 1024; /*(INT_MAX)*/
00051 #else
00052     const int XMAX_PIXELS = 1280; /*(INT_MAX)*/
00053 #endif
00054 #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
00086
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
00104
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
00122
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
00139
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__)
00423 DATASTREAM& operator« ( const UINT& uint )
00424 {
00425     if ( swap_ ) {
00426         unsigned char const* p = (unsigned char const*)&uint;
00427         fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00428         fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00429         fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00430         fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00431     }
00432     else
00433         fwrite( &uint, sizeof(UINT), 1, fp_ );
00434     return *this;
00435 }
00436 DATASTREAM& operator» ( UINT& uint )
00437 {
00438     if ( swap_ ) {
00439         unsigned char* p = (unsigned char*)&uint;
00440         fread( &p[3], sizeof(unsigned char), 1, fp_ );
00441         fread( &p[2], sizeof(unsigned char), 1, fp_ );
00442         fread( &p[1], sizeof(unsigned char), 1, fp_ );
00443         fread( &p[0], sizeof(unsigned char), 1, fp_ );
00444     }
00445     else
00446         fread( &uint, sizeof(UINT), 1, fp_ );
00447     return *this;
00448 }
00449 #endif /* !__x86_64__ */
00450 DATASTREAM& operator« ( const FLOAT& float_ )
00451 {
00452     if ( swap_ ) {
00453         unsigned char const* p = (unsigned char const*)&float_;
00454         fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00455         fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00456         fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00457         fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00458     }
00459     else
00460         fwrite( &float_, sizeof(FLOAT), 1, fp_ );
00461     return *this;
00462 }
00463 DATASTREAM& operator» ( FLOAT& float_ )
00464 {
00465     if ( swap_ ) {
00466         unsigned char* p = (unsigned char*)&float_;
00467         fread( &p[3], sizeof(unsigned char), 1, fp_ );
00468         fread( &p[2], sizeof(unsigned char), 1, fp_ );
00469         fread( &p[1], sizeof(unsigned char), 1, fp_ );
00470         fread( &p[0], sizeof(unsigned char), 1, fp_ );
00471     }
00472     else
00473         fread( &float_, sizeof(FLOAT), 1, fp_ );
00474     return *this;
00475 }
00476 DATASTREAM& operator« ( const PADDING& padding )
00477 {
00478     if ( padding.size_ != 0 )
00479         fwrite( &padding.padding_, sizeof(CHAR), padding.size_, fp_ );
00480     return *this;
00481 }
00482 DATASTREAM& operator« ( const RECTL& rectl )
00483 {
00484     *this « rectl.left « rectl.top « rectl.right « rectl.bottom;
00485     return *this;
00486 }
00487 DATASTREAM& operator» ( RECTL& rectl )
00488 {
00489     *this » rectl.left » rectl.top » rectl.right » rectl.bottom;
00490     return *this;
00491 }
00492 DATASTREAM& operator« ( const SIZEL& sizel )
00493 {
00494     *this « sizel.cx « sizel.cy;
00495     return *this;
00496 }
00497 DATASTREAM& operator» ( SIZEL& sizel )
00498 {
00499     *this » sizel.cx » sizel.cy;
00500     return *this;
00501 }
00502 DATASTREAM& operator« ( const WCHARSTR& wcharstr )
00503 {
00504     for ( int i = 0; i < wcharstr.length_; i++ )
00505         *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
00982
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_size ( const char* tag, const SIZE& 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( "\\tapptl%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( "\taptcs%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     class OBJECT {
01231     public:
01233         HGDIOBJ handle;
01235         virtual ~OBJECT () {}
01240         OBJECT ( void ) : handle( 0 ) {}
01244         virtual OBJECTTYPE getType ( void ) const = 0;
01245     };
01246
01248     class GRAPHICSOBJECT : public OBJECT {
01253     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     public:
01281         std::vector<OBJECT*> objects;
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 );
01355     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 class ENHMETAHEADER : public METARECORD, public ::ENHMETAHEADER {
01424
01425     LPWSTR description_w{ nullptr };
01426     int description_size{ 0 };
01427
01428 public:
01429     ENHMETAHEADER ( LPCWSTR description = 0 )
01430     : description_w( 0 ), description_size( 0 )
01431     {
01432         iType = EMR_HEADER;
01433         nSize = sizeof( ::ENHMETAHEADER );
01434
01435         // Compute the bounds
01436         RECTL default_bounds = { 0, 0, 0, 0 };
01437         rclBounds = default_bounds;
01438         RECTL default_frame = { 0, 0, 0, 0 };
01439         rclFrame = default_frame;
01440         dSignature = ENHMETA_SIGNATURE;
01441         nVersion = 0x10000;
01442         nBytes = nSize;
01443         nRecords = 1;
01444         nHandles = 0;
01445         sReserved = 0;
01446         nDescription = 0;
01447         offDescription = 0;
01448         nPalEntries = 0;
01449         szlDevice.cx = XMAX_PIXELS;
01450         szlDevice.cy = YMAX_PIXELS;
01451         szlMillimeters.cx = XMAX_MM;
01452         szlMillimeters.cy = YMAX_MM;
01453         //
01454         cbPixelFormat = 0;
01455         offPixelFormat = 0;
01456         bOpenGL = FALSE;
01457         //
01458 #if 1
01459         szlMicrometers.cx = 1000 * szlMillimeters.cx;
01460         szlMicrometers.cy = 1000 * szlMillimeters.cy;
01461 #endif
01462         if ( description ) {
01463             // Count the number of characters in the description
01464             int description_count = 0, nulls = 0;
01465             LPCWSTR description_p = description;
01466             while ( nulls < 3 ) {
01467                 description_count++;
01468                 if ( (*description_p++) == 0 ) nulls++;
01469             }
01470
01471             // Make sure that the TOTAL record length will be a multiple of 4
01472
01473             int record_size = ROUND_TO_LONG( sizeof( ::ENHMETAHEADER ) +
01474                 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 ~ENHMETAHEADER ( )
01501 {
01502     if ( description_w ) delete[] description_w;
01503 }
01504
01505 bool serialize ( DATASTREAM ds )
01506 {
01507     ds << iType << nSize
01508         << rclBounds << rclFrame
01509         << dSignature << nVersion << nBytes << nRecords << nHandles << sReserved
01510         << nDescription << offDescription << nPalEntries
01511         << szlDevice << szlMillimeters
01512         << cbPixelFormat << offPixelFormat << bOpenGL
01513         << szlMicrometers
01514         << WCHARSTR( description_w, description_size );
01515     return true;
01516 }
01517
01518 bool unserialize ( DATASTREAM ds )
01519 {
01520     ds >> iType >> nSize
01521         >> rclBounds >> rclFrame
01522         >> dSignature >> nVersion >> nBytes >> nRecords >> nHandles >> sReserved
01523         >> nDescription >> offDescription >> nPalEntries
01524         >> szlDevice >> szlMillimeters;
01525
01526     // Some elements of the metafile header were added at later dates
01527
01528 #define OffsetOf( a, b ) ((unsigned int)((char*)&(((::ENHMETAHEADER*)a)->b)) - \
01529 (char*)&(((::ENHMETAHEADER*)a))))
01530     if ( OffsetOf( this, szlMicrometers ) <= offDescription )
01531         ds >> cbPixelFormat >> offPixelFormat >> bOpenGL;
01532 #undef OffsetOf
01533     if ( sizeof(::ENHMETAHEADER) <= offDescription )
01534         ds >> szlMicrometers;
01535
01536     // Should now probably check that the offset is correct...
01537
01538     int description_size_to_read = ( nSize - offDescription ) / sizeof(WCHAR);
01539
01540     if ( description_size_to_read < (int)nDescription ) {
01541         throw std::runtime_error( "record size inconsistent with description size" );
01542     }
01543
01544     description_size = max( 2, description_size_to_read );
01545
01546     std::unique_ptr<WCHAR[]> buffer( new WCHAR[description_size] );
01547
01548     WCHARSTR description( buffer.get(), description_size_to_read );
01549
01550     ds >> description;
01551
01552     description_w = buffer.release();
01553
01554     // Make sure it's terminated properly.
01555     description_w[description_size-1] = 0;
01556     description_w[description_size-2] = 0;
01557     return true;
01558 }
01559
01560 int size ( void ) const { return nSize; }
01561 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01562 {
01563     // Actually handled by the destination device context.
01564     EMF_UNUSED(source);
01565     EMF_UNUSED(dc);
01566 }
01567
01568 #ifndef ENABLE_EDITING
01569 void edit ( void ) const
01570 {

```

```

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\t: %d\n";
01595     const char* FMT4 = "\tnDescription\t\t\t: %d\n";
01596     const char* FMT5 = "\toffDescription\t\t\t: %d\n";
01597     const char* FMT6 = "\tnPalEntries\t\t\t: %d\n";
01598     const char* FMT7 = "\tcbPixelFormat\t\t\t: %d\n";
01599     const char* FMT8 = "\toffPixelFormat\t\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\t: %ld\n";
01606     const char* FMT4 = "\tnDescription\t\t\t: %ld\n";
01607     const char* FMT5 = "\toffDescription\t\t\t: %ld\n";
01608     const char* FMT6 = "\tnPalEntries\t\t\t: %ld\n";
01609     const char* FMT7 = "\tcbPixelFormat\t\t\t: %ld\n";
01610     const char* FMT8 = "\toffPixelFormat\t\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_size( "szlDevice\t", szlDevice );
01627     edit_size( "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     }
01638     if ( sizeof(::ENHMETAHEADER) <= offDescription ) {
01639         edit_size( "szlMicrometers\t", szlMicrometers );
01640     }
01641 #endif
01642 }
01643
01644 #undef OffsetOf
01645
01646     if ( nDescription != 0 ) {
01647         wchar_t last_w = 0;
01648         WCHAR* description = description_w;
01649
01650         printf( "\tDescription:" );
01651
01652         for ( DWORD i = 0; i < nDescription; i++ ) {
01653             wchar_t w = *description++; /* This is not true, really. UNICODE is not
01654                                         * glibc's wide character representation */
01655
01656             if ( w != 0 ) {
01657                 if ( last_w == 0 ) printf( "\n\t\t" );
01658                 putchar( w );
01659             }
01660             last_w = w;
01661         }
01662         printf( "\n" );
01663     }
01664 #endif /* ENABLE_EDITING */
01665 };
01666
01667 class EMREOF : public METARECORD, ::EMREOF {
01668 public:
01669     EMREOF ( void )
01670     {
01671         emr.iType = EMR_EOF;
01672     }

```

```

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 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 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 EMRSETVIEWPORTEXTX : public METARECORD, ::EMRSETVIEWPORTEXTX {
01865     public:
01870         EMRSETVIEWPORTEXTX ( INT cx, INT cy )
01871         {
01872             emr.iType = EMR_SETVIEWPORTEXTX;
01873             emr.nSize = sizeof( ::EMRSETVIEWPORTEXTX );
01874             szlExtent.cx = cx;
01875             szlExtent.cy = cy;
01876         }
01881         EMRSETVIEWPORTEXTX ( 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( "*SETVIEWPORTEXTX*\n" );
01914             edit_size( "szlExtent", szlExtent );
01915         }
01916 #endif /* ENABLE_EDITING */
01917 };
01918
01920
01925     class EMRSCALEVIEWPORTEXTX : public METARECORD, ::EMRSCALEVIEWPORTEXTX {
01926     public:
01933         EMRSCALEVIEWPORTEXTX ( LONG x_num, LONG x_den, LONG y_num, LONG y_den )
01934         {
01935             emr.iType = EMR_SCALEVIEWPORTEXTX;
01936             emr.nSize = sizeof( ::EMRSCALEVIEWPORTEXTX );
01937             xNum = x_num;
01938             xDenom = x_den;
01939             yNum = y_num;
01940             yDenom = y_den;
01941         }
01946         EMRSCALEVIEWPORTEXTX ( 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 #ifndef ENABLE_EDITING
02051     void edit ( void ) const
02052     {
02053         printf( "SETWINDOWEXTEX*\n" );
02054         edit_size1( "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 #ifndef 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
02138
02139
02140 class EMRMODIFYWORLDTRANSFORM : public METARECORD, ::EMRMODIFYWORLDTRANSFORM {
02141 public:
02142     EMRMODIFYWORLDTRANSFORM ( const XFORM* transform, DWORD mode )
02143     {
02144         emr.iType = EMR_MODIFYWORLDTRANSFORM;
02145         emr.nSize = sizeof( ::EMRMODIFYWORLDTRANSFORM );
02146         xform = *transform;
02147         iMode = mode;
02148     }
02149     EMRMODIFYWORLDTRANSFORM ( DATASTREAM& ds )
02150     {
02151         ds » emr » xform » iMode;
02152     }
02153     bool serialize ( DATASTREAM ds )
02154     {
02155         ds « emr « xform « iMode;
02156         return true;
02157     }
02158     int size ( void ) const { return emr.nSize; }
02159     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02160     {
02161         EMF_UNUSED(source);
02162         ModifyWorldTransform( dc, &xform, iMode );
02163     }
02164 #ifdef ENABLE_EDITING
02165     void edit ( void ) const
02166     {
02167         #if defined(__LP64__)
02168             const char* FMT = "unknown(%d)\n";
02169         #else
02170             const char* FMT = "unknown(%ld)\n";
02171         #endif
02172         #if __x86_64__
02173             printf( "*MODIFYWORLDTRANSFORM*\n" );
02174             edit_xform( "xform", xform );
02175             printf( "\tiMode\t\t: " );
02176             switch ( iMode ) {
02177             case MWT_IDENTITY: printf( "MWT_IDENTITY\n" ); break;
02178             case MWT_LEFTMULTIPLY: printf( "MWT_LEFTMULTIPLY\n" ); break;
02179             case MWT_RIGHTMULTIPLY: printf( "MWT_RIGHTMULTIPLY\n" ); break;
02180             default: printf( FMT, iMode );
02181             }
02182         #endif
02183     }
02184 #endif /* ENABLE_EDITING */
02185 };
02186
02187
02188 class EMRSETWORLDTRANSFORM : public METARECORD, ::EMRSETWORLDTRANSFORM {
02189 public:
02190     EMRSETWORLDTRANSFORM ( const XFORM* transform )
02191     {
02192         emr.iType = EMR_SETWORLDTRANSFORM;
02193         emr.nSize = sizeof( ::EMRSETWORLDTRANSFORM );
02194         xform = *transform;
02195     }
02196     EMRSETWORLDTRANSFORM ( DATASTREAM& ds )
02197     {
02198         ds » emr » xform;
02199     }
02200     bool serialize ( DATASTREAM ds )
02201     {
02202         ds « emr « xform;
02203         return true;
02204     }
02205     int size ( void ) const { return emr.nSize; }
02206     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02207     {
02208         EMF_UNUSED(source);
02209         SetWorldTransform( dc, &xform );
02210     }
02211 #ifdef ENABLE_EDITING
02212     void edit ( void ) const
02213     {
02214         printf( "*SETWORLDTRANSFORM*\n" );
02215         edit_xform( "xform", xform );
02216     }
02217 #endif /* ENABLE_EDITING */
02218 };
02219
02220
02221 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%x)";
02328         #endif /* __x86_64__ */
02329         unsigned int known_bits = TA_BASELINE+TA_CENTER+TA_UPDATECP+TA_RTLCREADING;
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_RTLCREADING )
02351             printf( " | TA_RTLCREADING" );
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 #ifndef 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     #ifndef 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 #ifndef 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 #ifndef 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_point1( "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_point1( "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_rect1( "rclBox\t", rclBox );

```

```

02986     edit_pointl( "ptlStart", ptlStart );
02987     edit_pointl( "ptlEnd\t", ptlEnd );
02988 }
02989 #endif /* ENABLE_EDITING */
02990 };
02991
02992
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 #ifndef 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
03068
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 #ifndef ENABLE_EDITING
03123     void edit ( void ) const
03124     {
03125         printf( "*RECTANGLE*\n" );
03126         edit_rectl( "rclBox", rclBox );
03127     }
03128 #endif /* ENABLE_EDITING */
03129 };
03130
03131

```

```

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         }
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 #ifndef ENABLE_EDITING
03400     void edit ( void ) const
03401     {
03402         printf( "%POLYLINE16*\n" );
03403         edit_rectl( "rclBounds", rclBounds );
03404         edit_pointl6array( "\t", cpts, lpoints );
03405     }
03406 #endif /* ENABLE_EDITING */
03407 };
03408
03410
03413 class EMPOLYGON : public METARECORD, ::EMPOLYGON {
03414     POINTL* lpoints{ nullptr };
03415 public:
03421     EMPOLYGON ( 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( ::EMPOLYGON ) + 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     EMPOLYGON ( DATASTREAM& ds )
03445     {
03446         ds » emr » rclBounds » cptl;
03447
03448         if ( emr.nSize - (sizeof(::EMPOLYGON) - 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     ~EMPOLYGON ( )
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 #ifndef 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 EMPOLYGON16 : public METARECORD, ::EMPOLYGON16 {
03509     POINTL16* lpoints{ nullptr };
03510 public:
03516     EMPOLYGON16 ( 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 }
03672 ~EMRPOLYPOLYGON ( )
03673 {
03674     if ( lcounts ) delete[] lcounts;
03675     if ( lpoints ) delete[] lpoints;
03676 }
03677 EMRPOLYPOLYGON ( DATASTREAM& ds )
03678 {
03679     ds » emr » rclBounds » nPolys » cptl;
03680
03681     if ( emr.nSize - ( sizeof( :EMRPOLYPOLYGON ) - sizeof(POINTL) - sizeof(DWORD) ) <
03682         sizeof( POINTL ) * cptl + sizeof( DWORD ) * nPolys ) {
03683         throw std::runtime_error( "Invalid record size" );
03684     }
03685
03686     std::unique_ptr<DWORD[]> cbuffer( new DWORD[nPolys] );
03687
03688     DWORDARRAY counts( cbuffer.get(), nPolys );
03689
03690     ds » counts;
03691
03692     // Counts have to add up to less than the number of points
03693     // we have. DWORD is unsigned so we must care about overflow.
03694     DWORD n{0}, n_old{0};
03695     for ( DWORD c{0}; c < nPolys; ++c ) {
03696         n_old = n;
03697         n += cbuffer[c];
03698         if ( n < n_old ) {
03699             throw std::runtime_error( "Unsigned overflow" );
03700         }
03701     }
03702     if ( n > cptl ) {
03703         throw std::runtime_error( "Too few points" );
03704     }
03705
03706     std::unique_ptr<POINTL[]> pBuffer( new POINTL[cptl] );
03707
03708     POINTLARRAY points( pBuffer.get(), cptl );
03709
03710     ds » points;
03711
03712     // Don't do this until we won't have any more exceptions.
03713     lcounts = cbuffer.release();
03714     lpoints = pBuffer.release();
03715 }
03716 bool serialize ( DATASTREAM ds )
03717 {
03718     ds « emr « rclBounds « nPolys « cptl « DWORDARRAY( lcounts, nPolys )
03719     « POINTLARRAY( lpoints, cptl );
03720     return true;
03721 }
03722 int size ( void ) const { return emr.nSize; }
03723 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03724 {
03725     EMF_UNUSED(source);
03726     // According to the wine windef.h header, POINT and POINTL are equivalent
03727     // (but DWORD and INT are not)
03728     std::vector<INT> countsv( lcounts, lcounts + nPolys );
03729
03730     PolyPolygon( dc, (POINT*)lpoints, countsv.data(), nPolys );
03731 }

```

```

03750 #ifdef ENABLE_EDITING
03751     void edit ( void ) const
03752     {
03753     #if defined(__LP64__)
03754         const char* FMT0 = "\tnPolys\t\t: %d\n";
03755         const char* FMT1 = "\tcptl\t\t: %d\n";
03756         const char* FMT2 = "%d\n";
03757         const char* FMT3 = "\t\t\t\t %d\n";
03758         const char* FMT4 = "%d, %d\n";
03759         const char* FMT5 = "\t\t\t\t %d, %d\n";
03760     #else
03761         const char* FMT0 = "\tnPolys\t\t: %ld\n";
03762         const char* FMT1 = "\tcptl\t\t: %ld\n";
03763         const char* FMT2 = "%ld\n";
03764         const char* FMT3 = "\t\t\t\t %ld\n";
03765         const char* FMT4 = "%ld, %ld\n";
03766         const char* FMT5 = "\t\t\t\t %ld, %ld\n";
03767     #endif /* __x86_64__ */
03768     printf( "*POLYPOLYGON*\n" );
03769     edit_rectl( "rclBounds", rclBounds );
03770     printf( FMT0, nPolys );
03771     printf( FMT1, cptl );
03772     printf( "\taPolyCounts\t: " );
03773     if ( nPolys > 0 )
03774     printf( FMT2, lcounts[0] );
03775     else
03776     puts( "" );
03777     for ( unsigned int i = 1; i < nPolys; i++ )
03778     printf( FMT3, lcounts[i] );
03779     printf( "\taptl\t\t: " );
03780     if ( cptl > 0 )
03781     printf( FMT4, lpoints[0].x, lpoints[0].y );
03782     else
03783     puts( "" );
03784     for ( unsigned int i = 1; i < cptl; i++ )
03785     printf( FMT5, lpoints[i].x, lpoints[i].y );
03786     }
03787 #endif /* ENABLE_EDITING */
03788 };
03789
03790 class EMRPOLYPOLYGON16 : public METARECORD, ::EMRPOLYPOLYGON16 {
03791     DWORD* lcounts{ nullptr };
03792     POINT16* lpoints{ nullptr };
03793 public:
03794     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT* points,
03795         const INT* counts, UINT polygons )
03796     {
03797         nPolys = polygons;
03798         // Count the number of points in points
03799         int n = 0;
03800         for ( unsigned int i = 0; i < nPolys; i++ )
03801             n += counts[i];
03802
03803         cpts = n;
03804         aPolyCounts[0] = 0; // Really unused
03805         apts[0].x = 0;
03806         apts[0].y = 0;
03807
03808         emr.iType = EMR_POLYPOLYGON16;
03809         // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03810         // aren't directly written out
03811         emr.nSize = sizeof( ::EMRPOLYPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1)
03812         + sizeof( DWORD ) * (nPolys-1);
03813
03814         lcounts = new DWORD[nPolys];
03815
03816         for ( unsigned int i = 0; i < nPolys; i++ )
03817             lcounts[i] = counts[i];
03818
03819         lpoints = new POINT16[cpts];
03820
03821         for (int i=0; i<n; i++) {
03822             lpoints[i].x = points[i].x;
03823             lpoints[i].y = points[i].y;
03824         }
03825
03826         rclBounds = *bounds;
03827     }
03828     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT16* points,
03829         const INT* counts, UINT16 polygons )
03830     {
03831         nPolys = polygons;
03832         // Count the number of points in points
03833         int n = 0;
03834         for ( unsigned int i = 0; i < nPolys; i++ )
03835             n += counts[i];
03836     }

```

```

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 }
03882 ~EMRPOLYPOLYGON16 ( )
03883 {
03884     if ( lcounts ) delete[] lcounts;
03885     if ( lpoints ) delete[] lpoints;
03886 }
03887 EMRPOLYPOLYGON16 ( DATASTREAM& ds )
03888 {
03889     ds » emr » rclBounds » nPolys » cpts;
03890
03891     if ( emr.nSize - ( sizeof( ::EMRPOLYPOLYGON16 ) - sizeof(POINT16) - sizeof(DWORD) ) <
03892         sizeof( POINT16 ) * cpts + sizeof( DWORD ) * nPolys ) {
03893         throw std::runtime_error( "Invalid record size" );
03894     }
03895
03896     std::unique_ptr<DWORD[]> cbuffer( new DWORD[nPolys] );
03897
03898     DWORDARRAY counts( cbuffer.get(), nPolys );
03899
03900     ds » counts;
03901
03902     // Counts have to add up to less than the number of points
03903     // we have. DWORD is unsigned so we must care about overflow.
03904     DWORD n{0}, n_old{0};
03905     for ( DWORD c{0}; c < nPolys; ++c ) {
03906         n_old = n;
03907         n += cbuffer[c];
03908         if ( n < n_old ) {
03909             throw std::runtime_error( "Unsigned overflow" );
03910         }
03911     }
03912     if ( n > cpts ) {
03913         throw std::runtime_error( "Too few points" );
03914     }
03915
03916     std::unique_ptr<POINT16[]> pBuffer( new POINT16[cpts] );
03917
03918     POINT16ARRAY points( pBuffer.get(), cpts );
03919
03920     ds » points;
03921
03922     lcounts = cbuffer.release();
03923     lpoints = pBuffer.release();
03924 }
03925 bool serialize ( DATASTREAM ds )
03926 {
03927     ds « emr « rclBounds « nPolys « cpts « DWORDARRAY( lcounts, nPolys )
03928     « POINT16ARRAY( lpoints, cpts );
03929     return true;
03930 }
03931 int size ( void ) const { return emr.nSize; }
03932 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03933 {
03934     EMF_UNUSED(source);
03935     // According to the wine windef.h header, POINT and POINTL are equivalent
03936     // (but DWORD and INT are not)
03937     std::vector<INT> counts( lcounts, lcounts + nPolys );
03938
03939     PolyPolygon16( dc, lpoints, counts.data(), nPolys );
03940 }
03941 #ifdef ENABLE_EDITING
03942 void edit ( void ) const
03943 
```

```

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\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\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( "\taps\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\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, cpts );
04079 }
04080 #ifdef ENABLE_EDITING
04081 void edit ( void ) const
04082 {
04083     printf( "POLYBEZIER\n" );
04084     edit_rectl( "rclBounds", rclBounds );
04085     edit_pointlarray( "\t", cpts, lpoints );
04086 }
04087 #endif /* ENABLE_EDITING */
04088 };
04089
04090 class EMRPOLYBEZIER16 : public METARECORD, ::EMRPOLYBEZIER16 {
04091     POINT16* lpoints{ nullptr };
04092 public:
04093     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT16* points, INT n )
04094     {
04095         cpts = n;
04096         apts[0].x = 0;           // Really unused
04097         apts[0].y = 0;
04098
04099         emr.iType = EMR_POLYBEZIER16;
04100         // The (cpts-1) below is to account for apts, which isn't written out
04101         emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04102
04103         lpoints = new POINT16[cpts];
04104
04105         for (int i=0; i<n; i++) {
04106             lpoints[i].x = points[i].x;
04107             lpoints[i].y = points[i].y;
04108         }
04109
04110         rclBounds = *bounds;
04111     }
04112     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT* points, INT n )
04113     {
04114         cpts = n;
04115         apts[0].x = 0;           // Really unused
04116         apts[0].y = 0;
04117
04118         emr.iType = EMR_POLYBEZIER16;
04119         // The (cpts-1) below is to account for apts, which isn't written out
04120         emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04121
04122         lpoints = new POINT16[cpts];
04123
04124         for (int i=0; i<n; i++) {
04125             lpoints[i].x = points[i].x;
04126             lpoints[i].y = points[i].y;
04127         }
04128
04129         rclBounds = *bounds;
04130     }
04131     EMRPOLYBEZIER16 ( DATASTREAM& ds )
04132     {
04133         ds » emr » rclBounds » cpts;
04134
04135         if ( emr.nSize - (sizeof( ::EMRPOLYBEZIER16 ) - sizeof(POINT16)) <
04136             sizeof( POINT16 ) * cpts ) {
04137             throw std::runtime_error( "Invalid record size" );
04138         }
04139
04140         std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04141
04142         POINT16ARRAY points( buffer.get(), cpts );
04143
04144         ds » points;
04145
04146         lpoints = buffer.release();
04147     }
04148     ~EMRPOLYBEZIER16 ( )
04149     {
04150         if ( lpoints ) delete[] lpoints;
04151     }
04152     bool serialize ( DATASTREAM ds )
04153     {
04154         ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04155         return true;
04156     }
04157     int size ( void ) const { return emr.nSize; }
04158     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04159     {
04160         EMF_UNUSED(source);
04161         // According to the wine windef.h header, POINT and POINTL are equivalent
04162         PolyBezier16( dc, lpoints, cpts );
04163     }

```

```

04199     }
04200 #ifndef ENABLE_EDITING
04204     void edit ( void ) const
04205     {
04206         printf( "*POLYBEZIER16*\n" );
04207         edit_rectl( "rclBounds", rclBounds );
04208         edit_pointl6array( "\t", cpts, lpoints );
04209     }
04210 #endif /* ENABLE_EDITING */
04211 };
04212
04214
04217 class EMPOLYBEZIERTO : public METARECORD, ::EMPOLYBEZIER {
04218     POINTL* lpoints{ nullptr };
04219 public:
04225     EMPOLYBEZIERTO ( 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( ::EMPOLYBEZIERTO ) + 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     EMPOLYBEZIERTO ( DATASTREAM& ds )
04249     {
04250         ds » emr » rclBounds » cptl;
04251
04252         if ( emr.nSize - (sizeof( ::EMPOLYBEZIERTO ) - 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     ~EMPOLYBEZIERTO ( )
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 ( METAFILEDVICECONTEXT* 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 #ifndef 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 EMPOLYBEZIERTO16 : public METARECORD, ::EMPOLYBEZIER16 {
04313     POINT16* lpoints{ nullptr };
04314 public:
04320     EMPOLYBEZIERTO16 ( 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 }
04339 EMRPOLYBEZIERTO16 ( const RECTL* bounds, const POINT* points, INT n )
04340 {
04341     cpts = n;
04342     aptl[0].x = 0;           // Really unused
04343     aptl[0].y = 0;
04344
04345     emr.iType = EMR_POLYBEZIERTO16;
04346     // The (cptl-1) below is to account for aptl, which isn't written out
04347     emr.nSize = sizeof( ::EMRPOLYBEZIERTO16 ) + sizeof( POINT16 ) * (cpts-1);
04348
04349     lpoints = new POINT16[cpts];
04350
04351     for (int i=0; i<n; i++) {
04352         lpoints[i].x = points[i].x;
04353         lpoints[i].y = points[i].y;
04354     }
04355
04356     rclBounds = *bounds;
04357 }
04358 EMRPOLYBEZIERTO16 ( DATASTREAM& ds )
04359 {
04360     ds » emr » rclBounds » cpts;
04361
04362     if ( emr.nSize - (sizeof( ::EMRPOLYBEZIERTO16 ) - sizeof(POINT16)) <
04363         sizeof( POINT16 ) * cpts ) {
04364         throw std::runtime_error( "Invalid record size" );
04365     }
04366
04367     std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04368
04369     POINT16ARRAY points( buffer.get(), cpts );
04370
04371     ds » points;
04372
04373     lpoints = buffer.release();
04374 }
04375 ~EMRPOLYBEZIERTO16 ( )
04376 {
04377     if ( lpoints ) delete[] lpoints;
04378 }
04379 bool serialize ( DATASTREAM ds )
04380 {
04381     ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04382     return true;
04383 }
04384 int size ( void ) const { return emr.nSize; }
04385 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04386 {
04387     EMF_UNUSED(source);
04388     // According to the wine windef.h header, POINT and POINTL are equivalent
04389     PolyBezierTo16( dc, lpoints, cpts );
04390 }
04391 #ifdef ENABLE_EDITING
04392 void edit ( void ) const
04393 {
04394     printf( "*POLYBEZIERTO16*\n" );
04395     edit_rectl( "rclBounds", rclBounds );
04396     edit_point16array( "\t", cpts, lpoints );
04397 }
04398 #endif /* ENABLE_EDITING */
04399 };
04400
04401 class EMRPOLYLINETO : public METARECORD, ::EMRPOLYLINETO {
04402     POINTL* lpoints{ nullptr };
04403 public:
04404     EMRPOLYLINETO ( const RECTL* bounds, const POINT* points, INT n )
04405     {
04406         cptl = n;
04407         aptl[0].x = 0;
04408         aptl[0].y = 0;
04409
04410         emr.iType = EMR_POLYLINETO;
04411         // 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 pstoeedit - this is "fixed" now by estimating dx in pstoeedit
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 = "\tofffString\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 = "\tofffString\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.offfString );
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 };
04891
04892 class EMREXTTEXTOUTW : public METARECORD, ::EMREXTTEXTOUTW {
04893     PWSTR string_a{ nullptr };
04894     int string_size;
04895
04896     INT* dx_i{ nullptr };
04897 public:
04898     EMREXTTEXTOUTW ( const RECTL* bounds, DWORD graphicsMode, FLOAT xScale,
04899                     FLOAT yScale, const PEMRTEXT text, LPCWSTR string,
04900                     const INT* dx )
04901     {
04902         emr.iType = EMR_EXTTEXTOUTW;
04903         emr.nSize = sizeof( ::EMREXTTEXTOUTW );
04904
04905         rclBounds = *bounds;
04906
04907         iGraphicsMode = graphicsMode;
04908         exScale = xScale;
04909         eyScale = yScale;
04910
04911         emrtext = *text;
04912
04913         string_size = ROUND_TO_LONG( emrtext.nChars );
04914
04915         string_a = new WCHAR[ string_size ];
04916
04917         memset( string_a, 0, sizeof(WCHAR) * string_size );
04918
04919         for ( unsigned int i=0; i<emrtext.nChars; i++ )
04920             string_a[i] = *string++;
04921
04922         emrtext.offString = emr.nSize;
04923         emr.nSize += string_size * sizeof(WCHAR);
04924 #if 0
04925 /*
04926 Test only - Problem: Windows requires this dx to be set - at least from 2K on
04927 but to calculate real dx values is hard
04928 For pstoeedit - this is "fixed" now by estimating dx in pstoeedit
04929 */
04930         if ( !dx ) {
04931             int * dxn = new int [string_size];
04932             for (unsigned int i=0; i < string_size; i++) dxn[i] = 10;
04933             dx = dxn;
04934         }
04935 #endif
04936
04937         if ( dx ) {
04938             dx_i = new INT[ emrtext.nChars ];
04939
04940             for ( unsigned int i=0; i<emrtext.nChars; i++ )
04941                 dx_i[i] = *dx++;
04942
04943             emrtext.offDx = emr.nSize;
04944             emr.nSize += emrtext.nChars * sizeof(INT);
04945         }
04946         else {
04947             emrtext.offDx = 0;
04948             dx_i = 0;
04949         }
04950     }
04951     EMREXTTEXTOUTW ( DATASTREAM& ds )
04952     {
04953         ds » emr » rclBounds » iGraphicsMode » exScale » eyScale » emrtext;
04954
04955         if ( emrtext.nChars > 0 and emrtext.offString == 0 ) {
04956             throw std::runtime_error( "Invalid text specification" );
04957         }
04958
04959         if ( emrtext.nChars > emr.nSize - emrtext.offString ) {
04960             throw std::runtime_error( "Invalid text specification" );
04961         }
04962
04963         std::unique_ptr<WCHAR[]> cbuffer;
04964         std::unique_ptr<INT[]> ibuffer;
04965
04966         if ( emrtext.offString != 0 ) { // So, what is the point of this check?
04967             string_size = ROUND_TO_LONG( emrtext.nChars );
04968
04969             cbuffer.reset( new WCHAR[string_size] );
04970
04971             memset( cbuffer.get(), 0, sizeof(WCHAR) * string_size );
04972
04973             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
05179
05180
05181 class EMRSETPIXELV : public METARECORD, ::EMRSETPIXELV {
05182 public:
05183     EMRSETPIXELV ( INT x, INT y, COLORREF color )
05184     {
05185         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%x\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%x\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, HGDI OBJ 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 #ifndef 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, HGDI OBJ 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 #ifndef 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\\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: %ld\\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\\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 };
05894
05895 class EMRCLOSEFIGURE : public METARECORD, ::EMRCLOSEFIGURE {
05896 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 #ifndef ENABLE_EDITING
05942     void edit ( void ) const
05943     {
05944         printf( "*CLOSEFIGURE*\n" );
05945     }
05946 #endif /* ENABLE_EDITING */
05947 };
05948
05949 class EMRSAVEDC : public METARECORD, ::EMRSAVEDC {
05950 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 #ifndef ENABLE_EDITING
05997     void edit ( void ) const
05998     {
05999         printf( "*SAVEDC*\n" );
06000     }
06001 #endif /* ENABLE_EDITING */
06002 };
06003
06004 class EMRRESTOREDC : public METARECORD, ::EMRRESTOREDC {
06005 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 #ifndef 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 };
06064
06065 class EMRSETMETARGN : public METARECORD, ::EMRSETMETARGN {
06066 public:
06067     EMRSETMETARGN ( void )
06068     {
06069         emr.iType = EMR_SETMETARGN;
06070         emr.nSize = sizeof( ::EMRSETMETARGN );
06071     }
06072     EMRSETMETARGN ( DATASTREAM& ds )
06073     {
06074         ds >> emr;
06075     }
06076     bool serialize ( DATASTREAM ds )
06077     {
06078         ds << emr;
06079         return true;
06080     }
06081     int size ( void ) const { return emr.nSize; }
06082     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06083     {
06084         EMF_UNUSED(source);
06085         SetMetaRgn( dc );
06086     }
06087 #ifdef ENABLE_EDITING
06088     void edit ( void ) const
06089     {
06090         printf( "\\*SETMETARGN*\\n" );
06091     }
06092 #endif /* ENABLE_EDITING */
06093 };
06094
06095 class PEN : public GRAPHICSOBJECT, public LOGPEN {
06096 public:
06097     PEN ( const LOGPEN* lpen )
06098     {
06099         lopnStyle = lpen->lopnStyle;
06100         lopnWidth = lpen->lopnWidth;
06101         lopnColor = lpen->lopnColor;
06102     }
06103     OBJECTTYPE getType ( void ) const { return O_PEN; }
06104     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06105     {
06106         contexts[dc] = emf_handle;
06107         return new EMRCREATEPEN( this, emf_handle );
06108     }
06109 };
06110
06111 class EXTPEN : public GRAPHICSOBJECT, public EXTLOGPEN {
06112 public:
06113     EXTPEN ( const EXTLOGPEN* lpen )
06114     {
06115         elpPenStyle = lpen->elpPenStyle;
06116         elpWidth = lpen->elpWidth;
06117         elpBrushStyle = lpen->elpBrushStyle;
06118         elpColor = lpen->elpColor;
06119         elpHatch = lpen->elpHatch;
06120         elpNumEntries = 0;
06121         elpStyleEntry[0] = 0;
06122     }
06123     OBJECTTYPE getType ( void ) const { return O_EXTPEN; }
06124     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06125     {
06126         contexts[dc] = emf_handle;
06127         return new EMREXTCREATEPEN( this, emf_handle );
06128     }
06129 };
06130
06131 class BRUSH : public GRAPHICSOBJECT, public LOGBRUSH {
06132 public:
06133     BRUSH ( const LOGBRUSH* lbrush )
06134     {
06135         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
06353
06354
06355 class METAFILEDEVICECONTEXT : public OBJECT {
06356     void init ( const RECT* size, LPCWSTR description_w ) {
06357
06358         // Evidently, metafile handles are numbered from 1, so don't
06359         // ever use 0.
06360
06361         handles.push_back( true );
06362
06363         // Keep some of our graphics state in a header record
06364
06365         header = new ENHMETAHEADER ( description_w );
06366         records.push_back( header );
06367
06368         // Compute the size and position of the metafile on the "page"
06369
06370         if ( size ) {
06371             update_frame = false;
06372
06373             header->rclFrame.left = size->left;
06374             header->rclFrame.top = size->top;
06375             header->rclFrame.right = size->right;
06376             header->rclFrame.bottom = size->bottom;
06377
06378             header->rclBounds.left =
06379                 size->left * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06380             header->rclBounds.top =
06381                 size->top * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06382             header->rclBounds.right =
06383                 size->right * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06384             header->rclBounds.bottom =
06385                 size->bottom * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06386             }
06387         else {
06388             update_frame = true;
06389
06390             header->rclBounds.left = -10;
06391             header->rclBounds.top = -10;
06392             header->rclBounds.right = 10;
06393             header->rclBounds.bottom = 10;
06394
06395             header->rclFrame.left = (LONG)floor( (float)header->rclBounds.left *
06396                 header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06397             header->rclFrame.top = (LONG)floor( (float)header->rclBounds.top *
06398                 header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06399             header->rclFrame.right = (LONG)ceil( (float)header->rclBounds.right *
06400                 header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06401             header->rclFrame.bottom = (LONG)ceil( (float)header->rclBounds.bottom *
06402                 header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06403             }
06404
06405         // Some default graphics state (are they really, though?)
06406
06407         SIZEL default_resolution = { RESOLUTION, RESOLUTION };
06408         resolution = default_resolution;
06409         SIZEL default_viewport_ext = { 1, 1 };
06410         viewport_ext = default_viewport_ext;
06411         POINT default_viewport_org = { 0, 0 };
06412         viewport_org = default_viewport_org;
06413         SIZEL default_window_ext = { 1, 1 };
06414         window_ext = default_window_ext;
06415         POINT default_window_org = { 0, 0 };
06416         window_org = default_window_org;
06417
06418         min_device_point = viewport_org;
06419         max_device_point = viewport_org;
06420
06421         pen = (PEN*)globalObjects.find( BLACK_PEN | ENHMETA_STOCK_OBJECT );
06422         brush = (BRUSH*)globalObjects.find( BLACK_BRUSH | ENHMETA_STOCK_OBJECT );
06423         font = (FONT*)globalObjects.find( DEVICE_DEFAULT_FONT | ENHMETA_STOCK_OBJECT );
06424         palette = (PALETTE*)globalObjects.find( DEFAULT_PALETTE | ENHMETA_STOCK_OBJECT );
06425
06426         text_alignment = TA_BASELINE;
06427         text_color = RGB(0,0,0);
06428         bk_color = RGB(0xff,0xff,0xff);
06429         bk_mode = OPAQUE;
06430         polyfill_mode = ALTERNATE;
06431         map_mode = MM_TEXT;
06432         miter_limit = 10.f;
06433
06434         handle = globalObjects.add( this );
06435     }
06436 }
06437
06438

```

```

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     SIZE resolution;
06470     SIZE viewport_ext;
06471     POINT viewport_org;
06472     SIZE 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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