

libemf

1.0.9

Generated on Tue Jun 30 2020 09:06:19 for libemf by Doxygen 1.9.7

Tue Jun 30 2020 09:06:19

1 Hierarchical Index	1
1.1 Class Hierarchy	1
2 Data Structure Index	4
2.1 Data Structures	4
3 File Index	7
3.1 File List	7
4 Data Structure Documentation	8
4.1 EMF::BRUSH Class Reference	8
4.1.1 Detailed Description	9
4.1.2 Constructor & Destructor Documentation	9
4.1.3 Member Function Documentation	9
4.2 EMF::BYTEARRAY Struct Reference	10
4.2.1 Detailed Description	10
4.2.2 Constructor & Destructor Documentation	10
4.3 EMF::CHARSTR Struct Reference	11
4.3.1 Detailed Description	11
4.3.2 Constructor & Destructor Documentation	11
4.4 EMF::DATASTREAM Class Reference	12
4.4.1 Detailed Description	13
4.4.2 Constructor & Destructor Documentation	13
4.4.3 Member Function Documentation	13
4.5 EMF::DWORDARRAY Struct Reference	29
4.5.1 Detailed Description	29
4.5.2 Constructor & Destructor Documentation	30
4.6 EMF::EMRARC Class Reference	30
4.6.1 Detailed Description	31
4.6.2 Constructor & Destructor Documentation	31
4.6.3 Member Function Documentation	32
4.7 EMF::EMRARCTO Class Reference	32
4.7.1 Detailed Description	33
4.7.2 Constructor & Destructor Documentation	33
4.7.3 Member Function Documentation	34
4.8 EMF::EMRBEGINPATH Class Reference	35
4.8.1 Detailed Description	35
4.8.2 Constructor & Destructor Documentation	35
4.8.3 Member Function Documentation	36
4.9 EMF::EMRCLOSEFIGURE Class Reference	37
4.9.1 Detailed Description	37
4.9.2 Constructor & Destructor Documentation	37
4.9.3 Member Function Documentation	38

4.10 EMF::EMRCREATEBRUSHINDIRECT Class Reference	39
4.10.1 Detailed Description	39
4.10.2 Constructor & Destructor Documentation	39
4.10.3 Member Function Documentation	40
4.11 EMF::EMRCREATEPALETTE Class Reference	41
4.11.1 Detailed Description	41
4.11.2 Constructor & Destructor Documentation	41
4.11.3 Member Function Documentation	42
4.12 EMF::EMRCREATEPEN Class Reference	43
4.12.1 Detailed Description	43
4.12.2 Constructor & Destructor Documentation	43
4.12.3 Member Function Documentation	44
4.13 EMF::EMRDELETEOBJECT Class Reference	45
4.13.1 Detailed Description	45
4.13.2 Constructor & Destructor Documentation	45
4.13.3 Member Function Documentation	46
4.14 EMF::EMRELIPSE Class Reference	47
4.14.1 Detailed Description	47
4.14.2 Constructor & Destructor Documentation	47
4.14.3 Member Function Documentation	48
4.15 EMF::EMRENDPATH Class Reference	49
4.15.1 Detailed Description	49
4.15.2 Constructor & Destructor Documentation	50
4.15.3 Member Function Documentation	50
4.16 EMF::EMREOF Class Reference	51
4.16.1 Detailed Description	52
4.16.2 Constructor & Destructor Documentation	52
4.16.3 Member Function Documentation	52
4.17 EMF::EMREXTCREATEFONTINDIRECTW Class Reference	53
4.17.1 Detailed Description	54
4.17.2 Constructor & Destructor Documentation	54
4.17.3 Member Function Documentation	54
4.18 EMF::EMREXTCREATEPEN Class Reference	55
4.18.1 Detailed Description	56
4.18.2 Constructor & Destructor Documentation	56
4.18.3 Member Function Documentation	57
4.19 EMF::EMREXTTEXTOUTA Class Reference	58
4.19.1 Detailed Description	58
4.19.2 Constructor & Destructor Documentation	58
4.19.3 Member Function Documentation	59
4.20 EMF::EMREXTTEXTOUTW Class Reference	60
4.20.1 Detailed Description	61

4.20.2 Constructor & Destructor Documentation	61
4.20.3 Member Function Documentation	62
4.21 EMF::EMRFILLPATH Class Reference	63
4.21.1 Detailed Description	63
4.21.2 Constructor & Destructor Documentation	63
4.21.3 Member Function Documentation	64
4.22 EMF::EMRLINETO Class Reference	65
4.22.1 Detailed Description	65
4.22.2 Constructor & Destructor Documentation	65
4.22.3 Member Function Documentation	66
4.23 EMF::EMRMODIFYWORLDTRANSFORM Class Reference	67
4.23.1 Detailed Description	67
4.23.2 Constructor & Destructor Documentation	67
4.23.3 Member Function Documentation	68
4.24 EMF::EMRMOVETOEX Class Reference	69
4.24.1 Detailed Description	69
4.24.2 Constructor & Destructor Documentation	69
4.24.3 Member Function Documentation	70
4.25 EMF::EMRPOLYBEZIER Class Reference	71
4.25.1 Detailed Description	71
4.25.2 Constructor & Destructor Documentation	71
4.25.3 Member Function Documentation	72
4.26 EMF::EMRPOLYBEZIER16 Class Reference	73
4.26.1 Detailed Description	74
4.26.2 Constructor & Destructor Documentation	74
4.26.3 Member Function Documentation	75
4.27 EMF::EMRPOLYBEZIERTO Class Reference	76
4.27.1 Detailed Description	76
4.27.2 Constructor & Destructor Documentation	76
4.27.3 Member Function Documentation	77
4.28 EMF::EMRPOLYBEZIERTO16 Class Reference	78
4.28.1 Detailed Description	79
4.28.2 Constructor & Destructor Documentation	79
4.28.3 Member Function Documentation	80
4.29 EMF::EMRPOLYGON Class Reference	81
4.29.1 Detailed Description	81
4.29.2 Constructor & Destructor Documentation	81
4.29.3 Member Function Documentation	82
4.30 EMF::EMRPOLYGON16 Class Reference	83
4.30.1 Detailed Description	83
4.30.2 Constructor & Destructor Documentation	83
4.30.3 Member Function Documentation	84

4.31 EMF::EMRPOLYLINE Class Reference	85
4.31.1 Detailed Description	86
4.31.2 Constructor & Destructor Documentation	86
4.31.3 Member Function Documentation	87
4.32 EMF::EMRPOLYLINE16 Class Reference	88
4.32.1 Detailed Description	88
4.32.2 Constructor & Destructor Documentation	88
4.32.3 Member Function Documentation	89
4.33 EMF::EMRPOLYLINETO Class Reference	90
4.33.1 Detailed Description	91
4.33.2 Constructor & Destructor Documentation	91
4.33.3 Member Function Documentation	92
4.34 EMF::EMRPOLYLINETO16 Class Reference	92
4.34.1 Detailed Description	93
4.34.2 Constructor & Destructor Documentation	93
4.34.3 Member Function Documentation	94
4.35 EMF::EMRPOLYPOLYGON Class Reference	95
4.35.1 Detailed Description	96
4.35.2 Constructor & Destructor Documentation	96
4.35.3 Member Function Documentation	96
4.36 EMF::EMRPOLYPOLYGON16 Class Reference	97
4.36.1 Detailed Description	98
4.36.2 Constructor & Destructor Documentation	98
4.36.3 Member Function Documentation	100
4.37 EMF::EMRRECTANGLE Class Reference	101
4.37.1 Detailed Description	102
4.37.2 Constructor & Destructor Documentation	102
4.37.3 Member Function Documentation	102
4.38 EMF::EMRRESTOREDC Class Reference	103
4.38.1 Detailed Description	104
4.38.2 Constructor & Destructor Documentation	104
4.38.3 Member Function Documentation	104
4.39 EMF::EMRSAVEDC Class Reference	105
4.39.1 Detailed Description	106
4.39.2 Constructor & Destructor Documentation	106
4.39.3 Member Function Documentation	106
4.40 EMF::EMRSCALEVIEWPORTEXTEX Class Reference	107
4.40.1 Detailed Description	108
4.40.2 Constructor & Destructor Documentation	108
4.40.3 Member Function Documentation	109
4.41 EMF::EMRSCALEWINDOWEXTEx Class Reference	109
4.41.1 Detailed Description	110

4.41.2 Constructor & Destructor Documentation	110
4.41.3 Member Function Documentation	111
4.42 EMF::EMRSELECTOBJECT Class Reference	111
4.42.1 Detailed Description	112
4.42.2 Constructor & Destructor Documentation	112
4.42.3 Member Function Documentation	113
4.43 EMF::EMRSETBKCOLOR Class Reference	114
4.43.1 Detailed Description	114
4.43.2 Constructor & Destructor Documentation	114
4.43.3 Member Function Documentation	115
4.44 EMF::EMRSETBKMODE Class Reference	116
4.44.1 Detailed Description	116
4.44.2 Constructor & Destructor Documentation	116
4.44.3 Member Function Documentation	117
4.45 EMF::EMRSETMAPMODE Class Reference	118
4.45.1 Detailed Description	118
4.45.2 Constructor & Destructor Documentation	118
4.45.3 Member Function Documentation	119
4.46 EMF::EMRSETMETARGN Class Reference	120
4.46.1 Detailed Description	120
4.46.2 Constructor & Destructor Documentation	120
4.46.3 Member Function Documentation	121
4.47 EMF::EMRSETMITERLIMIT Class Reference	122
4.47.1 Detailed Description	122
4.47.2 Constructor & Destructor Documentation	122
4.47.3 Member Function Documentation	123
4.48 EMF::EMRSETPIXELV Class Reference	124
4.48.1 Detailed Description	124
4.48.2 Constructor & Destructor Documentation	124
4.48.3 Member Function Documentation	125
4.49 EMF::EMRSETPOLYFILLMODE Class Reference	126
4.49.1 Detailed Description	126
4.49.2 Constructor & Destructor Documentation	126
4.49.3 Member Function Documentation	127
4.50 EMF::EMRSETTEXTALIGN Class Reference	128
4.50.1 Detailed Description	128
4.50.2 Constructor & Destructor Documentation	128
4.50.3 Member Function Documentation	129
4.51 EMF::EMRSETTEXTCOLOR Class Reference	130
4.51.1 Detailed Description	130
4.51.2 Constructor & Destructor Documentation	130
4.51.3 Member Function Documentation	131

4.52 EMF::EMRSETVIEWPORTEXTEX Class Reference	132
4.52.1 Detailed Description	132
4.52.2 Constructor & Destructor Documentation	132
4.52.3 Member Function Documentation	133
4.53 EMF::EMRSETVIEWPORTORGEX Class Reference	134
4.53.1 Detailed Description	134
4.53.2 Constructor & Destructor Documentation	134
4.53.3 Member Function Documentation	135
4.54 EMF::EMRSETWINDOWEXTEX Class Reference	136
4.54.1 Detailed Description	136
4.54.2 Constructor & Destructor Documentation	136
4.54.3 Member Function Documentation	137
4.55 EMF::EMRSETWINDOWORGEX Class Reference	138
4.55.1 Detailed Description	138
4.55.2 Constructor & Destructor Documentation	138
4.55.3 Member Function Documentation	139
4.56 EMF::EMRSETWORLDTRANSFORM Class Reference	140
4.56.1 Detailed Description	140
4.56.2 Constructor & Destructor Documentation	140
4.56.3 Member Function Documentation	141
4.57 EMF::EMRSTROKEANDFILLPATH Class Reference	142
4.57.1 Detailed Description	142
4.57.2 Constructor & Destructor Documentation	142
4.57.3 Member Function Documentation	143
4.58 EMF::EMRSTROKEPATH Class Reference	144
4.58.1 Detailed Description	144
4.58.2 Constructor & Destructor Documentation	144
4.58.3 Member Function Documentation	145
4.59 EMF::ENHMETAHEADER Class Reference	146
4.59.1 Detailed Description	146
4.59.2 Constructor & Destructor Documentation	146
4.59.3 Member Function Documentation	147
4.60 EMF::EXTPEN Class Reference	148
4.60.1 Detailed Description	149
4.60.2 Constructor & Destructor Documentation	149
4.60.3 Member Function Documentation	149
4.61 EMF::FONT Class Reference	150
4.61.1 Detailed Description	151
4.61.2 Constructor & Destructor Documentation	151
4.61.3 Member Function Documentation	151
4.62 EMF::GLOBALOBJECTS Class Reference	152
4.62.1 Detailed Description	154

4.62.2 Member Function Documentation	154
4.63 EMF::GRAPHICSOBJECT Class Reference	156
4.63.1 Detailed Description	157
4.63.2 Member Function Documentation	157
4.63.3 Field Documentation	157
4.64 EMF::INTARRAY Struct Reference	158
4.64.1 Detailed Description	158
4.64.2 Constructor & Destructor Documentation	158
4.65 EMF::METAFILEDEVICECONTEXT Class Reference	159
4.65.1 Detailed Description	160
4.65.2 Constructor & Destructor Documentation	161
4.65.3 Member Function Documentation	161
4.65.4 Field Documentation	163
4.66 EMF::METARECORD Class Reference	164
4.66.1 Detailed Description	165
4.66.2 Constructor & Destructor Documentation	165
4.66.3 Member Function Documentation	165
4.67 EMF::OBJECT Class Reference	167
4.67.1 Detailed Description	167
4.67.2 Constructor & Destructor Documentation	167
4.67.3 Member Function Documentation	167
4.67.4 Field Documentation	168
4.68 EMF::PADDING Struct Reference	168
4.68.1 Detailed Description	168
4.68.2 Constructor & Destructor Documentation	168
4.69 EMF::PALETTE Class Reference	169
4.69.1 Detailed Description	170
4.69.2 Constructor & Destructor Documentation	170
4.69.3 Member Function Documentation	170
4.70 EMF::PEN Class Reference	171
4.70.1 Detailed Description	172
4.70.2 Constructor & Destructor Documentation	172
4.70.3 Member Function Documentation	172
4.71 EMF::POINT16ARRAY Struct Reference	173
4.71.1 Detailed Description	173
4.71.2 Constructor & Destructor Documentation	173
4.72 EMF::POINTLARRAY Struct Reference	174
4.72.1 Detailed Description	174
4.72.2 Constructor & Destructor Documentation	174
4.73 EMF::WCHARSTR Struct Reference	174
4.73.1 Detailed Description	175
4.73.2 Constructor & Destructor Documentation	175

5 File Documentation	175
5.1 emf.h	175
5.2 basetsd.h	176
5.3 guiddef.h	178
5.4 poppack.h	179
5.5 pshpack2.h	179
5.6 pshpack4.h	180
5.7 w16.h	180
5.8 winbase.h	181
5.9 windef.h	202
5.10 winerror.h	205
5.11 wingdi.h	227
5.12 winnt.h	265
5.13 winuser.h	319
5.14 libemf.h	367
Index	421

1 Hierarchical Index

1.1 Class Hierarchy

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

EMF::BYTEARRAY	10
EMF::CHARSTR	11
EMF::DATASTREAM	12
EMF::DWORDARRAY	29
EMF::GLOBALOBJECTS	152
EMF::INTARRAY	158
EMF::METARECORD	164
EMF::EMRARC	30
EMF::EMRARCTO	32
EMF::EMRBEGINPATH	35
EMF::EMRCLOSEFIGURE	37
EMF::EMRCREATEBRUSHINDIRECT	39
EMF::EMRCREATEPALETTE	41
EMF::EMRCREATEPEN	43

EMF::EMRDELETEOBJECT	45
EMF::EMRELLIPSE	47
EMF::EMRENDPATH	49
EMF::EMREOF	51
EMF::EMREXTCREATEFONTINDIRECTW	53
EMF::EMREXTCREATEPEN	55
EMF::EMREXTTEXTOUTA	58
EMF::EMREXTTEXTOUTW	60
EMF::EMRFILLPATH	63
EMF::EMRLINETO	65
EMF::EMRMODIFYWORLDTRANSFORM	67
EMF::EMRMOVETOEX	69
EMF::EMRPOLYBEZIER	71
EMF::EMRPOLYBEZIERTO	76
EMF::EMRPOLYBEZIER16	73
EMF::EMRPOLYBEZIERTO16	78
EMF::EMRPOLYBEZIERTO	76
EMF::EMRPOLYBEZIERTO16	78
EMF::EMRPOLYGON	81
EMF::EMRPOLYGON16	83
EMF::EMRPOLYLINE	85
EMF::EMRPOLYLINE16	88
EMF::EMRPOLYLINETO	90
EMF::EMRPOLYLINETO16	92
EMF::EMRPOLYPOLYGON	95
EMF::EMRPOLYPOLYGON16	97
EMF::EMRRECTANGLE	101
EMF::EMRRESTOREDC	103
EMF::EMRSAVEDC	105
EMF::EMRSCALEVIEWPORTEXTEX	107
EMF::EMRSCALEWINDOWEXTEX	109
EMF::EMRSELECTOBJECT	111

EMF::EMRSETBKCOLOR	114
EMF::EMRSETBKMODE	116
EMF::EMRSETMAPMODE	118
EMF::EMRSETMETARGN	120
EMF::EMRSETMITERLIMIT	122
EMF::EMRSETPIXELV	124
EMF::EMRSETPOLYFILLMODE	126
EMF::EMRSETTEXTALIGN	128
EMF::EMRSETTEXTCOLOR	130
EMF::EMRSETVIEWPORTEXTEX	132
EMF::EMRSETVIEWPORTORGEX	134
EMF::EMRSETWINDOWEXTEx	136
EMF::EMRSETWINDOWORGEX	138
EMF::EMRSETWORLDTRANSFORM	140
EMF::EMRSTROKEANDFILLPATH	142
EMF::EMRSTROKEPATH	144
EMF::ENHMETAHEADER	146
EMF::OBJECT	167
EMF::GRAPHICSOBJECT	156
EMF::BRUSH	8
EMF::EXTPEN	148
EMF::FONT	150
EMF::PALETTE	169
EMF::PEN	171
EMF::METAFILEDEVICECONTEXT	159
EMF::PADDING	168
EMF::POINT16ARRAY	173
EMF::POINTLARRAY	174
EMF::WCHARSTR	174

2 Data Structure Index

2.1 Data Structures

Here are the data structures with brief descriptions:

EMF::BRUSH	
Graphics Brush	8
EMF::BYTEARRAY	
Represent a byte array in a simple way	10
EMF::CHARSTR	
Represent an ASCII character string in a simple way	11
EMF::DATASTREAM	
Support different endian modes when reading and writing the metafile	12
EMF::DWORDARRAY	
Represent an array of double word integers in a simple way	29
EMF::EMRARC	
EMF Arc	30
EMF::EMRARCTO	
EMF Arc To	32
EMF::EMRBEGINPATH	
EMF Begin Path	35
EMF::EMRCLOSEFIGURE	
EMF Close Figure	37
EMF::EMRCREATEBRUSHINDIRECT	
EMF Brush	39
EMF::EMRCREATEPALETTE	
EMF Palette	41
EMF::EMRCREATEPEN	
EMF Pen	43
EMF::EMRDELETEOBJECT	
EMF Delete Object	45
EMF::EMRELLIPSE	
EMF Ellipse	47
EMF::EMRENDPATH	
EMF End Path	49
EMF::EMREOF	
EMF End of File Record	51
EMF::EMREXTCREATEFONTINDIRECTW	
EMF Font	53
EMF::EMREXTCREATEPEN	
EMF Extended Pen	55

EMF::EMREXTTEXTOUTA	
EMF Extended Text Output ASCII	58
EMF::EMREXTTEXTOUTW	
EMF Extended Text Output Wide character	60
EMF::EMRFILLPATH	
EMF Fill path	63
EMF::EMRLINETO	
EMF Line To	65
EMF::EMRMODIFYWORLDTRANSFORM	
EMF Modify World Transform	67
EMF::EMRMOVETOEX	
EMF MoveTo (ex)	69
EMF::EMRPOLYBEZIER	
EMF Polybezier	71
EMF::EMRPOLYBEZIER16	
EMF Polybezier16	73
EMF::EMRPOLYBEZIERTO	
EMF PolyBezierTo	76
EMF::EMRPOLYBEZIERTO16	
EMF PolyBezierTo16	78
EMF::EMRPOLYGON	
EMF Filled Polygon	81
EMF::EMRPOLYGON16	
EMF Filled Polygon16	83
EMF::EMRPOLYLINE	
EMF Polyline	85
EMF::EMRPOLYLINE16	
EMF Polyline16	88
EMF::EMRPOLYLINETO	
EMF PolylineTo	90
EMF::EMRPOLYLINETO16	
EMF PolylineTo16	92
EMF::EMRPOLYPOLYGON	
EMF Poly Polygon	95
EMF::EMRPOLYPOLYGON16	
EMF Poly Polygon16	97
EMF::EMRRECTANGLE	
EMF Rectangle	101
EMF::EMRRESTOREDC	
EMF Restore DC	103
EMF::EMRSAVEDC	
EMF Save DC	105

EMF::EMRSCALEVIEWPORTEXTEx	
EMF Scale Viewport Extents (ex)	107
EMF::EMRSCALEWINDOWEXTEx	
EMF Scale Window Extents (ex)	109
EMF::EMRSELECTOBJECT	
EMF Select Object	111
EMF::EMRSETBKCOLOR	
EMF Set Background Color	114
EMF::EMRSETBKMODE	
EMF Set Background Mode	116
EMF::EMRSETMAPMODE	
EMF Set Mapping Mode	118
EMF::EMRSETMETARGN	
EMF Set Meta Region	120
EMF::EMRSETMITERLIMIT	
EMF SetMiterLimit	122
EMF::EMRSETPIXELV	
EMF Set Pixel	124
EMF::EMRSETPOLYFILLMODE	
EMF Set the Polygon Fill Mode	126
EMF::EMRSETTEXTALIGN	
EMF Set Text Alignment	128
EMF::EMRSETTEXTCOLOR	
EMF Set Text Color	130
EMF::EMRSETVIEWPORTEXTEx	
EMF Set Viewport Extents (ex)	132
EMF::EMRSETVIEWPORTORGEX	
EMF Set Viewport Origin (ex)	134
EMF::EMRSETWINDOWEXTEx	
EMF Set Window Extent (ex)	136
EMF::EMRSETWINDOWORGEX	
EMF Set Window Origin (ex)	138
EMF::EMRSETWORLDTRANSFORM	
EMF Set World Transform	140
EMF::EMRSTROKEANDFILLPATH	
EMF Stroke and Fill path	142
EMF::EMRSTROKEPATH	
EMF Stroke path	144
EMF::ENHMETAHEADER	
Enhanced Metafile Header Record	146
EMF::EXTPEN	
Extended Graphics Pen	148

EMF::FONT	
Graphics Font	150
EMF::GLOBALOBJECTS	152
EMF::GRAPHICSOBJECT	
A global graphics object	156
EMF::INTARRAY	
Represent an array of integers in a simple way	158
EMF::METAFILEDEVICECONTEXT	
Graphics Device Context	159
EMF::METARECORD	
The base class of all metafile records	164
EMF::OBJECT	
Global GDI object	167
EMF::PADDING	
All metafile records must be padded out to a multiple of 4 bytes	168
EMF::PALETTE	
Graphics Palette	169
EMF::PEN	
Graphics Pen	171
EMF::POINT16ARRAY	
Represent an array of 16-bit point in a simple way	173
EMF::POINTLARRAY	
Represent an array of points in a simple way	174
EMF::WCHARSTR	
Represent a wide (UNICODE) character string in a simple way	174

3 File Index

3.1 File List

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

emf.h	175
basetsd.h	176
guiddef.h	178
poppack.h	179
pshpack2.h	179
pshpack4.h	180
w16.h	180

winbase.h	181
windef.h	202
winerror.h	205
wingdi.h	227
winnt.h	265
winuser.h	319
libemf.h	367

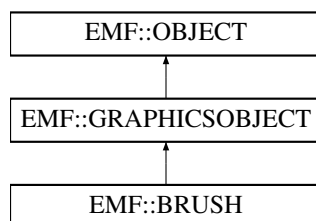
4 Data Structure Documentation

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.
- 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

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 BRUSH .

Implements [EMF::GRAPHICSOBJECT](#).

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

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

- libemf.h

4.2 EMF::BYTEARRAY Struct Reference

Represent a byte array in a simple way.

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

Public Member Functions

- [BYTEARRAY](#) (BYTE *const array, const int n)

Data Fields

- BYTE *const **array_**
Array of unsigned bytes.
- const int **n_**
Number of bytes in array.

4.2.1 Detailed Description

Represent a byte array in a simple way.

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

4.2.2 Constructor & Destructor Documentation

BYTEARRAY()

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

Simple constructor.

Parameters

<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> ↔ —	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> ↔ —	(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:

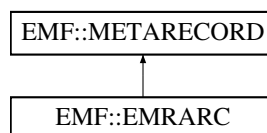
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

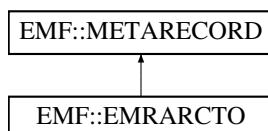
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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:

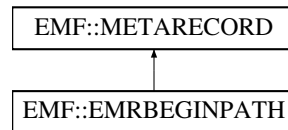
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

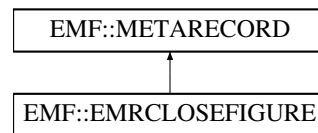
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

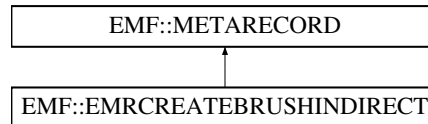
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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 BRUSH object.
<i>handle</i>	the BRUSH 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:

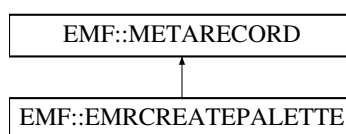
- libemf.h
- libemf.cpp

4.11 EMF::EMRCREATEPALETTE Class Reference

EMF Palette.

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

Inheritance diagram for EMF::EMRCREATEPALETTE:



Public Member Functions

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

Public Member Functions inherited from [EMF::METARECORD](#)

- virtual void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- virtual [~METARECORD](#) ()

4.11.1 Detailed Description

EMF Palette.

Create a new palette.

4.11.2 Constructor & Destructor Documentation

EMRCREATEPALETTE() [1/2]

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

Parameters

<i>palette</i>	an instance of a PALETTE object.
<i>handle</i>	the PALETTE 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:

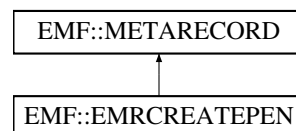
- libemf.h
- libemf.cpp

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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 PEN object.
<i>handle</i>	the PEN 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:

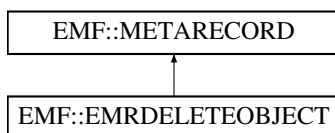
- libemf.h
- libemf.cpp

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

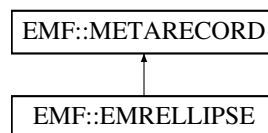
- libemf.h
- libemf.cpp

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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:

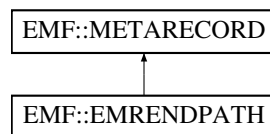
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

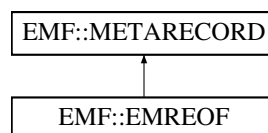
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

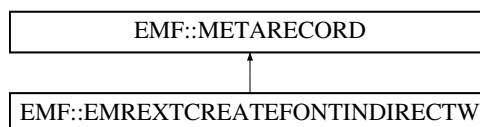
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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 FONT object.
<i>handle</i>	the FONT 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:

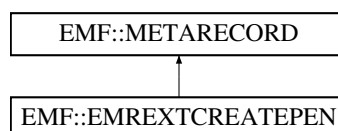
- libemf.h
- libemf.cpp

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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 PEN object.
<i>handle</i>	the PEN 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:

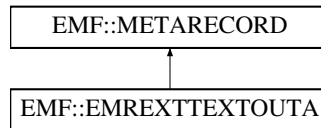
- libemf.h
- libemf.cpp

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

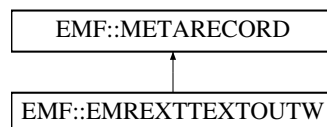
- libemf.h

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 void `execute` (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool `serialize` (DATASTREAM ds)=0
- virtual int `size` (void) const =0
- 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:

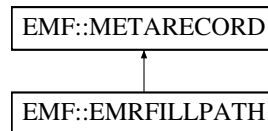
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

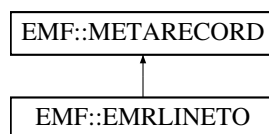
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

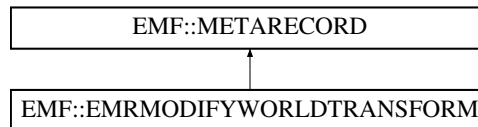
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

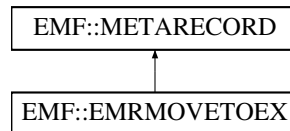
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

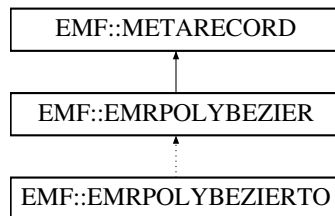
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

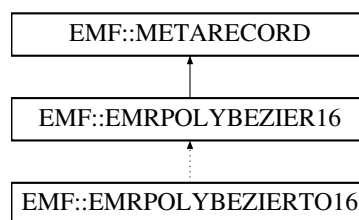
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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:

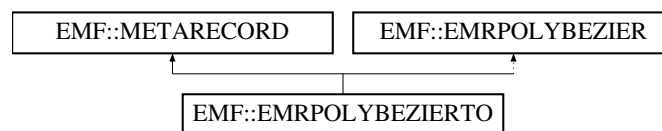
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

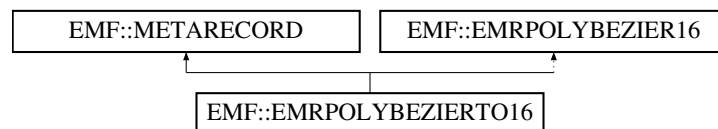
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

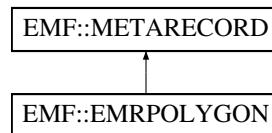
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

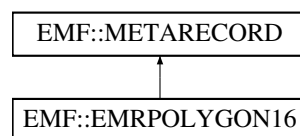
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

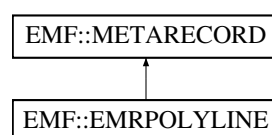
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

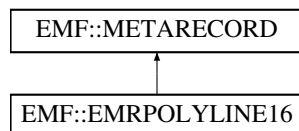
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

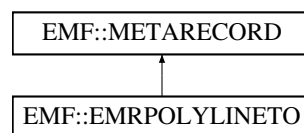
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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:

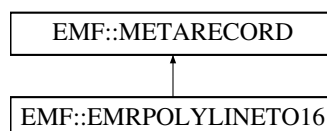
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

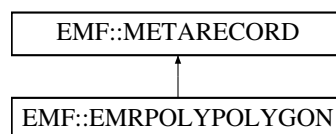
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

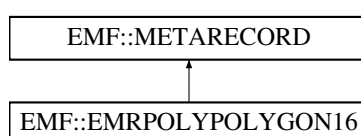
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

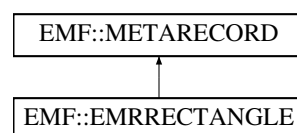
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

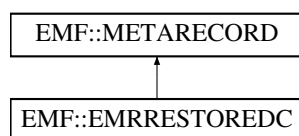
- libemf.h

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 void `execute` (`METAFILEDEVICECONTEXT` *source, HDC dc) const =0
- virtual bool `serialize` (`DATASTREAM` ds)=0
- virtual int `size` (void) const =0
- 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::EMRSTOREDC::serialize (
    DATASTREAM ds ) [inline], [virtual]
```

Parameters

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

Implements [EMF::METARECORD](#).

size()

```
int EMF::EMRSTOREDC::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:

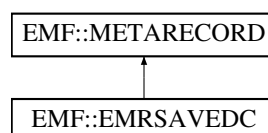
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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

EMRSAVE DC() [1/2]

```
EMF::EMRSAVE DC::EMRSAVE DC (
    void ) [inline]
```

Create a Save DC record.

References [EMRSAVE DC\(\)](#).

Referenced by [EMRSAVE DC\(\)](#).

EMRSAVE DC() [2/2]

```
EMF::EMRSAVE DC::EMRSAVE DC (
    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::EMRSAVE DC::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:

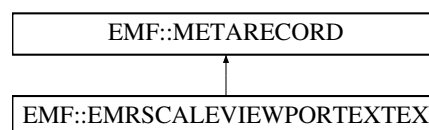
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) **source*, HDC *dc*) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) *ds*)=0
- virtual int [size](#) (void) const =0
- 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:

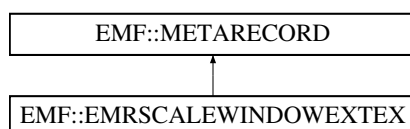
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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::EMRSCALEWINDOWEXTX::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::EMRSCALEWINDOWEXTX::serialize (
    DATASTREAM ds ) [inline], [virtual]
```

Parameters

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

Implements [EMF::METARECORD](#).

size()

```
int EMF::EMRSCALEWINDOWEXTX::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:

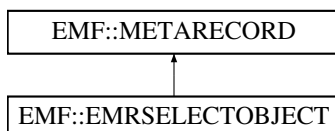
- libemf.h

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 void [execute](#) ([METAFILEDEVICECONTEXT](#) *source, HDC dc) const =0
- virtual bool [serialize](#) ([DATASTREAM](#) ds)=0
- virtual int [size](#) (void) const =0
- 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:

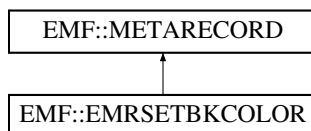
- libemf.h
- libemf.cpp

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

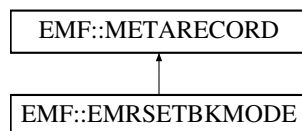
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

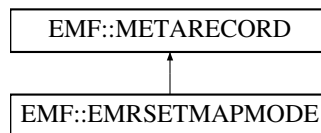
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

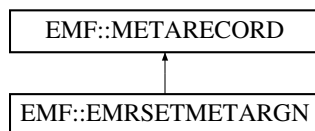
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

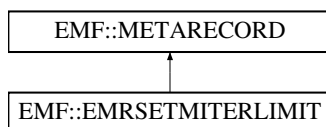
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

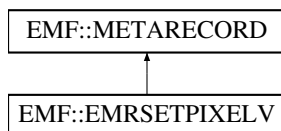
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

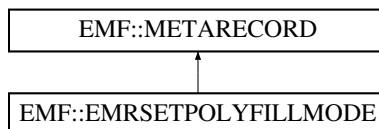
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

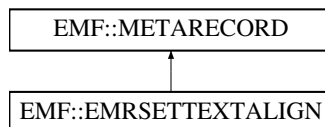
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

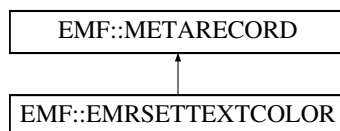
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

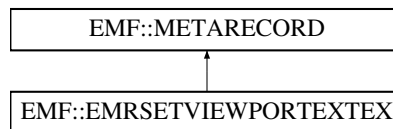
- libemf.h

4.52 EMF::EMRSETVIEWPORTETEX Class Reference

EMF Set Viewport Extents (ex)

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

Inheritance diagram for EMF::EMRSETVIEWPORTETEX:



Public Member Functions

- [EMRSETVIEWPORTETEX](#) (INT cx, INT cy)
- [EMRSETVIEWPORTETEX](#) (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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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

EMRSETVIEWPORTETEX() [1/2]

```
EMF::EMRSETVIEWPORTETEX::EMRSETVIEWPORTETEX (
    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:

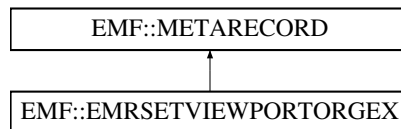
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

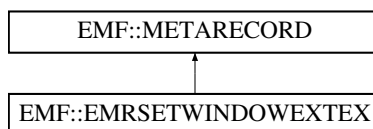
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

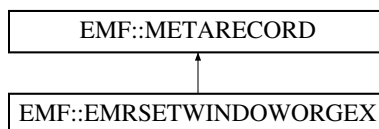
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

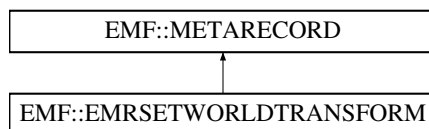
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

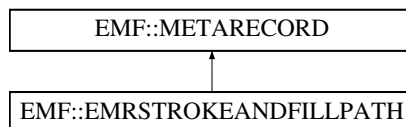
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

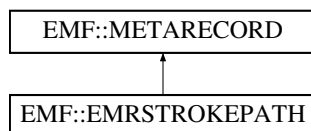
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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:

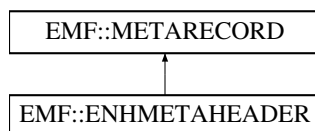
- libemf.h

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 void [execute](#) (METAFILEDEVICECONTEXT *source, HDC dc) const =0
- virtual bool [serialize](#) (DATASTREAM ds)=0
- virtual int [size](#) (void) const =0
- 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](#).

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:

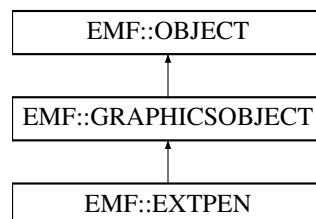
- libemf.h

4.60 EMF::EXTPEN Class Reference

Extended Graphics Pen.

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

Inheritance diagram for EMF::EXTPEN:



Public Member Functions

- [EXTPEN](#) (const EXTLOGPEN *|pen)
- 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.
- 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

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 PEN .

Implements [EMF::GRAPHICSOBJECT](#).

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

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

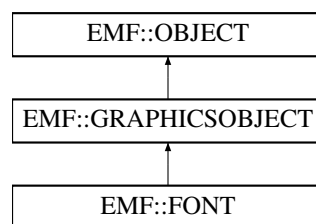
- libemf.h

4.61 EMF::FONT Class Reference

Graphics Font.

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

Inheritance diagram for EMF::FONT:



Public Member Functions

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

Public Member Functions inherited from [EMF::GRAPHICSOBJECT](#)

- virtual [~GRAPHICSOBJECT](#) ()
GRAPHICSOBJECTs has a virtual destructor.
- 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

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 FONT .

Implements [EMF::GRAPHICSOBJECT](#).

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

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

- libemf.h

4.62 EMF::GLOBALOBJECTS Class Reference

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

Public Member Functions

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

Static Public Member Functions

- static [EMF::METARECORD](#) * [new_eof](#) ([DATASTREAM](#) &ds)
Create a new [EMREOF](#) record.
- static [EMF::METARECORD](#) * [new_setviewportorgex](#) ([DATASTREAM](#) &ds)
Create a new [EMRSETVIEWPORTORGEX](#) record.
- static [EMF::METARECORD](#) * [new_setwindoworgex](#) ([DATASTREAM](#) &ds)
Create a new [EMRSETWINDOWORGEX](#) record.
- static [EMF::METARECORD](#) * [new_setviewporttextex](#) ([DATASTREAM](#) &ds)
Create a new [EMRSETVIEWPORTEXTEX](#) record.
- static [EMF::METARECORD](#) * [new_setwindowextex](#) ([DATASTREAM](#) &ds)
Create a new [EMRSETWINDOWEXTEX](#) record.
- static [EMF::METARECORD](#) * [new_scaleviewporttextex](#) ([DATASTREAM](#) &ds)
Create a new [SCALEVIEWPORTEXTEX](#) record.
- static [EMF::METARECORD](#) * [new_scalewindowextex](#) ([DATASTREAM](#) &ds)
Create a new [SCALEWINDOWEXTEX](#) record.
- static [EMF::METARECORD](#) * [new_modifyworldtransform](#) ([DATASTREAM](#) &ds)
Create a new [MODIFYWORLDTRANSFORM](#) record.
- static [EMF::METARECORD](#) * [new_setworldtransform](#) ([DATASTREAM](#) &ds)
Create a new [SETWORLDTRANSFORM](#) record.
- static [EMF::METARECORD](#) * [new_settextalign](#) ([DATASTREAM](#) &ds)
Create a new [SETTEXTALIGN](#) record.
- static [EMF::METARECORD](#) * [new_settextcolor](#) ([DATASTREAM](#) &ds)

- Create a new SETTEXTCOLOR record.*

 - static [EMF::METARECORD](#) * [new_setbkcolor](#) ([DATASTREAM](#) &ds)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Create a new POLYBEZIERTO record.
- static [EMF::METARECORD](#) * [new_polybezierto16](#) ([DATASTREAM](#) &ds)

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

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

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

Create a new EXTTEXTOUTA record.

- static `EMF::METARECORD * new_exttextoutw (DATASTREAM &ds)`
Create a new EXTTEXTOUTW record.
- static `EMF::METARECORD * new_setpixelv (DATASTREAM &ds)`
Create a new SETPIXELV record.
- static `EMF::METARECORD * new_createpen (DATASTREAM &ds)`
Create a new CREATEPEN record.
- static `EMF::METARECORD * new_extcreatepen (DATASTREAM &ds)`
Create a new EXTCREATEPEN record.
- static `EMF::METARECORD * new_createbrushindirect (DATASTREAM &ds)`
Create a new CREATEBRUSHINDIRECT record.
- static `EMF::METARECORD * new_extcreatefontindirectw (DATASTREAM &ds)`
Create a new EXTCREATEFONTINDIRECTW record.
- static `EMF::METARECORD * new_fillpath (DATASTREAM &ds)`
Create a new FILLPATH record.
- static `EMF::METARECORD * new_strokepath (DATASTREAM &ds)`
Create a new STROKEPATH record.
- static `EMF::METARECORD * new_strokeandfillpath (DATASTREAM &ds)`
Create a new STROKEANDFILLPATH record.
- static `EMF::METARECORD * new_beginpath (DATASTREAM &ds)`
Create a new BEGINPATH record.
- static `EMF::METARECORD * new_endpath (DATASTREAM &ds)`
Create a new ENDPATH record.
- static `EMF::METARECORD * new_closefigure (DATASTREAM &ds)`
Create a new CLOSEFIGURE record.
- static `EMF::METARECORD * new_savedc (DATASTREAM &ds)`
Create a new SAVEDC record.
- static `EMF::METARECORD * new_restoredc (DATASTREAM &ds)`
Create a new RESTOREDC record.
- static `EMF::METARECORD * new_setmetargn (DATASTREAM &ds)`
Create a new SETMETARGN record.
- static `EMF::METARECORD * new_setmiterlimit (DATASTREAM &ds)`
Create a new SETMITERLIMIT record.

4.62.1 Detailed Description

Stores all the objects in a single database within a process.

4.62.2 Member Function Documentation

add()

```
HGDIOBJ EMF::GLOBALOBJECTS::add (
    OBJECT * object )
```

Add an object to the global vector. The object's handle is simply its index in the global object vector, which is computed by the very interesting “difference between two iterators” method.

Parameters

<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:

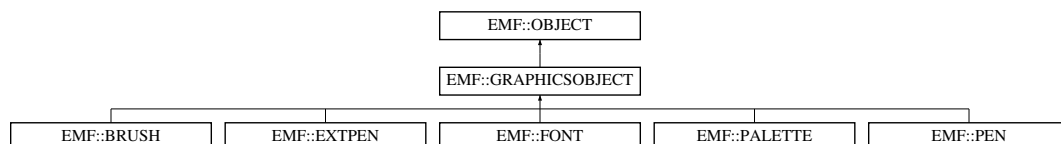
- libemf.h
- libemf.cpp

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, HGDI OBJ **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:

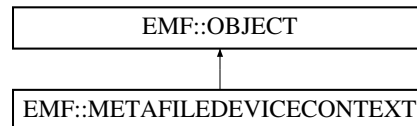
- libemf.h

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)
- virtual OBJECTTYPE [getType](#) (void) const =0

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](#), and [header](#).

4.65.4 Field Documentation**ds**

```
DATASTREAM EMF::METAFILEDEVICECONTEXT::ds
```

All i/o to the metafile is wrapped by this class so that byte swapping on big-endian machines is transparent.

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\(\)](#).

Serves double duty as the physical device description.

Referenced by [appendHandle\(\)](#), [appendRecord\(\)](#), [mergePoint\(\)](#), and [nextHandle\(\)](#).

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:

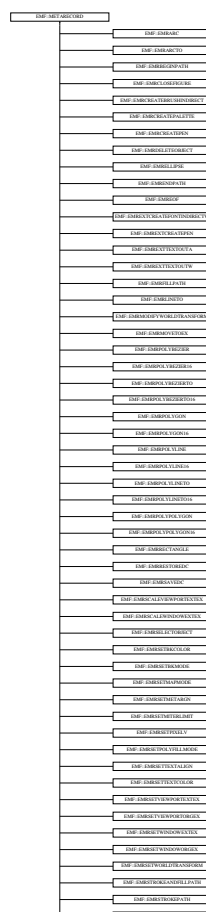
- libemf.h

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::EMRSETVIEWPORTEXTTEX](#), [EMF::EMRSCALEVIEWPORTEXTTEX](#), [EMF::EMRSETWINDOWEXTTEX](#), [EMF::EMRSCALEWINDOWEXTTEX](#), [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::EMRSTOREDC, 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::EMRSTOREDC](#), [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::EMRSTOREDC](#), [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:

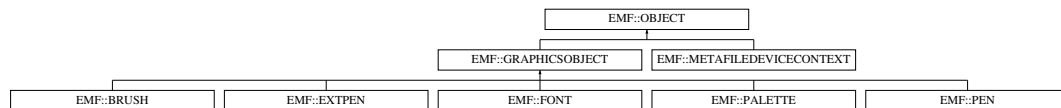
- `libemf.h`

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:

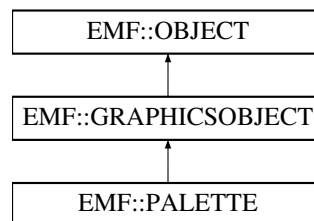
- libemf.h
- libemf.cpp

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.
- 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

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>lpalette</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 FONT .

Implements [EMF::GRAPHICSOBJECT](#).

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

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

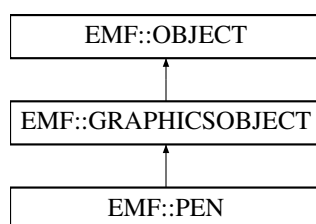
- libemf.h

4.70 EMF::PEN Class Reference

Graphics Pen.

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

Inheritance diagram for EMF::PEN:



Public Member Functions

- [PEN](#) (const LOGPEN *|pen)
- 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.
- 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

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 PEN .

Implements [EMF::GRAPHICSOBJECT](#).

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

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

- libemf.h

4.71 EMF::POINT16ARRAY Struct Reference

Represent an array of 16-bit point in a simple way.

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

Public Member Functions

- [POINT16ARRAY](#) (POINT16 *const points, const DWORD n)

Data Fields

- POINT16 *const **points_**
Array of POINT16s.
- const DWORD **n_**
Number of POINT16s in array.

4.71.1 Detailed Description

Represent an array of 16-bit point in a simple way.

Allow an array of POINT16's to be written out at once.

4.71.2 Constructor & Destructor Documentation

POINT16ARRAY()

```
EMF::POINT16ARRAY::POINT16ARRAY (  
    POINT16 *const points,  
    const DWORD n ) [inline]
```

Simple constructor.

Parameters

<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 (widechar) strings have to be byte swapped. This structure allows us to provide a uniform stream-like interface for writing out all the components of metafiles.

4.73.2 Constructor & Destructor Documentation

WCHARSTR()

```
EMF::WCHARSTR::WCHARSTR (
    WCHAR *const string,
    const int length ) [inline]
```

Simple constructor.

Parameters

<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/windef.h>
00028 #include <libEMF/wine/winbase.h>
00029 #include <libEMF/wine/wingdi.h>
00030 #include <libEMF/wine/winuser.h>
00031 #include <libEMF/wine/winerror.h>
00032
00033 #ifdef __cplusplus
00034 extern "C" {
00035 #endif
00036 /*
00037  * Here are additional, non-"standard" routines which the author deems useful.
00038  */
00039 HDC CreateEnhMetaFileWithFILEA( HDC context, FILE* fp, const RECT* size,
00040                                LPCSTR description );
00041 HDC CreateEnhMetaFileWithFILEW( HDC context, FILE* fp, const RECT* size,
00042                                LPCWSTR description );
00043 HENHMETAFILE CloseEnhMetaFileWithFILE( HDC context );
00044 /*
00045  * This function will only produce output if the library has been compiled with
00046  * editing enabled (e.g., ./configure --enable-editing).
00047  */
00048 void WINAPI EditEnhMetaFile ( HENHMETAFILE metafile );
00049 #ifdef __cplusplus
00050 }
00051 #endif
00052
00053 #endif /* _EMF_H */

```

5.2 basetsd.h

```

00001 /*
00002  * Compilers that uses ILP32, LP64 or P64 type models
00003  * for both Win32 and Win64 are supported by this file.
00004  */
00005
00006 #ifndef __WINE_BASETSD_H
00007 #define __WINE_BASETSD_H
00008
00009 #ifdef __cplusplus
00010 extern "C" {
00011 #endif /* defined(__cplusplus) */
00012
00013 /*
00014  * Win32 was easy to implement under Unix since most (all?) 32-bit
00015  * Unices uses the same type model (ILP32) as Win32, where int, long
00016  * and pointer are 32-bit.
00017  *
00018  * Win64, however, will cause some problems when implemented under Unix.
00019  * Linux/{Alpha, Sparc64} and most (all?) other 64-bit Unices uses
00020  * the LP64 type model where int is 32-bit and long and pointer are
00021  * 64-bit. Win64 on the other hand uses the P64 (sometimes called LLP64)
00022  * type model where int and long are 32 bit and pointer is 64-bit.
00023  */
00024
00025 /* Type model indepent typedefs */
00026
00027 typedef char          __int8;
00028 typedef unsigned char __uint8;
00029
00030 typedef short         __int16;
00031 typedef unsigned short __uint16;
00032
00033 typedef int           __int32;
00034 typedef unsigned int  __uint32;
00035
00036 // wogl
00037 //typedef long long    __int64;

```



```

00038 //typedef unsigned long long __uint64;
00039 typedef long __int64;
00040 typedef unsigned long __uint64;
00041
00042 #if defined(_WIN64)
00043
00044 typedef __uint32 __ptr32;
00045 typedef void *__ptr64;
00046
00047 #else /* FIXME: defined(_WIN32) */
00048
00049 typedef void *__ptr32;
00050 typedef __uint64 __ptr64;
00051
00052 #endif
00053
00054 /* Always signed and 32 bit wide */
00055
00056 typedef __int32 LONG32;
00057 typedef __int32 INT32;
00058
00059 typedef LONG32 *PLONG32;
00060 typedef INT32 *PINT32;
00061
00062 /* Always unsigned and 32 bit wide */
00063
00064 typedef __uint32 ULONG32;
00065 typedef __uint32 DWORD32;
00066 typedef __uint32 UINT32;
00067
00068 typedef ULONG32 *PULONG32;
00069 typedef DWORD32 *PDWORD32;
00070 typedef UINT32 *PUINT32;
00071
00072 /* Always signed and 64 bit wide */
00073
00074 typedef __int64 LONG64;
00075 typedef __int64 INT64;
00076
00077 typedef LONG64 *PLONG64;
00078 typedef INT64 *PINT64;
00079
00080 /* Always unsigned and 64 bit wide */
00081
00082 typedef __uint64 ULONG64;
00083 typedef __uint64 DWORD64;
00084 typedef __uint64 UINT64;
00085
00086 typedef ULONG64 *PULONG64;
00087 typedef DWORD64 *PDWORD64;
00088 typedef UINT64 *PUINT64;
00089
00090 /* Win32 or Win64 dependent typedef/defines. */
00091
00092 #ifdef _WIN64
00093
00094 typedef __int64 INT_PTR, *PINT_PTR;
00095 typedef __uint64 UINT_PTR, *PUINT_PTR;
00096
00097 #define MAXINT_PTR 0x7fffffffffffffff
00098 #define MININT_PTR 0x8000000000000000
00099 #define MAXUINT_PTR 0xffffffffffffffff
00100
00101 typedef __int32 HALF_PTR, *PHALF_PTR;
00102 typedef __int32 UHALF_PTR, *PUHALF_PTR;
00103
00104 #define MAXHALF_PTR 0x7fffffff
00105 #define MINHALF_PTR 0x80000000
00106 #define MAXUHALF_PTR 0xffffffff
00107
00108 typedef __int64 LONG_PTR, *PLONG_PTR;
00109 typedef __uint64 ULONG_PTR, *PULONG_PTR;
00110 typedef __uint64 DWORD_PTR, *PDWORD_PTR;
00111
00112 #else /* FIXME: defined(_WIN32) */
00113
00114 typedef __int32 INT_PTR, *PINT_PTR;
00115 typedef __uint32 UINT_PTR, *PUINT_PTR;
00116
00117 #define MAXINT_PTR 0x7fffffff
00118 #define MININT_PTR 0x80000000
00119 #define MAXUINT_PTR 0xffffffff
00120
00121 typedef __int16 HALF_PTR, *PHALF_PTR;
00122 typedef __uint16 UHALF_PTR, *PUHALF_PTR;
00123
00124 #define MAXUHALF_PTR 0xffff

```

```

00125 #define MAXHALF_PTR 0x7fff
00126 #define MINHALF_PTR 0x8000
00127
00128 typedef __int32 LONG_PTR, *PLONG_PTR;
00129 typedef __uint32 ULONG_PTR, *PULONG_PTR;
00130 typedef __uint32 DWORD_PTR, *PDWORD_PTR;
00131
00132 #endif /* defined(_WIN64) || defined(_WIN32) */
00133
00134 typedef INT_PTR SSIZE_T, *PSSIZE_T;
00135 typedef UINT_PTR SIZE_T, *PSIZE_T;
00136
00137 #ifdef __cplusplus
00138 } /* extern "C" */
00139 #endif /* defined(__cplusplus) */
00140
00141 #endif /* !defined(__WINE_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, 0xC0,0,0,0,0,0,0,0x46)
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 #else
00056 /* Depth == 0 ! */
00057 #error "Popping alignment isn't possible since no alignment has been pushed"
00058
00059 #endif
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 u {
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 ONE5STOPBITS 1
00298 #define TWOSTOPBITS 2
00299
00300 #define IGNORE 0

```



```
00301 #define INFINITE      0xFFFFFFFF
00302
00303 #define CE_RXOVER      0x0001
00304 #define CE_OVERRUN    0x0002
00305 #define CE_RXPARITY    0x0004
00306 #define CE_FRAME      0x0008
00307 #define CE_BREAK       0x0010
00308 #define CE_CTSTO      0x0020
00309 #define CE_DSRTO      0x0040
00310 #define CE_RLSDTO     0x0080
00311 #define CE_TXFULL     0x0100
00312 #define CE_PTO        0x0200
00313 #define CE_IOE         0x0400
00314 #define CE_DNS         0x0800
00315 #define CE_OOP         0x1000
00316 #define CE_MODE 0x8000
00317
00318 #define IE_BADID       -1
00319 #define IE_OPEN        -2
00320 #define IE_NOPEN       -3
00321 #define IE_MEMORY      -4
00322 #define IE_DEFAULT     -5
00323 #define IE_HARDWARE    -10
00324 #define IE_BYTESIZE    -11
00325 #define IE_BAUDRATE    -12
00326
00327 #define EV_RXCHAR      0x0001
00328 #define EV_RXFLAG     0x0002
00329 #define EV_TXEMPT     0x0004
00330 #define EV_CTS        0x0008
00331 #define EV_DSR        0x0010
00332 #define EV_RLSD       0x0020
00333 #define EV_BREAK      0x0040
00334 #define EV_ERR        0x0080
00335 #define EV_RING       0x0100
00336 #define EV_PERR       0x0200
00337 #define EV_RX80FULL   0x0400
00338 #define EV_EVENT1     0x0800
00339 #define EV_EVENT2     0x1000
00340
00341 #define SETXOFF 1
00342 #define SETXON 2
00343 #define SETRTS 3
00344 #define CLRRTS 4
00345 #define SETDTR 5
00346 #define CLRDTR 6
00347 #define RESETDEV 7
00348 #define SETBREAK 8
00349 #define CLRBREAK 9
00350
00351 /* Purge functions for Comm Port */
00352 #define PURGE_TXABORT 0x0001 /* Kill the pending/current writes to the
00353                                comm port */
00354 #define PURGE_RXABORT 0x0002 /*Kill the pending/current reads to
00355                                the comm port */
00356 #define PURGE_TXCLEAR 0x0004 /* Kill the transmit queue if there*/
00357 #define PURGE_RXCLEAR 0x0008 /* Kill the typeahead buffer if there*/
00358
00359
00360 /* Modem Status Flags */
00361 #define MS_CTS_ON      ((DWORD)0x0010)
00362 #define MS_DSR_ON      ((DWORD)0x0020)
00363 #define MS_RING_ON     ((DWORD)0x0040)
00364 #define MS_RLSD_ON     ((DWORD)0x0080)
00365
00366 #define RTS_CONTROL_DISABLE 0
00367 #define RTS_CONTROL_ENABLE 1
00368 #define RTS_CONTROL_HANDSHAKE 2
00369 #define RTS_CONTROL_TOGGLE 3
00370
00371 #define DTR_CONTROL_DISABLE 0
00372 #define DTR_CONTROL_ENABLE 1
00373 #define DTR_CONTROL_HANDSHAKE 2
00374
00375
00376 #define LMEM_FIXED      0
00377 #define LMEM_MOVEABLE   0x0002
00378 #define LMEM_NOCOMPACT  0x0010
00379 #define LMEM_NODISCARD  0x0020
00380 #define LMEM_ZEROINIT   0x0040
00381 #define LMEM_MODIFY      0x0080
00382 #define LMEM_DISCARDABLE 0x0F00
00383 #define LMEM_DISCARDED   0x4000
00384 #define LMEM_LOCKCOUNT 0x00FF
00385
00386 #define LPTR (LMEM_FIXED | LMEM_ZEROINIT)
00387 #define LHND (LMEM_MOVEABLE | LMEM_ZEROINIT)
```

```

00388
00389 #define NONZEROLHND (LMEM_MOVEABLE)
00390 #define NONZEROLPTR (LMEM_FIXED)
00391
00392 #define GMEM_FIXED 0x0000
00393 #define GMEM_MOVEABLE 0x0002
00394 #define GMEM_NOCOMPACT 0x0010
00395 #define GMEM_NODISCARD 0x0020
00396 #define GMEM_ZEROINIT 0x0040
00397 #define GMEM_MODIFY 0x0080
00398 #define GMEM_DISCARDABLE 0x0100
00399 #define GMEM_NOT_BANKED 0x1000
00400 #define GMEM_SHARE 0x2000
00401 #define GMEM_DDESHARE 0x2000
00402 #define GMEM_NOTIFY 0x4000
00403 #define GMEM_LOWER GMEM_NOT_BANKED
00404 #define GMEM_DISCARDED 0x4000
00405 #define GMEM_LOCKCOUNT 0x00ff
00406 #define GMEM_INVALID_HANDLE 0x8000
00407
00408 #define GHND (GMEM_MOVEABLE | GMEM_ZEROINIT)
00409 #define GPTR (GMEM_FIXED | GMEM_ZEROINIT)
00410
00411 #define INVALID_ATOM ((ATOM) 0)
00412 #define MAXINTATOM 0xc000
00413 #define MAKEINTATOMA(atom) ((LPCSTR) ((ULONG_PTR) ((WORD) (atom))))
00414 #define MAKEINTATOMW(atom) ((LPCWSTR) ((ULONG_PTR) ((WORD) (atom))))
00415 #define MAKEINTATOM WINELIB_NAME_AW(MAKEINTATOM)
00416
00417 typedef struct tagMEMORYSTATUS
00418 {
00419     DWORD dwLength;
00420     DWORD dwMemoryLoad;
00421     DWORD dwTotalPhys;
00422     DWORD dwAvailPhys;
00423     DWORD dwTotalPageFile;
00424     DWORD dwAvailPageFile;
00425     DWORD dwTotalVirtual;
00426     DWORD dwAvailVirtual;
00427 } MEMORYSTATUS, *LPMEMORYSTATUS;
00428
00429
00430 typedef struct {
00431     WORD wYear;
00432     WORD wMonth;
00433     WORD wDayOfWeek;
00434     WORD wDay;
00435     WORD wHour;
00436     WORD wMinute;
00437     WORD wSecond;
00438     WORD wMilliseconds;
00439 } SYSTEMTIME, *PSYSTEMTIME, *LPSYSTEMTIME;
00440
00441 /* The 'overlapped' data structure used by async I/O functions.
00442 */
00443 typedef struct {
00444     DWORD Internal;
00445     DWORD InternalHigh;
00446     DWORD Offset;
00447     DWORD OffsetHigh;
00448     HANDLE hEvent;
00449 } OVERLAPPED, *LPOVERLAPPED;
00450
00451 typedef VOID CALLBACK (*LPOVERLAPPED_COMPLETION_ROUTINE) (DWORD dwErrorCode, DWORD
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 0x00000000
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

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```

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, *PBH_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;

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```

00648     WORD      wProcessorRevision;
00649 } SYSTEM_INFO, *LPSYSTEM_INFO;
00650
00651 typedef BOOL CALLBACK (*ENUMRESTYPEPROCA) (HMODULE, LPSTR, LONG);
00652 typedef BOOL CALLBACK (*ENUMRESTYPEPROCW) (HMODULE, LPWSTR, LONG);
00653 typedef BOOL CALLBACK (*ENUMRESNAMEPROCA) (HMODULE, LPCSTR, LPSTR, LONG);
00654 typedef BOOL CALLBACK (*ENUMRESNAMEPROCW) (HMODULE, LPCWSTR, LPWSTR, LONG);
00655 typedef BOOL CALLBACK (*ENUMRESLANGPROCA) (HMODULE, LPCSTR, LPCSTR, WORD, LONG);
00656 typedef BOOL CALLBACK (*ENUMRESLANGPROCW) (HMODULE, LPCWSTR, LPCWSTR, WORD, LONG);
00657
00658 DECL_WINELIB_TYPE_AW(ENUMRESTYPEPROC)
00659 DECL_WINELIB_TYPE_AW(ENUMRESNAMEPROC)
00660 DECL_WINELIB_TYPE_AW(ENUMRESLANGPROC)
00661
00662 /* flags that can be passed to LoadLibraryEx */
00663 #define DONT_RESOLVE_DLL_REFERENCES 0x00000001
00664 #define LOAD_LIBRARY_AS_DATAFILE 0x00000002
00665 #define LOAD_WITH_ALTERED_SEARCH_PATH 0x00000008
00666
00667 /* ifdef _x86_ ... */
00668 typedef struct _LDT_ENTRY {
00669     WORD      LimitLow;
00670     WORD      BaseLow;
00671     union u4 {
00672         struct {
00673             BYTE      BaseMid;
00674             BYTE      Flags1; /*Declare as bytes to avoid alignment problems */
00675             BYTE      Flags2;
00676             BYTE      BaseHi;
00677         } Bytes;
00678         struct {
00679             unsigned   BaseMid      : 8;
00680             unsigned   Type        : 5;
00681             unsigned   Dpl         : 2;
00682             unsigned   Pres        : 1;
00683             unsigned   LimitHi     : 4;
00684             unsigned   Sys         : 1;
00685             unsigned   Reserved_0  : 1;
00686             unsigned   Default_Big : 1;
00687             unsigned   Granularity : 1;
00688             unsigned   BaseHi      : 8;
00689         } Bits;
00690     } HighWord;
00691 } LDT_ENTRY, *LPLDT_ENTRY;
00692
00693
00694 typedef enum _GET_FILEEX_INFO_LEVELS {
00695     GetFileExInfoStandard
00696 } GET_FILEEX_INFO_LEVELS;
00697
00698 typedef struct _WIN32_FILE_ATTRIBUTES_DATA {
00699     DWORD      dwFileAttributes;
00700     FILETIME   ftCreationTime;
00701     FILETIME   ftLastAccessTime;
00702     FILETIME   ftLastWriteTime;
00703     DWORD      nFileSizeHigh;
00704     DWORD      nFileSizeLow;
00705 } WIN32_FILE_ATTRIBUTE_DATA, *LPWIN32_FILE_ATTRIBUTE_DATA;
00706
00707 /*
00708  * This one seems to be a Win32 only definition. It also is defined with
00709  * WINAPI instead of CALLBACK in the windows headers.
00710  */
00711 typedef DWORD CALLBACK (*LPPROGRESS_ROUTINE) (LARGE_INTEGER, LARGE_INTEGER, LARGE_INTEGER,
00712     LARGE_INTEGER, DWORD, 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

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```

00735 #define MOVEFILE_DELAY_UNTIL_REBOOT      0x00000004
00736
00737 #define FS_CASE_SENSITIVE                   FILE_CASE_SENSITIVE_SEARCH
00738 #define FS_CASE_IS_PRESERVED               FILE_CASE_PRESERVED_NAMES
00739 #define FS_UNICODE_STORED_ON_DISK          FILE_UNICODE_ON_DISK
00740 #define FS_PERSISTENT_ACLS                 FILE_PERSISTENT_ACLS
00741 #define FS_VOL_IS_COMPRESSED               FILE_VOLUME_IS_COMPRESSED
00742 #define FS_FILE_COMPRESSION                FILE_FILE_COMPRESSION
00743
00744 #define EXCEPTION_ACCESS_VIOLATION          STATUS_ACCESS_VIOLATION
00745 #define EXCEPTION_DATATYPE_MISALIGNMENT     STATUS_DATATYPE_MISALIGNMENT
00746 #define EXCEPTION_BREAKPOINT                STATUS_BREAKPOINT
00747 #define EXCEPTION_SINGLE_STEP               STATUS_SINGLE_STEP
00748 #define EXCEPTION_ARRAY_BOUNDS_EXCEEDED     STATUS_ARRAY_BOUNDS_EXCEEDED
00749 #define EXCEPTION_FLT_DENORMAL_OPERAND      STATUS_FLOAT_DENORMAL_OPERAND
00750 #define EXCEPTION_FLT_DIVIDE_BY_ZERO         STATUS_FLOAT_DIVIDE_BY_ZERO
00751 #define EXCEPTION_FLT_INEXACT_RESULT         STATUS_FLOAT_INEXACT_RESULT
00752 #define EXCEPTION_FLT_INVALID_OPERATION      STATUS_FLOAT_INVALID_OPERATION
00753 #define EXCEPTION_FLT_OVERFLOW              STATUS_FLOAT_OVERFLOW
00754 #define EXCEPTION_FLT_STACK_CHECK           STATUS_FLOAT_STACK_CHECK
00755 #define EXCEPTION_FLT_UNDERFLOW             STATUS_FLOAT_UNDERFLOW
00756 #define EXCEPTION_INT_DIVIDE_BY_ZERO         STATUS_INTEGER_DIVIDE_BY_ZERO
00757 #define EXCEPTION_INT_OVERFLOW              STATUS_INTEGER_OVERFLOW
00758 #define EXCEPTION_PRIV_INSTRUCTION           STATUS_PRIVILEGED_INSTRUCTION
00759 #define EXCEPTION_IN_PAGE_ERROR             STATUS_IN_PAGE_ERROR
00760 #define EXCEPTION_ILLEGAL_INSTRUCTION        STATUS_ILLEGAL_INSTRUCTION
00761 #define EXCEPTION_NONCONTINUABLE_EXCEPTION   STATUS_NONCONTINUABLE_EXCEPTION
00762 #define EXCEPTION_STACK_OVERFLOW             STATUS_STACK_OVERFLOW
00763 #define EXCEPTION_INVALID_DISPOSITION        STATUS_INVALID_DISPOSITION
00764 #define EXCEPTION_GUARD_PAGE                STATUS_GUARD_PAGE_VIOLATION
00765 #define EXCEPTION_INVALID_HANDLE             STATUS_INVALID_HANDLE
00766 #define CONTROL_C_EXIT                      STATUS_CONTROL_C_EXIT
00767
00768 /* Wine extension; Windows doesn't have a name for this code */
00769 #define EXCEPTION_CRITICAL_SECTION_WAIT      0xc0000194
00770
00771 #define DUPLICATE_CLOSE_SOURCE               0x00000001
00772 #define DUPLICATE_SAME_ACCESS                0x00000002
00773
00774 #define HANDLE_FLAG_INHERIT                  0x00000001
00775 #define HANDLE_FLAG_PROTECT_FROM_CLOSE      0x00000002
00776
00777 #define HINSTANCE_ERROR 32
00778
00779 #define THREAD_PRIORITY_LOWEST                THREAD_BASE_PRIORITY_MIN
00780 #define THREAD_PRIORITY_BELOW_NORMAL          (THREAD_PRIORITY_LOWEST+1)
00781 #define THREAD_PRIORITY_NORMAL                0
00782 #define THREAD_PRIORITY_HIGHEST              THREAD_BASE_PRIORITY_MAX
00783 #define THREAD_PRIORITY_ABOVE_NORMAL          (THREAD_PRIORITY_HIGHEST-1)
00784 #define THREAD_PRIORITY_ERROR_RETURN           (0x7fffffff)
00785 #define THREAD_PRIORITY_TIME_CRITICAL         THREAD_BASE_PRIORITY_LOWRT
00786 #define THREAD_PRIORITY_IDLE                  THREAD_BASE_PRIORITY_IDLE
00787
00788 /* flags to FormatMessage */
00789 #define FORMAT_MESSAGE_ALLOCATE_BUFFER         0x00000100
00790 #define FORMAT_MESSAGE_IGNORE_INSERTS         0x00000200
00791 #define FORMAT_MESSAGE_FROM_STRING            0x00000400
00792 #define FORMAT_MESSAGE_FROM_HMODULE           0x00000800
00793 #define FORMAT_MESSAGE_FROM_SYSTEM            0x00001000
00794 #define FORMAT_MESSAGE_ARGUMENT_ARRAY         0x00002000
00795 #define FORMAT_MESSAGE_MAX_WIDTH_MASK        0x000000ff
00796
00797 #ifdef __WINE__
00798 #define CRITICAL_SECTION_INIT(name) { (void *) (__FILE__ ": " name), -1, 0, 0, 0, 0 }
00799 #endif
00800
00801 typedef struct {
00802     DWORD dwOSVersionInfoSize;
00803     DWORD dwMajorVersion;
00804     DWORD dwMinorVersion;
00805     DWORD dwBuildNumber;
00806     DWORD dwPlatformId;
00807     CHAR szCSDVersion[128];
00808 } OSVERSIONINFOA, *POSVERSIONINFOA, *LPOSVERSIONINFOA;
00809
00810 typedef struct {
00811     DWORD dwOSVersionInfoSize;
00812     DWORD dwMajorVersion;
00813     DWORD dwMinorVersion;
00814     DWORD dwBuildNumber;
00815     DWORD dwPlatformId;
00816     WCHAR szCSDVersion[128];
00817 } OSVERSIONINFOW, *POSVERSIONINFOW, *LPOSVERSIONINFOW;
00818
00819 DECL_WINELIB_TYPE_AW(OSVERSIONINFO)
00820 DECL_WINELIB_TYPE_AW(POSVERSIONINFO)
00821 DECL_WINELIB_TYPE_AW(LPOSVERSIONINFO)

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```

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)

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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)
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 );

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00996 PVOID      WINAPI RtlReAllocateHeap (HANDLE, ULONG, PVOID, ULONG);
00997 ULONG      WINAPI RtlSizeHeap (HANDLE, ULONG, PVOID);
00998 #define      HeapAlloc(heap, flags, size) RtlAllocateHeap(heap, flags, size)
00999 #define      HeapFree(heap, flags, ptr) RtlFreeHeap(heap, flags, ptr)
01000 #define      HeapReAlloc(heap, flags, ptr, size) RtlReAllocateHeap(heap, flags, ptr, size)
01001 #define      HeapSize(heap, flags, ptr) RtlSizeHeap(heap, flags, ptr)
01002 #define      EnterCriticalSection(crit) RtlEnterCriticalSection(crit)
01003 #define      LeaveCriticalSection(crit) RtlLeaveCriticalSection(crit)
01004 #define      DeleteCriticalSection(crit) RtlDeleteCriticalSection(crit)
01005 #define      TryEnterCriticalSection(crit) RtlTryEnterCriticalSection(crit)
01006 #else
01007 LPVOID      WINAPI HeapAlloc (HANDLE, DWORD, DWORD);
01008 BOOL        WINAPI HeapFree (HANDLE, DWORD, LPVOID);
01009 LPVOID      WINAPI HeapReAlloc (HANDLE, DWORD, LPVOID, DWORD);
01010 DWORD      WINAPI HeapSize (HANDLE, DWORD, LPVOID);
01011 void        WINAPI DeleteCriticalSection (CRITICAL_SECTION *lpCrit);
01012 void        WINAPI EnterCriticalSection (CRITICAL_SECTION *lpCrit);
01013 BOOL        WINAPI TryEnterCriticalSection (CRITICAL_SECTION *lpCrit);
01014 void        WINAPI LeaveCriticalSection (CRITICAL_SECTION *lpCrit);
01015 #endif
01016
01017 void        WINAPI InitializeCriticalSection (CRITICAL_SECTION *lpCrit);
01018 BOOL        WINAPI InitializeCriticalSectionAndSpinCount (CRITICAL_SECTION *, DWORD);
01019 void        WINAPI MakeCriticalSectionGlobal (CRITICAL_SECTION *lpCrit);
01020 BOOL        WINAPI GetProcessWorkingSetSize (HANDLE, LPDWORD, LPDWORD);
01021 DWORD      WINAPI QueueUserAPC (PAPCFUNC, HANDLE, ULONG_PTR);
01022 void        WINAPI RaiseException (DWORD, DWORD, DWORD, const LPDWORD);
01023 BOOL        WINAPI SetProcessWorkingSetSize (HANDLE, DWORD, DWORD);
01024 BOOL        WINAPI TerminateProcess (HANDLE, DWORD);
01025 BOOL        WINAPI TerminateThread (HANDLE, DWORD);
01026 BOOL        WINAPI GetExitCodeThread (HANDLE, LPDWORD);
01027
01028 /* GetBinaryType return values.
01029 */
01030
01031 #define SCS_32BIT_BINARY 0
01032 #define SCS_DOS_BINARY 1
01033 #define SCS_WOW_BINARY 2
01034 #define SCS_PIF_BINARY 3
01035 #define SCS_POSIX_BINARY 4
01036 #define SCS_OS216_BINARY 5
01037
01038 BOOL WINAPI GetBinaryTypeA (LPCSTR lpApplicationName, LPDWORD lpBinaryType);
01039 BOOL WINAPI GetBinaryTypeW (LPCWSTR lpApplicationName, LPDWORD lpBinaryType);
01040 #define GetBinaryType WINELIB_NAME_AW(GetBinaryType)
01041
01042 /* Declarations for functions that exist only in Win32 */
01043
01044 BOOL        WINAPI AddAccessAllowedAce (PACL, DWORD, DWORD, PSID);
01045 BOOL        WINAPI AttachThreadInput (DWORD, DWORD, BOOL);
01046 BOOL        WINAPI
    AccessCheck (PSECURITY_DESCRIPTOR, HANDLE, DWORD, PGENERIC_MAPPING, PPRIVILEGE_SET, LPDWORD, LPDWORD, LPBOOL);
01047 BOOL        WINAPI AdjustTokenPrivileges (HANDLE, BOOL, LPVOID, DWORD, LPVOID, LPDWORD);
01048 BOOL        WINAPI
    AllocateAndInitializeSid (PSID_IDENTIFIER_AUTHORITY, BYTE, DWORD, DWORD, DWORD, DWORD, DWORD, DWORD, DWORD, 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);

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01080 BOOL        WINAPI CopyFileW(LPCWSTR, LPCWSTR, BOOL);
01081 #define        CopyFile WINELIB_NAME_AW(CopyFile)
01082 BOOL        WINAPI CopyFileExA(LPCSTR, LPCSTR, LPCTSTR, LPVOID, LPVOID, LPVOID, LPVOID);
01083 BOOL        WINAPI CopyFileExW(LPCWSTR, LPCWSTR, LPCTSTR, LPVOID, LPVOID, LPVOID, LPVOID);
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, LPSECURITY_ATTRIBUTES);
01104 HANDLE      WINAPI
01105 CreateNamedPipeW(LPCWSTR, DWORD, DWORD, DWORD, DWORD, LPSECURITY_ATTRIBUTES);
01106 #define        CreateNamedPipe WINELIB_NAME_AW(CreateNamedPipe)
01107 BOOL        WINAPI CreatePipe(PHANDLE, PHANDLE, LPSECURITY_ATTRIBUTES, DWORD);
01108 BOOL        WINAPI CreateProcessA(LPCSTR, LPSTR, LPSECURITY_ATTRIBUTES,
01109                                    LPSECURITY_ATTRIBUTES, BOOL, DWORD, LPVOID, LPCSTR,
01110                                    LPSTARTUPINFOA, LPPROCESS_INFORMATION);
01111 BOOL        WINAPI CreateProcessW(LPCWSTR, LPWSTR, LPSECURITY_ATTRIBUTES,
01112                                    LPSECURITY_ATTRIBUTES, BOOL, DWORD, LPVOID, LPCWSTR,
01113                                    LPSTARTUPINFOW, LPPROCESS_INFORMATION);
01114 #define        CreateProcess WINELIB_NAME_AW(CreateProcess)
01115 HANDLE      WINAPI
01116 CreateRemoteThread(HANDLE, LPSECURITY_ATTRIBUTES, DWORD, LPTHREAD_START_ROUTINE, LPVOID, DWORD, LPDWORD);
01117 HANDLE      WINAPI CreateSemaphoreA(LPSECURITY_ATTRIBUTES, LONG, LONG, LPCSTR);
01118 HANDLE      WINAPI CreateSemaphoreW(LPSECURITY_ATTRIBUTES, LONG, LONG, LPCWSTR);
01119 #define        CreateSemaphore WINELIB_NAME_AW(CreateSemaphore)
01120 DWORD       WINAPI CreateTapePartition(HANDLE, DWORD, DWORD, DWORD);
01121 HANDLE      WINAPI
01122 CreateThread(LPSECURITY_ATTRIBUTES, DWORD, LPTHREAD_START_ROUTINE, LPVOID, DWORD, LPDWORD);
01123 HANDLE      WINAPI CreateWaitableTimerA(LPSECURITY_ATTRIBUTES, BOOL, LPCSTR);
01124 HANDLE      WINAPI CreateWaitableTimerW(LPSECURITY_ATTRIBUTES, BOOL, LPCWSTR);
01125 #define        CreateWaitableTimer WINELIB_NAME_AW(CreateWaitableTimer)
01126 BOOL        WINAPI DebugActiveProcess(DWORD);
01127 void        WINAPI DebugBreak(void);
01128 BOOL        WINAPI DeregisterEventSource(HANDLE);
01129 BOOL        WINAPI DeviceIoControl(HANDLE, DWORD, LPVOID, DWORD, LPVOID, DWORD, LPDWORD, LPOVERLAPPED);
01130 BOOL        WINAPI DisableThreadLibraryCalls(HMODULE);
01131 BOOL        WINAPI DosDateTimeToFileTime(WORD, WORD, LPFILETIME);
01132 BOOL        WINAPI DuplicateHandle(HANDLE, HANDLE, HANDLE, HANDLE*, DWORD, BOOL, DWORD);
01133 BOOL        WINAPI EscapeCommFunction(HANDLE, UINT);
01134 BOOL        WINAPI EnumResourceLanguagesA(HMODULE, LPCSTR, LPCSTR,
01135                                             ENUMRESLANGPROCA, LONG);
01136 BOOL        WINAPI EnumResourceLanguagesW(HMODULE, LPCWSTR, LPCWSTR,
01137                                             ENUMRESLANGPROCW, LONG);
01138 #define        EnumResourceLanguages WINELIB_NAME_AW(EnumResourceLanguages)
01139 BOOL        WINAPI EnumResourceNamesA(HMODULE, LPCSTR, ENUMRESNAMEPROCA,
01140                                       LONG);
01141 BOOL        WINAPI EnumResourceNamesW(HMODULE, LPCWSTR, ENUMRESNAMEPROCW,
01142                                       LONG);
01143 #define        EnumResourceNames WINELIB_NAME_AW(EnumResourceNames)
01144 BOOL        WINAPI EnumResourceTypesA(HMODULE, ENUMRESTYPEPROCA, LONG);
01145 BOOL        WINAPI EnumResourceTypesW(HMODULE, ENUMRESTYPEPROCW, LONG);
01146 #define        EnumResourceTypes WINELIB_NAME_AW(EnumResourceTypes)
01147 BOOL        WINAPI EqualSid(PSID, PSID);
01148 BOOL        WINAPI EqualPrefixSid(PSID, PSID);
01149 DWORD       WINAPI EraseTape(HANDLE, DWORD, BOOL);
01150 VOID        WINAPI ExitProcess(DWORD) WINE_NORETURN;
01151 VOID        WINAPI ExitThread(DWORD) WINE_NORETURN;
01152 DWORD       WINAPI ExpandEnvironmentStringsA(LPCSTR, LPSTR, DWORD);
01153 DWORD       WINAPI ExpandEnvironmentStringsW(LPCWSTR, LPWSTR, DWORD);
01154 #define        ExpandEnvironmentStrings WINELIB_NAME_AW(ExpandEnvironmentStrings)
01155 BOOL        WINAPI FileTimeToDosDateTime(const FILETIME*, LPWORD, LPWORD);
01156 BOOL        WINAPI FileTimeToLocalFileTime(const FILETIME*, LPFILETIME);
01157 BOOL        WINAPI FileTimeToSystemTime(const FILETIME*, LPSYSTEMTIME);
01158 HANDLE      WINAPI FindFirstChangeNotificationA(LPCSTR, BOOL, DWORD);
01159 HANDLE      WINAPI FindFirstChangeNotificationW(LPCWSTR, BOOL, DWORD);
01160 #define        FindFirstChangeNotification WINELIB_NAME_AW(FindFirstChangeNotification)
01161 BOOL        WINAPI FindNextChangeNotification(HANDLE);
01162 BOOL        WINAPI FindCloseChangeNotification(HANDLE);
01163 HRSRC       WINAPI FindResourceExA(HMODULE, LPCSTR, LPCSTR, WORD);
01164 HRSRC       WINAPI FindResourceExW(HMODULE, LPCWSTR, LPCWSTR, WORD);
01165 #define        FindResourceEx WINELIB_NAME_AW(FindResourceEx)
01166 BOOL        WINAPI FlushFileBuffers(HANDLE);

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01164 BOOL        WINAPI FlushViewOfFile(LPCVOID, DWORD);
01165 DWORD        WINAPI FormatMessageA(DWORD, LPCVOID, DWORD, DWORD, LPSTR, DWORD, va_list*);
01166 WORD         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, LPCB);
01178 BOOL         WINAPI GetCommTimeouts(HANDLE, LPCOMMTIMEOUTS);
01179 LPSTR        WINAPI GetCommandLineA(void);
01180 LPWSTR       WINAPI GetCommandLineW(void);
01181 #define        GetCommandLine WINELIB_NAME_AW(GetCommandLine)
01182 BOOL         WINAPI GetComputerNameA(LPSTR, LPDWORD);
01183 BOOL         WINAPI GetComputerNameW(LPWSTR, LPDWORD);
01184 #define        GetComputerName WINELIB_NAME_AW(GetComputerName)
01185 HANDLE       WINAPI GetCurrentProcess(void);
01186 HANDLE       WINAPI GetCurrentThread(void);
01187 BOOL         WINAPI GetDefaultCommConfigA(LPCSTR, LPCOMMCONFIG, LPDWORD);
01188 BOOL         WINAPI GetDefaultCommConfigW(LPCWSTR, LPCOMMCONFIG, LPDWORD);
01189 #define        GetDefaultCommConfig WINELIB_NAME_AW(GetDefaultCommConfig)
01190 LPSTR        WINAPI GetEnvironmentStringsA(void);
01191 LPWSTR       WINAPI GetEnvironmentStringsW(void);
01192 #define        GetEnvironmentStrings WINELIB_NAME_AW(GetEnvironmentStrings)
01193 DWORD        WINAPI GetEnvironmentVariableA(LPCSTR, LPSTR, DWORD);
01194 DWORD        WINAPI GetEnvironmentVariableW(LPCWSTR, LPWSTR, DWORD);
01195 #define        GetEnvironmentVariable WINELIB_NAME_AW(GetEnvironmentVariable)
01196 BOOL         WINAPI GetFileAttributesExA(LPCSTR, GET_FILEEX_INFO_LEVELS, LPVOID);
01197 BOOL         WINAPI GetFileAttributesExW(LPCWSTR, GET_FILEEX_INFO_LEVELS, LPVOID);
01198 #define        GetFileAttributesEx WINELIB_NAME_AW(GetFileAttributesEx)
01199 DWORD        WINAPI GetFileInformationByHandle(HANDLE, BY_HANDLE_FILE_INFORMATION*);
01200 BOOL         WINAPI GetFileSecurityA(LPCSTR, SECURITY_INFORMATION, PSECURITY_DESCRIPTOR, DWORD, LPDWORD);
01201 BOOL         WINAPI GetFileSecurityW(LPCWSTR, SECURITY_INFORMATION, PSECURITY_DESCRIPTOR, DWORD, LPDWORD);
01202 #define        GetFileSecurity WINELIB_NAME_AW(GetFileSecurity)
01203 DWORD        WINAPI GetFileSize(HANDLE, LPDWORD);
01204 BOOL         WINAPI GetFileTime(HANDLE, LPFILETIME, LPFILETIME, LPFILETIME);
01205 DWORD        WINAPI GetFileType(HANDLE);
01206 DWORD        WINAPI GetFullPathNameA(LPCSTR, DWORD, LPSTR, LPSTR*);
01207 DWORD        WINAPI GetFullPathNameW(LPCWSTR, DWORD, LPWSTR, LPWSTR*);
01208 #define        GetFullPathName WINELIB_NAME_AW(GetFullPathName)
01209 BOOL         WINAPI GetHandleInformation(HANDLE, LPDWORD);
01210 DWORD        WINAPI GetLengthSid(PSID);
01211 VOID         WINAPI GetLocalTime(LPSYSTEMTIME);
01212 DWORD        WINAPI GetLogicalDrives(void);
01213 DWORD        WINAPI GetLongPathNameA(LPCSTR, LPSTR, DWORD);
01214 DWORD        WINAPI GetLongPathNameW(LPCWSTR, LPWSTR, DWORD);
01215 #define        GetLongPathName WINELIB_NAME_AW(GetLongPathName)
01216 BOOL         WINAPI GetNumberOfEventLogRecords(HANDLE, PDWORD);
01217 BOOL         WINAPI GetOldestEventLogRecord(HANDLE, PDWORD);
01218 DWORD        WINAPI GetPriorityClass(HANDLE);
01219 BOOL         WINAPI GetProcessTimes(HANDLE, LPFILETIME, LPFILETIME, LPFILETIME, LPFILETIME);
01220 DWORD        WINAPI GetProcessVersion(DWORD);
01221 BOOL         WINAPI
GetSecurityDescriptorControl(PSECURITY_DESCRIPTOR, PSECURITY_DESCRIPTOR_CONTROL, LPDWORD);
01222 BOOL         WINAPI GetSecurityDescriptorDacl(PSECURITY_DESCRIPTOR, LPBOOL, PACL *, LPBOOL);
01223 BOOL         WINAPI GetSecurityDescriptorGroup(PSECURITY_DESCRIPTOR, PSID *, LPBOOL);
01224 DWORD        WINAPI GetSecurityDescriptorLength(PSECURITY_DESCRIPTOR);
01225 BOOL         WINAPI GetSecurityDescriptorOwner(PSECURITY_DESCRIPTOR, PSID *, LPBOOL);
01226 BOOL         WINAPI GetSecurityDescriptorSacl(PSECURITY_DESCRIPTOR, LPBOOL, PACL *, LPBOOL);
01227 PSID_IDENTIFIER_AUTHORITY WINAPI GetSidIdentifierAuthority(PSID);
01228 DWORD        WINAPI GetSidLengthRequired(BYTE);
01229 PDWORD       WINAPI GetSidSubAuthority(PSID, DWORD);
01230 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);

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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 LookupAccountSid(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, LPOVERLAPPED);
01274 BOOL            WINAPI LookupPrivilegeValueA(LPCSTR, LPCSTR, LPVOID);
01275 BOOL            WINAPI LookupPrivilegeValueW(LPCWSTR, LPCWSTR, LPVOID);
01276 #define           LookupPrivilegeValue WINELIB_NAME_AW(LookupPrivilegeValue)
01277 BOOL            WINAPI MakeSelfRelativeSD(PSECURITY_DESCRIPTOR, PSECURITY_DESCRIPTOR, LPDWORD);
01278 HMODULE          WINAPI MapHModuleSL(WORD);
01279 WORD            WINAPI MapHModuleLS(HMODULE);
01280 LPVOID           WINAPI MapViewOfFile(HANDLE, DWORD, DWORD, DWORD, DWORD);
01281 LPVOID           WINAPI MapViewOfFileEx(HANDLE, DWORD, DWORD, DWORD, DWORD, LPVOID);
01282 BOOL            WINAPI MoveFileA(LPCSTR, LPCSTR);
01283 BOOL            WINAPI MoveFileW(LPCWSTR, LPCWSTR);
01284 #define           MoveFile WINELIB_NAME_AW(MoveFile)
01285 BOOL            WINAPI MoveFileExA(LPCSTR, LPCSTR, DWORD);
01286 BOOL            WINAPI MoveFileExW(LPCWSTR, LPCWSTR, DWORD);
01287 #define           MoveFileEx WINELIB_NAME_AW(MoveFileEx)
01288 BOOL            WINAPI NotifyChangeEventLog(HANDLE, HANDLE);
01289 HANDLE          WINAPI OpenBackupEventLogA(LPCSTR, LPCSTR);
01290 HANDLE          WINAPI OpenBackupEventLogW(LPCWSTR, LPCWSTR);
01291 #define           OpenBackupEventLog WINELIB_NAME_AW(OpenBackupEventLog)
01292 HANDLE          WINAPI OpenEventA(DWORD, BOOL, LPCSTR);
01293 HANDLE          WINAPI OpenEventW(DWORD, BOOL, LPCWSTR);
01294 #define           OpenEvent WINELIB_NAME_AW(OpenEvent)
01295 HANDLE          WINAPI OpenEventLogA(LPCSTR, LPCSTR);
01296 HANDLE          WINAPI OpenEventLogW(LPCWSTR, LPCWSTR);
01297 #define           OpenEventLog WINELIB_NAME_AW(OpenEventLog)
01298 HANDLE          WINAPI OpenFileMappingA(DWORD, BOOL, LPCSTR);
01299 HANDLE          WINAPI OpenFileMappingW(DWORD, BOOL, LPCWSTR);
01300 #define           OpenFileMapping WINELIB_NAME_AW(OpenFileMapping)
01301 HANDLE          WINAPI OpenMutexA(DWORD, BOOL, LPCSTR);
01302 HANDLE          WINAPI OpenMutexW(DWORD, BOOL, LPCWSTR);
01303 #define           OpenMutex WINELIB_NAME_AW(OpenMutex)
01304 HANDLE          WINAPI OpenProcess(DWORD, BOOL, DWORD);
01305 BOOL            WINAPI OpenProcessToken(HANDLE, DWORD, PHANDLE);
01306 HANDLE          WINAPI OpenSemaphoreA(DWORD, BOOL, LPCSTR);
01307 HANDLE          WINAPI OpenSemaphoreW(DWORD, BOOL, LPCWSTR);
01308 #define           OpenSemaphore WINELIB_NAME_AW(OpenSemaphore)
01309 BOOL            WINAPI OpenThreadToken(HANDLE, DWORD, BOOL, PHANDLE);
01310 HANDLE          WINAPI OpenWaitableTimerA(DWORD, BOOL, LPCSTR);
01311 HANDLE          WINAPI OpenWaitableTimerW(DWORD, BOOL, LPCWSTR);
01312 #define           OpenWaitableTimer WINELIB_NAME_AW(OpenWaitableTimer)
01313 DWORD           WINAPI PrepareTape(HANDLE, DWORD, BOOL);
01314 BOOL            WINAPI PulseEvent(HANDLE);
01315 BOOL            WINAPI PurgeComm(HANDLE, DWORD);
01316 DWORD           WINAPI QueryDosDeviceA(LPCSTR, LPSTR, DWORD);
01317 DWORD           WINAPI QueryDosDeviceW(LPCWSTR, LPWSTR, DWORD);
01318 #define           QueryDosDevice WINELIB_NAME_AW(QueryDosDevice)
01319 BOOL            WINAPI QueryPerformanceCounter(LARGE_INTEGER*);
01320 BOOL            WINAPI QueryPerformanceFrequency(LARGE_INTEGER*);
01321 BOOL            WINAPI ReadEventLogA(HANDLE, DWORD, LPVOID, DWORD, DWORD *, DWORD *);
01322 BOOL            WINAPI ReadEventLogW(HANDLE, DWORD, LPVOID, DWORD, DWORD *, DWORD *);
01323 #define           ReadEventLog WINELIB_NAME_AW(ReadEventLog)
01324 BOOL            WINAPI ReadFile(HANDLE, LPVOID, DWORD, LPDWORD, LPOVERLAPPED);
01325 BOOL            WINAPI ReadFileEx(HANDLE, LPVOID, DWORD, LPOVERLAPPED, LPOVERLAPPED_COMPLETION_ROUTINE);
01326 HANDLE          WINAPI RegisterEventSourceA(LPCSTR, LPCSTR);
01327 HANDLE          WINAPI RegisterEventSourceW(LPCWSTR, LPCWSTR);
01328 #define           RegisterEventSource WINELIB_NAME_AW(RegisterEventSource)
01329 BOOL            WINAPI ReleaseMutex(HANDLE);
01330 BOOL            WINAPI ReleaseSemaphore(HANDLE, LONG, LPLONG);
01331 BOOL            WINAPI ReportEventA(HANDLE, WORD, WORD, DWORD, PSID, WORD, DWORD, LPCSTR *, LPVOID);
01332 BOOL            WINAPI ReportEventW(HANDLE, WORD, WORD, DWORD, PSID, WORD, DWORD, LPCWSTR *, LPVOID);
01333 #define           ReportEvent WINELIB_NAME_AW(ReportEvent)
01334 BOOL            WINAPI ResetEvent(HANDLE);
01335 DWORD           WINAPI ResumeThread(HANDLE);
01336 BOOL            WINAPI RevertToSelf(void);

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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, LPDCB);
01344 BOOL       WINAPI SetCommTimeouts(HANDLE, LPCOMMTIMEOUTS);
01345 BOOL       WINAPI SetComputerNameA(LPCSTR);
01346 BOOL       WINAPI SetComputerNameW(LPCWSTR);
01347 #define      SetComputerName WINELIB_NAME_AW(SetComputerName)
01348 BOOL       WINAPI SetDefaultCommConfigA(LPCSTR, LPCOMMCONFIG, DWORD);
01349 BOOL       WINAPI SetDefaultCommConfigW(LPCWSTR, LPCOMMCONFIG, DWORD);
01350 #define      SetDefaultCommConfig WINELIB_NAME_AW(SetDefaultCommConfig)
01351 BOOL       WINAPI SetEndOfFile(HANDLE);
01352 BOOL       WINAPI SetEnvironmentVariableA(LPCSTR, LPCSTR);
01353 BOOL       WINAPI SetEnvironmentVariableW(LPCWSTR, LPCWSTR);
01354 #define      SetEnvironmentVariable WINELIB_NAME_AW(SetEnvironmentVariable)
01355 BOOL       WINAPI SetEvent(HANDLE);
01356 VOID       WINAPI SetFileApisToANSI(void);
01357 VOID       WINAPI SetFileApisToOEM(void);
01358 DWORD      WINAPI SetFilePointer(HANDLE, LONG, LPLONG, DWORD);
01359 BOOL       WINAPI SetFileSecurityA(LPCSTR, SECURITY_INFORMATION, PSECURITY_DESCRIPTOR);
01360 BOOL       WINAPI SetFileSecurityW(LPCWSTR, SECURITY_INFORMATION, PSECURITY_DESCRIPTOR);
01361 #define      SetFileSecurity WINELIB_NAME_AW(SetFileSecurity)
01362 BOOL       WINAPI SetFileTime(HANDLE, const FILETIME*, const FILETIME*, const FILETIME*);
01363 BOOL       WINAPI SetHandleInformation(HANDLE, DWORD, DWORD);
01364 BOOL       WINAPI SetKernelObjectSecurity(HANDLE, SECURITY_INFORMATION, PSECURITY_DESCRIPTOR);
01365 BOOL       WINAPI SetPriorityClass(HANDLE, DWORD);
01366 BOOL       WINAPI SetLocalTime(const SYSTEMTIME*);
01367 BOOL       WINAPI SetSecurityDescriptorDacl(PSECURITY_DESCRIPTOR, BOOL, PACL, BOOL);
01368 BOOL       WINAPI SetSecurityDescriptorGroup(PSECURITY_DESCRIPTOR, PSID, BOOL);
01369 BOOL       WINAPI SetSecurityDescriptorOwner(PSECURITY_DESCRIPTOR, PSID, BOOL);
01370 BOOL       WINAPI SetSecurityDescriptorSacl(PSECURITY_DESCRIPTOR, BOOL, PACL, BOOL);
01371 BOOL       WINAPI SetStdHandle(DWORD, HANDLE);
01372 BOOL       WINAPI SetSystemPowerState(BOOL, BOOL);
01373 BOOL       WINAPI SetSystemTime(const SYSTEMTIME*);
01374 DWORD      WINAPI SetTapeParameters(HANDLE, DWORD, LPVOID);
01375 DWORD      WINAPI SetTapePosition(HANDLE, DWORD, DWORD, DWORD, BOOL);
01376 DWORD      WINAPI SetThreadAffinityMask(HANDLE, DWORD);
01377 BOOL       WINAPI SetThreadContext(HANDLE, const CONTEXT *);
01378 DWORD      WINAPI SetThreadExecutionState(EXECUTION_STATE);
01379 BOOL       WINAPI SetThreadPriority(HANDLE, INT);
01380 BOOL       WINAPI SetThreadPriorityBoost(HANDLE, BOOL);
01381 BOOL       WINAPI SetThreadToken(PHANDLE, HANDLE);
01382 BOOL       WINAPI SetTimeZoneInformation(const LPTIME_ZONE_INFORMATION);
01383 BOOL       WINAPI SetWaitableTimer(HANDLE, const LARGE_INTEGER*, LONG, PTIMERAPCROUTINE, LPVOID, BOOL);
01384 BOOL       WINAPI SetupComm(HANDLE, DWORD, DWORD);
01385 VOID       WINAPI Sleep(DWORD);
01386 DWORD      WINAPI SleepEx(DWORD, BOOL);
01387 DWORD      WINAPI SuspendThread(HANDLE);
01388 BOOL       WINAPI SystemTimeToFileTime(const SYSTEMTIME*, LPFILETIME);
01389 DWORD      WINAPI TlsAlloc(void);
01390 BOOL       WINAPI TlsFree(DWORD);
01391 LPVOID     WINAPI TlsGetValue(DWORD);
01392 BOOL       WINAPI TlsSetValue(DWORD, LPVOID);
01393 BOOL       WINAPI TransmitCommChar(HANDLE, CHAR);
01394 BOOL       WINAPI UnlockFile(HANDLE, DWORD, DWORD, DWORD, DWORD);
01395 BOOL       WINAPI UnmapViewOfFile(LPVOID);
01396 LPVOID     WINAPI VirtualAlloc(LPVOID, DWORD, DWORD, DWORD);
01397 LPVOID     WINAPI VirtualAllocEx(HANDLE, LPVOID, DWORD, DWORD, DWORD);
01398 BOOL       WINAPI VirtualFree(LPVOID, DWORD, DWORD);
01399 BOOL       WINAPI VirtualLock(LPVOID, DWORD);
01400 BOOL       WINAPI VirtualProtect(LPVOID, DWORD, DWORD, LPDWORD);
01401 BOOL       WINAPI VirtualProtectEx(HANDLE, LPVOID, DWORD, 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);

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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);
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)

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01511 VOID            WINAPI GetStartupInfoA(LPSTARTUPINFOA);
01512 VOID            WINAPI GetStartupInfoW(LPSTARTUPINFOW);
01513 #define          GetStartupInfo WINELIB_NAME_AW(GetStartupInfo)
01514 UINT            WINAPI GetSystemDirectoryA(LPSTR,UINT);
01515 UINT            WINAPI GetSystemDirectoryW(LPWSTR,UINT);
01516 #define          GetSystemDirectory WINELIB_NAME_AW(GetSystemDirectory)
01517 DWORD          WINAPI GetTickCount(void);
01518 UINT            WINAPI GetTempFileNameA(LPCSTR,LPCSTR,UINT,LPSTR);
01519 UINT            WINAPI GetTempFileNameW(LPCWSTR,LPCWSTR,UINT,LPWSTR);
01520 #define          GetTempFileName WINELIB_NAME_AW(GetTempFileName)
01521 UINT            WINAPI GetTempPathA(UINT,LPSTR);
01522 UINT            WINAPI GetTempPathW(UINT,LPWSTR);
01523 #define          GetTempPath WINELIB_NAME_AW(GetTempPath)
01524 LONG            WINAPI GetVersion(void);
01525 BOOL            WINAPI GetVolumeInformationA(LPCSTR,LPSTR,DWORD,LPDWORD,LPDWORD,LPDWORD,LPSTR,DWORD);
01526 BOOL            WINAPI GetVolumeInformationW(LPCWSTR,LPWSTR,DWORD,LPDWORD,LPDWORD,LPDWORD,LPWSTR,DWORD);
01527 #define          GetVolumeInformation WINELIB_NAME_AW(GetVolumeInformation)
01528 UINT            WINAPI GetWindowsDirectoryA(LPSTR,UINT);
01529 UINT            WINAPI GetWindowsDirectoryW(LPWSTR,UINT);
01530 #define          GetWindowsDirectory WINELIB_NAME_AW(GetWindowsDirectory)
01531 ATOM            WINAPI GlobalAddAtomA(LPCSTR);
01532 ATOM            WINAPI GlobalAddAtomW(LPCWSTR);
01533 #define          GlobalAddAtom WINELIB_NAME_AW(GlobalAddAtom)
01534 HGLOBAL         WINAPI GlobalAlloc(UINT,DWORD);
01535 DWORD          WINAPI GlobalCompact(DWORD);
01536 ATOM            WINAPI GlobalDeleteAtom(ATOM);
01537 ATOM            WINAPI GlobalFindAtomA(LPCSTR);
01538 ATOM            WINAPI GlobalFindAtomW(LPCWSTR);
01539 #define          GlobalFindAtom WINELIB_NAME_AW(GlobalFindAtom)
01540 UINT            WINAPI GlobalFlags(HGLOBAL);
01541 HGLOBAL         WINAPI GlobalFree(HGLOBAL);
01542 UINT            WINAPI GlobalGetAtomNameA(ATOM,LPSTR,INT);
01543 UINT            WINAPI GlobalGetAtomNameW(ATOM,LPWSTR,INT);
01544 #define          GlobalGetAtomName WINELIB_NAME_AW(GlobalGetAtomName)
01545 HGLOBAL         WINAPI GlobalHandle(LPCVOID);
01546 VOID            WINAPI GlobalFix(HGLOBAL);
01547 LPVOID         WINAPI GlobalLock(HGLOBAL);
01548 HGLOBAL         WINAPI GlobalReAlloc(HGLOBAL,DWORD,UINT);
01549 DWORD          WINAPI GlobalSize(HGLOBAL);
01550 VOID            WINAPI GlobalUnfix(HGLOBAL);
01551 BOOL            WINAPI GlobalUnlock(HGLOBAL);
01552 BOOL            WINAPI GlobalUnWire(HGLOBAL);
01553 LPVOID         WINAPI GlobalWire(HGLOBAL);
01554 #define          HasOverlappedCompleted(lpOverlapped) ((lpOverlapped)->Internal != STATUS_PENDING)
01555 BOOL            WINAPI InitAtomTable(DWORD);
01556 BOOL            WINAPI IsBadCodePtr(FARPROC);
01557 BOOL            WINAPI IsBadHugeReadPtr(LPCVOID,UINT);
01558 BOOL            WINAPI IsBadHugeWritePtr(LPVOID,UINT);
01559 BOOL            WINAPI IsBadReadPtr(LPCVOID,UINT);
01560 BOOL            WINAPI IsBadStringPtrA(LPCSTR,UINT);
01561 BOOL            WINAPI IsBadStringPtrW(LPCWSTR,UINT);
01562 #define          IsBadStringPtr WINELIB_NAME_AW(IsBadStringPtr)
01563 BOOL            WINAPI IsBadWritePtr(LPVOID,UINT);
01564 BOOL            WINAPI IsDebuggerPresent(void);
01565 HMODULE         WINAPI LoadLibraryA(LPCSTR);
01566 HMODULE         WINAPI LoadLibraryW(LPCWSTR);
01567 #define          LoadLibrary WINELIB_NAME_AW(LoadLibrary)
01568 HMODULE         WINAPI LoadLibraryExA(LPCSTR,HANDLE,DWORD);
01569 HMODULE         WINAPI LoadLibraryExW(LPCWSTR,HANDLE,DWORD);
01570 #define          LoadLibraryEx WINELIB_NAME_AW(LoadLibraryEx)
01571 HINSTANCE       WINAPI LoadModule(LPCSTR,LPVOID);
01572 HGLOBAL         WINAPI LoadResource(HMODULE,HRSRC);
01573 HLOCAL          WINAPI LocalAlloc(UINT,DWORD);
01574 UINT            WINAPI LocalCompact(UINT);
01575 UINT            WINAPI LocalFlags(HLOCAL);
01576 HLOCAL          WINAPI LocalFree(HLOCAL);
01577 HLOCAL          WINAPI LocalHandle(LPCVOID);
01578 LPVOID         WINAPI LocalLock(HLOCAL);
01579 HLOCAL          WINAPI LocalReAlloc(HLOCAL,DWORD,UINT);
01580 UINT            WINAPI LocalShrink(HGLOBAL,UINT);
01581 UINT            WINAPI LocalSize(HLOCAL);
01582 BOOL            WINAPI LocalUnlock(HLOCAL);
01583 LPVOID         WINAPI LockResource(HGLOBAL);
01584 #define          LockSegment(handle) GlobalFix((HANDLE)(handle))
01585 #define          MakeProcInstance(proc,inst) (proc)
01586 HFILE           WINAPI OpenFile(LPCSTR,OFSTRUCT*,UINT);
01587 VOID            WINAPI OutputDebugStringA(LPCSTR);
01588 VOID            WINAPI OutputDebugStringW(LPCWSTR);
01589 #define          OutputDebugString WINELIB_NAME_AW(OutputDebugString)
01590 BOOL            WINAPI ReadProcessMemory(HANDLE,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);

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01598 BOOL        WINAPI SetFileAttributesA(LPCSTR,DWORD);
01599 BOOL        WINAPI SetFileAttributesW(LPCWSTR,DWORD);
01600 #define        SetFileAttributes WINELIB_NAME_AW(SetFileAttributes)
01601 UINT        WINAPI SetHandleCount(UINT);
01602 #define        SetSwapAreaSize(w) (w)
01603 BOOL        WINAPI SetVolumeLabelA(LPCSTR,LPCSTR);
01604 BOOL        WINAPI SetVolumeLabelW(LPCWSTR,LPCWSTR);
01605 #define        SetVolumeLabel WINELIB_NAME_AW(SetVolumeLabel)
01606 DWORD        WINAPI SizeofResource(HMODULE,HRSRC);
01607 BOOL        WINAPI UnlockFileEx(HFILE,DWORD,DWORD,DWORD,LPOVERLAPPED);
01608 #define        UnlockSegment(handle) GlobalUnfix((HANDLE)(handle))
01609 BOOL        WINAPI WritePrivateProfileSectionA(LPCSTR,LPCSTR,LPCSTR);
01610 BOOL        WINAPI WritePrivateProfileSectionW(LPCWSTR,LPCWSTR,LPCWSTR);
01611 #define        WritePrivateProfileSection WINELIB_NAME_AW(WritePrivateProfileSection)
01612 BOOL        WINAPI WritePrivateProfileStringA(LPCSTR,LPCSTR,LPCSTR,LPCSTR);
01613 BOOL        WINAPI WritePrivateProfileStringW(LPCWSTR,LPCWSTR,LPCWSTR,LPCWSTR);
01614 #define        WritePrivateProfileString WINELIB_NAME_AW(WritePrivateProfileString)
01615 BOOL        WINAPI WriteProfileSectionA(LPCSTR,LPCSTR);
01616 BOOL        WINAPI WriteProfileSectionW(LPCWSTR,LPCWSTR);
01617 #define        WritePrivateProfileSection WINELIB_NAME_AW(WritePrivateProfileSection)
01618 BOOL        WINAPI WritePrivateProfileStructA(LPCSTR,LPCSTR,LPCVOID,UINT,LPCSTR);
01619 BOOL        WINAPI WritePrivateProfileStructW(LPCWSTR,LPCWSTR,LPCVOID,UINT,LPCWSTR);
01620 #define        WritePrivateProfileStruct WINELIB_NAME_AW(WritePrivateProfileStruct)
01621 BOOL        WINAPI WriteProcessMemory(HANDLE,LPCVOID,DWORD,LPCVOID,DWORD,LPCWSTR);
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 lstrcpyA(LPSTR,LPCSTR,INT);
01633 LPWSTR        WINAPI lstrcpyW(LPWSTR,LPCWSTR,INT);
01634 #define        lstrcpy WINELIB_NAME_AW(lstrcpy)
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,LPCVOID,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 _hread(HFILE,LPCVOID,UINT);
01646 UINT        WINAPI _lwrite(HFILE,LPCSTR,UINT);
01647 INT        WINAPI lstrcmpA(LPCSTR,LPCSTR);
01648 INT        WINAPI lstrcmpW(LPCWSTR,LPCWSTR);
01649 #define        lstrcmp WINELIB_NAME_AW(lstrcmp)
01650 INT        WINAPI lstrcmpiA(LPCSTR,LPCSTR);
01651 INT        WINAPI lstrcmpiW(LPCWSTR,LPCWSTR);
01652 #define        lstrcmpi WINELIB_NAME_AW(lstrcmpi)
01653
01654 /* compatibility macros */
01655 #define        FillMemory RtlFillMemory
01656 #define        MoveMemory RtlMoveMemory
01657 #define        ZeroMemory RtlZeroMemory
01658 #define        CopyMemory RtlCopyMemory
01659
01660 /* undocumented functions */
01661
01662 typedef struct tagSYSLEVEL
01663 {
01664     CRITICAL_SECTION crst;
01665     INT level;
01666 } SYSLEVEL;
01667
01668 /* [GS]etProcessDword offsets */
01669 #define        GPD_APP_COMPAT_FLAGS (-56)
01670 #define        GPD_LOAD_DONE_EVENT (-52)
01671 #define        GPD_HINSTANCE16 (-48)
01672 #define        GPD_WINDOWS_VERSION (-44)
01673 #define        GPD_THDB (-40)
01674 #define        GPD_PDB (-36)
01675 #define        GPD_STARTF_SHELLDATA (-32)
01676 #define        GPD_STARTF_HOTKEY (-28)
01677 #define        GPD_STARTF_SHOWWINDOW (-24)
01678 #define        GPD_STARTF_SIZE (-20)
01679 #define        GPD_STARTF_POSITION (-16)
01680 #define        GPD_STARTF_FLAGS (-12)
01681 #define        GPD_PARENT (- 8)
01682 #define        GPD_FLAGS (- 4)
01683 #define        GPD_USERDATA ( 0)
01684

```



```

01685 void          WINAPI DisposeLZ32Handle(HANDLE);
01686 HANDLE         WINAPI DosFileHandleToWin32Handle(HFILE);
01687 DWORD          WINAPI GetProcessDword(DWORD,INT);
01688 VOID           WINAPI GetpWin16Lock(SYSLEVEL**);
01689 DWORD          WINAPI MapLS(LPCVOID);
01690 DWORD          WINAPI MapProcessHandle(HANDLE);
01691 LPVOID          WINAPI MapSL(DWORD);
01692 VOID           WINAPI ReleaseThunkLock(DWORD*);
01693 VOID           WINAPI RestoreThunkLock(DWORD);
01694 void           WINAPI SetProcessDword(DWORD,INT,DWORD);
01695 VOID           WINAPI UnMapLS(DWORD);
01696 HFILE          WINAPI Win32HandleToDosFileHandle(HANDLE);
01697 VOID           WINAPI _CheckNotSysLevel(SYSLEVEL *lock);
01698 DWORD          WINAPI _ConfirmWin16Lock(void);
01699 DWORD          WINAPI _ConfirmSysLevel(SYSLEVEL*);
01700 VOID           WINAPI _EnterSysLevel(SYSLEVEL*);
01701 VOID           WINAPI _LeaveSysLevel(SYSLEVEL*);
01702
01703
01704 /* Wine internal functions */
01705
01706 BOOL           WINAPI wine_get_unix_file_name( LPCSTR dos, LPSTR buffer, DWORD len );
01707
01708
01709 /* a few optimizations for i386/gcc */
01710
01711 /*#if defined(__i386__) && defined(__GNUC__)*/
01712 /* Deleted these since the real WINE environment is not available */
01713 #if 0
01714
01715 extern inline LONG WINAPI InterlockedCompareExchange( PLONG dest, LONG xchg, LONG compare );
01716 extern inline LONG WINAPI InterlockedCompareExchange( PLONG dest, LONG xchg, LONG compare )
01717 {
01718     LONG ret;
01719     __asm__ __volatile__( "lock; cmpxchgl %2,%1"
01720                          : "=a" (ret) : "r" (dest), "r" (xchg), "0" (compare) : "memory" );
01721     return ret;
01722 }
01723
01724 extern inline LONG WINAPI InterlockedExchange( PLONG dest, LONG val );
01725 extern inline LONG WINAPI InterlockedExchange( PLONG dest, LONG val )
01726 {
01727     LONG ret;
01728     __asm__ __volatile__( "lock; xchgl %0,%1"
01729                          : "=r" (ret) : "r" (dest), "0" (val) : "memory" );
01730     return ret;
01731 }
01732
01733 extern inline LONG WINAPI InterlockedExchangeAdd( PLONG dest, LONG incr );
01734 extern inline LONG WINAPI InterlockedExchangeAdd( PLONG dest, LONG incr )
01735 {
01736     LONG ret;
01737     __asm__ __volatile__( "lock; xaddl %0,%1"
01738                          : "=r" (ret) : "r" (dest), "0" (incr) : "memory" );
01739     return ret;
01740 }
01741
01742 extern inline LONG WINAPI InterlockedIncrement( PLONG dest );
01743 extern inline LONG WINAPI InterlockedIncrement( PLONG dest )
01744 {
01745     return InterlockedExchangeAdd( dest, 1 ) + 1;
01746 }
01747
01748 extern inline LONG WINAPI InterlockedDecrement( PLONG dest );
01749 extern inline LONG WINAPI InterlockedDecrement( PLONG dest )
01750 {
01751     return InterlockedExchangeAdd( dest, -1 ) - 1;
01752 }
01753
01754 extern inline DWORD WINAPI GetLastError(void);
01755 extern inline DWORD WINAPI GetLastError(void)
01756 {
01757     DWORD ret;
01758     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x60,%0" : "=r" (ret) );
01759     return ret;
01760 }
01761
01762 extern inline DWORD WINAPI GetCurrentProcessId(void);
01763 extern inline DWORD WINAPI GetCurrentProcessId(void)
01764 {
01765     DWORD ret;
01766     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x20,%0" : "=r" (ret) );
01767     return ret;
01768 }
01769
01770 extern inline DWORD WINAPI GetCurrentThreadId(void);
01771 extern inline DWORD WINAPI GetCurrentThreadId(void)

```

```

01772 {
01773     DWORD ret;
01774     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x24,%0" : "=r" (ret) );
01775     return ret;
01776 }
01777
01778 extern inline void WINAPI SetLastError( DWORD err );
01779 extern inline void WINAPI SetLastError( DWORD err )
01780 {
01781     __asm__ __volatile__( ".byte 0x64\n\tmovl %0,0x60" : : "r" (err) : "memory" );
01782 }
01783
01784 extern inline HANDLE WINAPI GetProcessHeap(void);
01785 extern inline HANDLE WINAPI GetProcessHeap(void)
01786 {
01787     HANDLE *pdb;
01788     __asm__ __volatile__( ".byte 0x64\n\tmovl 0x30,%0" : "=r" (pdb) );
01789     return pdb[0x18 / sizeof(HANDLE)]; /* get dword at offset 0x18 in pdb */
01790 }
01791
01792 #else /* __i386__ && __GNUC__ */
01793 DWORD WINAPI GetCurrentProcessId(void);
01794 DWORD WINAPI GetCurrentThreadId(void);
01795 DWORD WINAPI GetLastError(void);
01796 HANDLE WINAPI GetProcessHeap(void);
01797 LONG WINAPI InterlockedCompareExchange( LONG*, LONG, LONG );
01798 LONG WINAPI InterlockedDecrement( PLONG );
01799 LONG WINAPI InterlockedExchange( PLONG, LONG );
01800 LONG WINAPI InterlockedExchangeAdd( PLONG, LONG );
01801 LONG WINAPI InterlockedIncrement( PLONG );
01802 VOID WINAPI SetLastError( DWORD );
01803 #endif /* __i386__ && __GNUC__ */
01804
01805 /* FIXME: should handle platforms where sizeof(void*) != sizeof(long) */
01806 #if 0
01807     /* Unused in libEMF */
01808     static inline PVOID WINAPI InterlockedCompareExchangePointer( PVOID *dest, PVOID xchg, PVOID compare )
01809     {
01810         return (PVOID)InterlockedCompareExchange( (PLONG)dest, (LONG)xchg, (LONG)compare );
01811     }
01812
01813     static inline PVOID WINAPI InterlockedExchangePointer( PVOID *dest, PVOID val )
01814     {
01815         return (PVOID)InterlockedExchange( (PLONG)dest, (LONG)val );
01816     }
01817 #endif
01818 #ifdef __WINE__
01819 #define GetCurrentProcess() ((HANDLE)0xffffffff)
01820 #define GetCurrentThread() ((HANDLE)0xfffffffffe)
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) & 0xfffffff0) | 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 SIZE_L, *PSIZE_L, *LPSIZE_L;
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_SEGDP1	198
00212	#define	ERROR_AUTODATASEG_EXCEEDS_64k	199
00213	#define	ERROR_RING2SEG_MUST_BE_MOVABLE	200
00214	#define	ERROR_RELOC_CHAIN_XCEEDS_SEGLIM	201
00215	#define	ERROR_INFLOOP_IN_RELOC_CHAIN	202
00216	#define	ERROR_ENVVAR_NOT_FOUND	203
00217	#define	ERROR_NO_SIGNAL_SENT	205
00218	#define	ERROR_FILENAME_EXCED_RANGE	206
00219	#define	ERROR_RING2_STACK_IN_USE	207
00220	#define	ERROR_META_EXPANSION_TOO_LONG	208
00221	#define	ERROR_INVALID_SIGNAL_NUMBER	209
00222	#define	ERROR_THREAD_1_INACTIVE	210
00223	#define	ERROR_LOCKED	212
00224	#define	ERROR_TOO_MANY_MODULES	214
00225	#define	ERROR_NESTING_NOT_ALLOWED	215
00226	#define	ERROR_EXE_MACHINE_TYPE_MISMATCH	216
00227	#define	ERROR_BAD_PIPE	230
00228	#define	ERROR_PIPE_BUSY	231
00229	#define	ERROR_NO_DATA	232
00230	#define	ERROR_PIPE_NOT_CONNECTED	233
00231	#define	ERROR_MORE_DATA	234
00232	#define	ERROR_VC_DISCONNECTED	240
00233	#define	ERROR_INVALID_EA_NAME	254
00234	#define	ERROR_EA_LIST_INCONSISTENT	255
00235	#define	ERROR_NO_MORE_ITEMS	259
00236	#define	ERROR_CANNOT_COPY	266
00237	#define	ERROR_DIRECTORY	267
00238	#define	ERROR_EAS_DIDNT_FIT	275
00239	#define	ERROR_EA_FILE_CORRUPT	276
00240	#define	ERROR_EA_TABLE_FULL	277
00241	#define	ERROR_INVALID_EA_HANDLE	278
00242	#define	ERROR_EAS_NOT_SUPPORTED	282
00243	#define	ERROR_NOT_OWNER	288

00244	#define	ERROR_TOO_MANY_POSTS	298
00245	#define	ERROR_PARTIAL_COPY	299
00246	#define	ERROR_OPLOCK_NOT_GRANTED	300
00247	#define	ERROR_INVALID_OPLOCK_PROTOCOL	301
00248	#define	ERROR_MR_MID_NOT_FOUND	317
00249	#define	ERROR_INVALID_ADDRESS	487
00250	#define	ERROR_ARITHMETIC_OVERFLOW	534
00251	#define	ERROR_PIPE_CONNECTED	535
00252	#define	ERROR_PIPE_LISTENING	536
00253	#define	ERROR_EA_ACCESS_DENIED	994
00254	#define	ERROR_OPERATION_ABORTED	995
00255	#define	ERROR_IO_INCOMPLETE	996
00256	#define	ERROR_IO_PENDING	997
00257	#define	ERROR_NOACCESS	998
00258	#define	ERROR_SWAPERROR	999
00259	#define	ERROR_STACK_OVERFLOW	1001
00260	#define	ERROR_INVALID_MESSAGE	1002
00261	#define	ERROR_CAN_NOT_COMPLETE	1003
00262	#define	ERROR_INVALID_FLAGS	1004
00263	#define	ERROR_UNRECOGNIZED_VOLUME	1005
00264	#define	ERROR_FILE_INVALID	1006
00265	#define	ERROR_FULLSCREEN_MODE	1007
00266	#define	ERROR_NO_TOKEN	1008
00267	#define	ERROR_BADDB	1009
00268	#define	ERROR_BADKEY	1010
00269	#define	ERROR_CANTOPEN	1011
00270	#define	ERROR_CANTREAD	1012
00271	#define	ERROR_CANTWRITE	1013
00272	#define	ERROR_REGISTRY_RECOVERED	1014
00273	#define	ERROR_REGISTRY_CORRUPT	1015
00274	#define	ERROR_REGISTRY_IO_FAILED	1016
00275	#define	ERROR_NOT_REGISTRY_FILE	1017
00276	#define	ERROR_KEY_DELETED	1018
00277	#define	ERROR_NO_LOG_SPACE	1019
00278	#define	ERROR_KEY_HAS_CHILDREN	1020
00279	#define	ERROR_CHILD_MUST_BE_VOLATILE	1021
00280	#define	ERROR_NOTIFY_ENUM_DIR	1022
00281	#define	ERROR_DEPENDENT_SERVICES_RUNNING	1051
00282	#define	ERROR_INVALID_SERVICE_CONTROL	1052
00283	#define	ERROR_SERVICE_REQUEST_TIMEOUT	1053
00284	#define	ERROR_SERVICE_NO_THREAD	1054
00285	#define	ERROR_SERVICE_DATABASE_LOCKED	1055
00286	#define	ERROR_SERVICE_ALREADY_RUNNING	1056
00287	#define	ERROR_INVALID_SERVICE_ACCOUNT	1057
00288	#define	ERROR_SERVICE_DISABLED	1058
00289	#define	ERROR_CIRCULAR_DEPENDENCY	1059
00290	#define	ERROR_SERVICE_DOES_NOT_EXIST	1060
00291	#define	ERROR_SERVICE_CANNOT_ACCEPT_CTRL	1061
00292	#define	ERROR_SERVICE_NOT_ACTIVE	1062
00293	#define	ERROR_FAILED_SERVICE_CONTROLLER_CONNECT	1063
00294	#define	ERROR_EXCEPTION_IN_SERVICE	1064
00295	#define	ERROR_DATABASE_DOES_NOT_EXIST	1065
00296	#define	ERROR_SERVICE_SPECIFIC_ERROR	1066
00297	#define	ERROR_PROCESS_ABORTED	1067
00298	#define	ERROR_SERVICE_DEPENDENCY_FAIL	1068
00299	#define	ERROR_SERVICE_LOGON_FAILED	1069
00300	#define	ERROR_SERVICE_START_HANG	1070
00301	#define	ERROR_INVALID_SERVICE_LOCK	1071
00302	#define	ERROR_SERVICE_MARKED_FOR_DELETE	1072
00303	#define	ERROR_SERVICE_EXISTS	1073
00304	#define	ERROR_ALREADY_RUNNING_LKG	1074
00305	#define	ERROR_SERVICE_DEPENDENCY_DELETED	1075
00306	#define	ERROR_BOOT_ALREADY_ACCEPTED	1076
00307	#define	ERROR_SERVICE_NEVER_STARTED	1077
00308	#define	ERROR_DUPLICATE_SERVICE_NAME	1078
00309	#define	ERROR_DIFFERENT_SERVICE_ACCOUNT	1079
00310	#define	ERROR_CANNOT_DETECT_DRIVER_FAILURE	1080
00311	#define	ERROR_CANNOT_DETECT_PROCESS_ABORT	1081
00312	#define	ERROR_NO_RECOVERY_PROGRAM	1082
00313	#define	ERROR_SERVICE_NOT_IN_EXE	1083
00314	#define	ERROR_END_OF_MEDIA	1100
00315	#define	ERROR_FILEMARK_DETECTED	1101
00316	#define	ERROR_BEGINNING_OF_MEDIA	1102
00317	#define	ERROR_SETMARK_DETECTED	1103
00318	#define	ERROR_NO_DATA_DETECTED	1104
00319	#define	ERROR_PARTITION_FAILURE	1105
00320	#define	ERROR_INVALID_BLOCK_LENGTH	1106
00321	#define	ERROR_DEVICE_NOT_PARTITIONED	1107
00322	#define	ERROR_UNABLE_TO_LOCK_MEDIA	1108
00323	#define	ERROR_UNABLE_TO_UNLOAD_MEDIA	1109
00324	#define	ERROR_MEDIA_CHANGED	1110
00325	#define	ERROR_BUS_RESET	1111
00326	#define	ERROR_NO_MEDIA_IN_DRIVE	1112
00327	#define	ERROR_NO_UNICODE_TRANSLATION	1113
00328	#define	ERROR_DLL_INIT_FAILED	1114
00329	#define	ERROR_SHUTDOWN_IN_PROGRESS	1115
00330	#define	ERROR_NO_SHUTDOWN_IN_PROGRESS	1116

00331	#define	ERROR_IO_DEVICE	1117
00332	#define	ERROR_SERIAL_NO_DEVICE	1118
00333	#define	ERROR_IRQ_BUSY	1119
00334	#define	ERROR_MORE_WRITES	1120
00335	#define	ERROR_COUNTER_TIMEOUT	1121
00336	#define	ERROR_FLOPPY_ID_MARK_NOT_FOUND	1122
00337	#define	ERROR_FLOPPY_WRONG_CYLINDER	1123
00338	#define	ERROR_FLOPPY_UNKNOWN_ERROR	1124
00339	#define	ERROR_FLOPPY_BAD_REGISTERS	1125
00340	#define	ERROR_DISK_RECALIBRATE_FAILED	1126
00341	#define	ERROR_DISK_OPERATION_FAILED	1127
00342	#define	ERROR_DISK_RESET_FAILED	1128
00343	#define	ERROR_EOM_OVERFLOW	1129
00344	#define	ERROR_NOT_ENOUGH_SERVER_MEMORY	1130
00345	#define	ERROR_POSSIBLE_DEADLOCK	1131
00346	#define	ERROR_MAPPED_ALIGNMENT	1132
00347	#define	ERROR_SET_POWER_STATE_VETOED	1140
00348	#define	ERROR_SET_POWER_STATE_FAILED	1141
00349	#define	ERROR_TOO_MANY_LINKS	1142
00350	#define	ERROR_OLD_WIN_VERSION	1150
00351	#define	ERROR_APP_WRONG_OS	1151
00352	#define	ERROR_SINGLE_INSTANCE_APP	1152
00353	#define	ERROR_RMODE_APP	1153
00354	#define	ERROR_INVALID_DLL	1154
00355	#define	ERROR_NO_ASSOCIATION	1155
00356	#define	ERROR_DDE_FAIL	1156
00357	#define	ERROR_DLL_NOT_FOUND	1157
00358	#define	ERROR_NO_MORE_USER_HANDLES	1158
00359	#define	ERROR_MESSAGE_SYNC_ONLY	1159
00360	#define	ERROR_SOURCE_ELEMENT_EMPTY	1160
00361	#define	ERROR_DESTINATION_ELEMENT_FULL	1161
00362	#define	ERROR_ILLEGAL_ELEMENT_ADDRESS	1162
00363	#define	ERROR_MAGAZINE_NOT_PRESENT	1163
00364	#define	ERROR_DEVICE_REINITIALIZATION_NEEDED	1164
00365	#define	ERROR_DEVICE_REQUIRES_CLEANING	1165
00366	#define	ERROR_DEVICE_DOOR_OPEN	1166
00367	#define	ERROR_DEVICE_NOT_CONNECTED	1167
00368	#define	ERROR_NOT_FOUND	1168
00369	#define	ERROR_NO_MATCH	1169
00370	#define	ERROR_SET_NOT_FOUND	1170
00371	#define	ERROR_POINT_NOT_FOUND	1171
00372	#define	ERROR_NO_TRACKING_SERVICE	1172
00373	#define	ERROR_NO_VOLUME_ID	1173
00374	#define	ERROR_UNABLE_TO_REMOVE_REPLACED	1175
00375	#define	ERROR_UNABLE_TO_MOVE_REPLACEMENT	1176
00376	#define	ERROR_UNABLE_TO_MOVE_REPLACEMENT_2	1177
00377	#define	ERROR_JOURNAL_DELETE_IN_PROGRESS	1178
00378	#define	ERROR_JOURNAL_NOT_ACTIVE	1179
00379	#define	ERROR_POTENTIAL_FILE_FOUND	1180
00380	#define	ERROR_JOURNAL_ENTRY_DELETED	1181
00381	#define	ERROR_BAD_DEVICE	1200
00382	#define	ERROR_CONNECTION_UNAVAIL	1201
00383	#define	ERROR_DEVICE_ALREADY_REMEMBERED	1202
00384	#define	ERROR_NO_NET_OR_BAD_PATH	1203
00385	#define	ERROR_BAD_PROVIDER	1204
00386	#define	ERROR_CANNOT_OPEN_PROFILE	1205
00387	#define	ERROR_BAD_PROFILE	1206
00388	#define	ERROR_NOT_CONTAINER	1207
00389	#define	ERROR_EXTENDED_ERROR	1208
00390	#define	ERROR_INVALID_GROUPNAME	1209
00391	#define	ERROR_INVALID_COMPUTERNAME	1210
00392	#define	ERROR_INVALID_EVENTNAME	1211
00393	#define	ERROR_INVALID_DOMAINNAME	1212
00394	#define	ERROR_INVALID_SERVICENAME	1213
00395	#define	ERROR_INVALID_NETNAME	1214
00396	#define	ERROR_INVALID_SHARENAME	1215
00397	#define	ERROR_INVALID_PASSWORDNAME	1216
00398	#define	ERROR_INVALID_MESSAGE	1217
00399	#define	ERROR_INVALID_MESSAGEDEST	1218
00400	#define	ERROR_SESSION_CREDENTIAL_CONFLICT	1219
00401	#define	ERROR_REMOTE_SESSION_LIMIT_EXCEEDED	1220
00402	#define	ERROR_DUP_DOMAINNAME	1221
00403	#define	ERROR_NO_NETWORK	1222
00404	#define	ERROR_CANCELLED	1223
00405	#define	ERROR_USER_MAPPED_FILE	1224
00406	#define	ERROR_CONNECTION_REFUSED	1225
00407	#define	ERROR_GRACEFUL_DISCONNECT	1226
00408	#define	ERROR_ADDRESS_ALREADY_ASSOCIATED	1227
00409	#define	ERROR_ADDRESS_NOT_ASSOCIATED	1228
00410	#define	ERROR_CONNECTION_INVALID	1229
00411	#define	ERROR_CONNECTION_ACTIVE	1230
00412	#define	ERROR_NETWORK_UNREACHABLE	1231
00413	#define	ERROR_HOST_UNREACHABLE	1232
00414	#define	ERROR_PROTOCOL_UNREACHABLE	1233
00415	#define	ERROR_PORT_UNREACHABLE	1234
00416	#define	ERROR_REQUEST_ABORTED	1235
00417	#define	ERROR_CONNECTION_ABORTED	1236

00418	#define	ERROR_RETRY	1237
00419	#define	ERROR_CONNECTION_COUNT_LIMIT	1238
00420	#define	ERROR_LOGIN_TIME_RESTRICTION	1239
00421	#define	ERROR_LOGIN_WKSTA_RESTRICTION	1240
00422	#define	ERROR_INCORRECT_ADDRESS	1241
00423	#define	ERROR_ALREADY_REGISTERED	1242
00424	#define	ERROR_SERVICE_NOT_FOUND	1243
00425	#define	ERROR_NOT_AUTHENTICATED	1244
00426	#define	ERROR_NOT_LOGGED_ON	1245
00427	#define	ERROR_CONTINUE	1246
00428	#define	ERROR_ALREADY_INITIALIZED	1247
00429	#define	ERROR_NO_MORE_DEVICES	1248
00430	#define	ERROR_NO_SUCH_SITE	1249
00431	#define	ERROR_DOMAIN_CONTROLLER_EXISTS	1250
00432	#define	ERROR_ONLY_IF_CONNECTED	1251
00433	#define	ERROR_OVERRIDE_NOCHANGES	1252
00434	#define	ERROR_BAD_USER_PROFILE	1253
00435	#define	ERROR_NOT_SUPPORTED_ON_SBS	1254
00436	#define	ERROR_NOT_ALL_ASSIGNED	1300
00437	#define	ERROR_SOME_NOT_MAPPED	1301
00438	#define	ERROR_NO_QUOTAS_FOR_ACCOUNT	1302
00439	#define	ERROR_LOCAL_USER_SESSION_KEY	1303
00440	#define	ERROR_NULL_LM_PASSWORD	1304
00441	#define	ERROR_UNKNOWN_REVISION	1305
00442	#define	ERROR_REVISION_MISMATCH	1306
00443	#define	ERROR_INVALID_OWNER	1307
00444	#define	ERROR_INVALID_PRIMARY_GROUP	1308
00445	#define	ERROR_NO_IMPERSONATION_TOKEN	1309
00446	#define	ERROR_CANT_DISABLE_MANDATORY	1310
00447	#define	ERROR_NO_LOGON_SERVERS	1311
00448	#define	ERROR_NO_SUCH_LOGON_SESSION	1312
00449	#define	ERROR_NO_SUCH_PRIVILEGE	1313
00450	#define	ERROR_PRIVILEGE_NOT_HELD	1314
00451	#define	ERROR_INVALID_ACCOUNT_NAME	1315
00452	#define	ERROR_USER_EXISTS	1316
00453	#define	ERROR_NO_SUCH_USER	1317
00454	#define	ERROR_GROUP_EXISTS	1318
00455	#define	ERROR_NO_SUCH_GROUP	1319
00456	#define	ERROR_MEMBER_IN_GROUP	1320
00457	#define	ERROR_MEMBER_NOT_IN_GROUP	1321
00458	#define	ERROR_LAST_ADMIN	1322
00459	#define	ERROR_WRONG_PASSWORD	1323
00460	#define	ERROR_ILL_FORMED_PASSWORD	1324
00461	#define	ERROR_PASSWORD_RESTRICTION	1325
00462	#define	ERROR_LOGON_FAILURE	1326
00463	#define	ERROR_ACCOUNT_RESTRICTION	1327
00464	#define	ERROR_INVALID_LOGON_HOURS	1328
00465	#define	ERROR_INVALID_WORKSTATION	1329
00466	#define	ERROR_PASSWORD_EXPIRED	1330
00467	#define	ERROR_ACCOUNT_DISABLED	1331
00468	#define	ERROR_NONE_MAPPED	1332
00469	#define	ERROR_TOO_MANY_LUIDS_REQUESTED	1333
00470	#define	ERROR_LUIDS_EXHAUSTED	1334
00471	#define	ERROR_INVALID_SUB_AUTHORITY	1335
00472	#define	ERROR_INVALID_ACL	1336
00473	#define	ERROR_INVALID_SID	1337
00474	#define	ERROR_INVALID_SECURITY_DESCR	1338
00475	#define	ERROR_BAD_INHERITANCE_ACL	1340
00476	#define	ERROR_SERVER_DISABLED	1341
00477	#define	ERROR_SERVER_NOT_DISABLED	1342
00478	#define	ERROR_INVALID_ID_AUTHORITY	1343
00479	#define	ERROR_ALLOTTED_SPACE_EXCEEDED	1344
00480	#define	ERROR_INVALID_GROUP_ATTRIBUTES	1345
00481	#define	ERROR_BAD_IMPERSONATION_LEVEL	1346
00482	#define	ERROR_CANT_OPEN_ANONYMOUS	1347
00483	#define	ERROR_BAD_VALIDATION_CLASS	1348
00484	#define	ERROR_BAD_TOKEN_TYPE	1349
00485	#define	ERROR_NO_SECURITY_ON_OBJECT	1350
00486	#define	ERROR_CANT_ACCESS_DOMAIN_INFO	1351
00487	#define	ERROR_INVALID_SERVER_STATE	1352
00488	#define	ERROR_INVALID_DOMAIN_STATE	1353
00489	#define	ERROR_INVALID_DOMAIN_ROLE	1354
00490	#define	ERROR_NO_SUCH_DOMAIN	1355
00491	#define	ERROR_DOMAIN_EXISTS	1356
00492	#define	ERROR_DOMAIN_LIMIT_EXCEEDED	1357
00493	#define	ERROR_INTERNAL_DB_CORRUPTION	1358
00494	#define	ERROR_INTERNAL_ERROR	1359
00495	#define	ERROR_GENERIC_NOT_MAPPED	1360
00496	#define	ERROR_BAD_DESCRIPTOR_FORMAT	1361
00497	#define	ERROR_NOT_LOGON_PROCESS	1362
00498	#define	ERROR_LOGON_SESSION_EXISTS	1363
00499	#define	ERROR_NO_SUCH_PACKAGE	1364
00500	#define	ERROR_BAD_LOGON_SESSION_STATE	1365
00501	#define	ERROR_LOGON_SESSION_COLLISION	1366
00502	#define	ERROR_INVALID_LOGON_TYPE	1367
00503	#define	ERROR_CANTNOT_IMPERSONATE	1368
00504	#define	ERROR_RXACT_INVALID_STATE	1369

00505	#define	ERROR_RXACT_COMMIT_FAILURE	1370
00506	#define	ERROR_SPECIAL_ACCOUNT	1371
00507	#define	ERROR_SPECIAL_GROUP	1372
00508	#define	ERROR_SPECIAL_USER	1373
00509	#define	ERROR_MEMBERS_PRIMARY_GROUP	1374
00510	#define	ERROR_TOKEN_ALREADY_IN_USE	1375
00511	#define	ERROR_NO_SUCH_ALIAS	1376
00512	#define	ERROR_MEMBER_NOT_IN_ALIAS	1377
00513	#define	ERROR_MEMBER_IN_ALIAS	1378
00514	#define	ERROR_ALIAS_EXISTS	1379
00515	#define	ERROR_LOGON_NOT_GRANTED	1380
00516	#define	ERROR_TOO_MANY_SECRETS	1381
00517	#define	ERROR_SECRET_TOO_LONG	1382
00518	#define	ERROR_INTERNAL_DB_ERROR	1383
00519	#define	ERROR_TOO_MANY_CONTEXT_IDS	1384
00520	#define	ERROR_LOGON_TYPE_NOT_GRANTED	1385
00521	#define	ERROR_NT_CROSS_ENCRYPTION_REQUIRED	1386
00522	#define	ERROR_NO_SUCH_MEMBER	1387
00523	#define	ERROR_INVALID_MEMBER	1388
00524	#define	ERROR_TOO_MANY_SIDS	1389
00525	#define	ERROR_LM_CROSS_ENCRYPTION_REQUIRED	1390
00526	#define	ERROR_NO_INHERITANCE	1391
00527	#define	ERROR_FILE_CORRUPT	1392
00528	#define	ERROR_DISK_CORRUPT	1393
00529	#define	ERROR_NO_USER_SESSION_KEY	1394
00530	#define	ERROR_LICENSE_QUOTA_EXCEEDED	1395
00531	#define	ERROR_WRONG_TARGET_NAME	1396
00532	#define	ERROR_MUTUAL_AUTH_FAILED	1397
00533	#define	ERROR_TIME_SKEW	1398
00534	#define	ERROR_INVALID_WINDOW_HANDLE	1400
00535	#define	ERROR_INVALID_MENU_HANDLE	1401
00536	#define	ERROR_INVALID_CURSOR_HANDLE	1402
00537	#define	ERROR_INVALID_ACCEL_HANDLE	1403
00538	#define	ERROR_INVALID_HOOK_HANDLE	1404
00539	#define	ERROR_INVALID_DWP_HANDLE	1405
00540	#define	ERROR_TLW_WITH_WSCHILD	1406
00541	#define	ERROR_CANNOT_FIND_WND_CLASS	1407
00542	#define	ERROR_WINDOW_OF_OTHER_THREAD	1408
00543	#define	ERROR_HOTKEY_ALREADY_REGISTERED	1409
00544	#define	ERROR_CLASS_ALREADY_EXISTS	1410
00545	#define	ERROR_CLASS_DOES_NOT_EXIST	1411
00546	#define	ERROR_CLASS_HAS_WINDOWS	1412
00547	#define	ERROR_INVALID_INDEX	1413
00548	#define	ERROR_INVALID_ICON_HANDLE	1414
00549	#define	ERROR_PRIVATE_DIALOG_INDEX	1415
00550	#define	ERROR_LISTBOX_ID_NOT_FOUND	1416
00551	#define	ERROR_NO_WILDCARD_CHARACTERS	1417
00552	#define	ERROR_CLIPBOARD_NOT_OPEN	1418
00553	#define	ERROR_HOTKEY_NOT_REGISTERED	1419
00554	#define	ERROR_WINDOW_NOT_DIALOG	1420
00555	#define	ERROR_CONTROL_ID_NOT_FOUND	1421
00556	#define	ERROR_INVALID_COMBOBOX_MESSAGE	1422
00557	#define	ERROR_WINDOW_NOT_COMBOBOX	1423
00558	#define	ERROR_INVALID_EDIT_HEIGHT	1424
00559	#define	ERROR_DC_NOT_FOUND	1425
00560	#define	ERROR_INVALID_HOOK_FILTER	1426
00561	#define	ERROR_INVALID_FILTER_PROC	1427
00562	#define	ERROR_HOOK_NEEDS_HMOD	1428
00563	#define	ERROR_GLOBAL_ONLY_HOOK	1429
00564	#define	ERROR_JOURNAL_HOOK_SET	1430
00565	#define	ERROR_HOOK_NOT_INSTALLED	1431
00566	#define	ERROR_INVALID_LB_MESSAGE	1432
00567	#define	ERROR_SETCOUNT_ON_BAD_LB	1433
00568	#define	ERROR_LB_WITHOUT_TABSTOPS	1434
00569	#define	ERROR_DESTROY_OBJECT_OF_OTHER_THREAD	1435
00570	#define	ERROR_CHILD_WINDOW_MENU	1436
00571	#define	ERROR_NO_SYSTEM_MENU	1437
00572	#define	ERROR_INVALID_MSGBOX_STYLE	1438
00573	#define	ERROR_INVALID_SPI_VALUE	1439
00574	#define	ERROR_SCREEN_ALREADY_LOCKED	1440
00575	#define	ERROR_HWNDS_HAVE_DIFF_PARENT	1441
00576	#define	ERROR_NOT_CHILD_WINDOW	1442
00577	#define	ERROR_INVALID_GW_COMMAND	1443
00578	#define	ERROR_INVALID_THREAD_ID	1444
00579	#define	ERROR_NON_MDICHILD_WINDOW	1445
00580	#define	ERROR_POPUP_ALREADY_ACTIVE	1446
00581	#define	ERROR_NO_SCROLLBARS	1447
00582	#define	ERROR_INVALID_SCROLLBAR_RANGE	1448
00583	#define	ERROR_INVALID_SHOWWIN_COMMAND	1449
00584	#define	ERROR_NO_SYSTEM_RESOURCES	1450
00585	#define	ERROR_NONPAGED_SYSTEM_RESOURCES	1451
00586	#define	ERROR_PAGED_SYSTEM_RESOURCES	1452
00587	#define	ERROR_WORKING_SET_QUOTA	1453
00588	#define	ERROR_PAGEFILE_QUOTA	1454
00589	#define	ERROR_COMMITMENT_LIMIT	1455
00590	#define	ERROR_MENU_ITEM_NOT_FOUND	1456
00591	#define	ERROR_INVALID_KEYBOARD_HANDLE	1457

```
00592 #define ERROR_HOOK_TYPE_NOT_ALLOWED 1458
00593 #define ERROR_REQUIRES_INTERACTIVE_WINDOWSTATION 1459
00594 #define ERROR_TIMEOUT 1460
00595 #define ERROR_INVALID_MONITOR_HANDLE 1461
00596 #define ERROR_EVENTLOG_FILE_CORRUPT 1500
00597 #define ERROR_EVENTLOG_CANT_START 1501
00598 #define ERROR_LOG_FILE_FULL 1502
00599 #define ERROR_EVENTLOG_FILE_CHANGED 1503
00600 #define ERROR_INSTALL_SERVICE_FAILURE 1601
00601 #define ERROR_INSTALL_USEREXIT 1602
00602 #define ERROR_INSTALL_FAILURE 1603
00603 #define ERROR_INSTALL_SUSPEND 1604
00604 #define ERROR_UNKNOWN_PRODUCT 1605
00605 #define ERROR_UNKNOWN_FEATURE 1606
00606 #define ERROR_UNKNOWN_COMPONENT 1607
00607 #define ERROR_UNKNOWN_PROPERTY 1608
00608 #define ERROR_INVALID_HANDLE_STATE 1609
00609 #define ERROR_BAD_CONFIGURATION 1610
00610 #define ERROR_INDEX_ABSENT 1611
00611 #define ERROR_INSTALL_SOURCE_ABSENT 1612
00612 #define ERROR_INSTALL_PACKAGE_VERSION 1613
00613 #define ERROR_PRODUCT_UNINSTALLED 1614
00614 #define ERROR_BAD_QUERY_SYNTAX 1615
00615 #define ERROR_INVALID_FIELD 1616
00616 #define ERROR_DEVICE_REMOVED 1617
00617 #define ERROR_INSTALL_ALREADY_RUNNING 1618
00618 #define ERROR_INSTALL_PACKAGE_OPEN_FAILED 1619
00619 #define ERROR_INSTALL_PACKAGE_INVALID 1620
00620 #define ERROR_INSTALL_UI_FAILURE 1621
00621 #define ERROR_INSTALL_LOG_FAILURE 1622
00622 #define ERROR_INSTALL_LANGUAGE_UNSUPPORTED 1623
00623 #define ERROR_INSTALL_TRANSFORM_FAILURE 1624
00624 #define ERROR_INSTALL_PACKAGE_REJECTED 1625
00625 #define ERROR_FUNCTION_NOT_CALLED 1626
00626 #define ERROR_FUNCTION_FAILED 1627
00627 #define ERROR_INVALID_TABLE 1628
00628 #define ERROR_DATATYPE_MISMATCH 1629
00629 #define ERROR_UNSUPPORTED_TYPE 1630
00630 #define ERROR_CREATE_FAILED 1631
00631 #define ERROR_INSTALL_TEMP_UNWRITABLE 1632
00632 #define ERROR_INSTALL_PLATFORM_UNSUPPORTED 1633
00633 #define ERROR_INSTALL_NOTUSED 1634
00634 #define ERROR_PATCH_PACKAGE_OPEN_FAILED 1635
00635 #define ERROR_PATCH_PACKAGE_INVALID 1636
00636 #define ERROR_PATCH_PACKAGE_UNSUPPORTED 1637
00637 #define ERROR_PRODUCT_VERSION 1638
00638 #define ERROR_INVALID_COMMAND_LINE 1639
00639 #define ERROR_INSTALL_REMOTE_DISALLOWED 1640
00640 #define ERROR_SUCCESS_REBOOT_INITIATED 1641
00641 #define RPC_S_INVALID_STRING_BINDING 1700
00642 #define RPC_S_WRONG_KIND_OF_BINDING 1701
00643 #define RPC_S_INVALID_BINDING 1702
00644 #define RPC_S_PROTSEQ_NOT_SUPPORTED 1703
00645 #define RPC_S_INVALID_RPC_PROTSEQ 1704
00646 #define RPC_S_INVALID_STRING_UUID 1705
00647 #define RPC_S_INVALID_ENDPOINT_FORMAT 1706
00648 #define RPC_S_INVALID_NET_ADDR 1707
00649 #define RPC_S_NO_ENDPOINT_FOUND 1708
00650 #define RPC_S_INVALID_TIMEOUT 1709
00651 #define RPC_S_OBJECT_NOT_FOUND 1710
00652 #define RPC_S_ALREADY_REGISTERED 1711
00653 #define RPC_S_TYPE_ALREADY_REGISTERED 1712
00654 #define RPC_S_ALREADY_LISTENING 1713
00655 #define RPC_S_NO_PROTSEQS_REGISTERED 1714
00656 #define RPC_S_NOT_LISTENING 1715
00657 #define RPC_S_UNKNOWN_MGR_TYPE 1716
00658 #define RPC_S_UNKNOWN_IF 1717
00659 #define RPC_S_NO_BINDINGS 1718
00660 #define RPC_S_NO_PROTSEQS 1719
00661 #define RPC_S_CANT_CREATE_ENDPOINT 1720
00662 #define RPC_S_OUT_OF_RESOURCES 1721
00663 #define RPC_S_SERVER_UNAVAILABLE 1722
00664 #define RPC_S_SERVER_TOO_BUSY 1723
00665 #define RPC_S_INVALID_NETWORK_OPTIONS 1724
00666 #define RPC_S_NO_CALL_ACTIVE 1725
00667 #define RPC_S_CALL_FAILED 1726
00668 #define RPC_S_CALL_FAILED_DNE 1727
00669 #define RPC_S_PROTOCOL_ERROR 1728
00670 #define RPC_S_UNSUPPORTED_TRANS_SYN 1730
00671 #define RPC_S_UNSUPPORTED_TYPE 1732
00672 #define RPC_S_INVALID_TAG 1733
00673 #define RPC_S_INVALID_BOUND 1734
00674 #define RPC_S_NO_ENTRY_NAME 1735
00675 #define RPC_S_INVALID_NAME_SYNTAX 1736
00676 #define RPC_S_UNSUPPORTED_NAME_SYNTAX 1737
00677 #define RPC_S_UUID_NO_ADDRESS 1739
00678 #define RPC_S_DUPLICATE_ENDPOINT 1740
```

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00679 #define RPC_S_UNKNOWN_AUTHN_TYPE 1741
00680 #define RPC_S_MAX_CALLS_TOO_SMALL 1742
00681 #define RPC_S_STRING_TOO_LONG 1743
00682 #define RPC_S_PROTSEQ_NOT_FOUND 1744
00683 #define RPC_S_PROCNUM_OUT_OF_RANGE 1745
00684 #define RPC_S_BINDING_HAS_NO_AUTH 1746
00685 #define RPC_S_UNKNOWN_AUTHN_SERVICE 1747
00686 #define RPC_S_UNKNOWN_AUTHN_LEVEL 1748
00687 #define RPC_S_INVALID_AUTH_IDENTITY 1749
00688 #define RPC_S_UNKNOWN_AUTHZ_SERVICE 1750
00689 #define EPT_S_INVALID_ENTRY 1751
00690 #define EPT_S_CANT_PERFORM_OP 1752
00691 #define EPT_S_NOT_REGISTERED 1753
00692 #define RPC_S_NOTHING_TO_EXPORT 1754
00693 #define RPC_S_INCOMPLETE_NAME 1755
00694 #define RPC_S_INVALID_VERS_OPTION 1756
00695 #define RPC_S_NO_MORE_MEMBERS 1757
00696 #define RPC_S_NOT_ALL_OBJS_UNEXPORTED 1758
00697 #define RPC_S_INTERFACE_NOT_FOUND 1759
00698 #define RPC_S_ENTRY_ALREADY_EXISTS 1760
00699 #define RPC_S_ENTRY_NOT_FOUND 1761
00700 #define RPC_S_NAME_SERVICE_UNAVAILABLE 1762
00701 #define RPC_S_INVALID_NAF_ID 1763
00702 #define RPC_S_CANNOT_SUPPORT 1764
00703 #define RPC_S_NO_CONTEXT_AVAILABLE 1765
00704 #define RPC_S_INTERNAL_ERROR 1766
00705 #define RPC_S_ZERO_DIVIDE 1767
00706 #define RPC_S_ADDRESS_ERROR 1768
00707 #define RPC_S_FP_DIV_ZERO 1769
00708 #define RPC_S_FP_UNDERFLOW 1770
00709 #define RPC_S_FP_OVERFLOW 1771
00710 #define RPC_X_NO_MORE_ENTRIES 1772
00711 #define RPC_X_SS_CHAR_TRANS_OPEN_FAIL 1773
00712 #define RPC_X_SS_CHAR_TRANS_SHORT_FILE 1774
00713 #define RPC_X_SS_IN_NULL_CONTEXT 1775
00714 #define RPC_X_SS_CONTEXT_DAMAGED 1777
00715 #define RPC_X_SS_HANDLES_MISMATCH 1778
00716 #define RPC_X_SS_CANNOT_GET_CALL_HANDLE 1779
00717 #define RPC_X_NULL_REF_POINTER 1780
00718 #define RPC_X_ENUM_VALUE_OUT_OF_RANGE 1781
00719 #define RPC_X_BYTE_COUNT_TOO_SMALL 1782
00720 #define RPC_X_BAD_STUB_DATA 1783
00721 #define ERROR_INVALID_USER_BUFFER 1784
00722 #define ERROR_UNRECOGNIZED_MEDIA 1785
00723 #define ERROR_NO_TRUST_LSA_SECRET 1786
00724 #define ERROR_NO_TRUST_SAM_ACCOUNT 1787
00725 #define ERROR_TRUSTED_DOMAIN_FAILURE 1788
00726 #define ERROR_TRUSTED_RELATIONSHIP_FAILURE 1789
00727 #define ERROR_TRUST_FAILURE 1790
00728 #define RPC_S_CALL_IN_PROGRESS 1791
00729 #define ERROR_NETLOGON_NOT_STARTED 1792
00730 #define ERROR_ACCOUNT_EXPIRED 1793
00731 #define ERROR_REDIRECTOR_HAS_OPEN_HANDLES 1794
00732 #define ERROR_PRINTER_DRIVER_ALREADY_INSTALLED 1795
00733 #define ERROR_UNKNOWN_PORT 1796
00734 #define ERROR_UNKNOWN_PRINTER_DRIVER 1797
00735 #define ERROR_UNKNOWN_PRINTPROCESSOR 1798
00736 #define ERROR_INVALID_SEPARATOR_FILE 1799
00737 #define ERROR_INVALID_PRIORITY 1800
00738 #define ERROR_INVALID_PRINTER_NAME 1801
00739 #define ERROR_PRINTER_ALREADY_EXISTS 1802
00740 #define ERROR_INVALID_PRINTER_COMMAND 1803
00741 #define ERROR_INVALID_DATATYPE 1804
00742 #define ERROR_INVALID_ENVIRONMENT 1805
00743 #define RPC_S_NO_MORE_BINDINGS 1806
00744 #define ERROR_NOLOGON_INTERDOMAIN_TRUST_ACCOUNT 1807
00745 #define ERROR_NOLOGON_WORKSTATION_TRUST_ACCOUNT 1808
00746 #define ERROR_NOLOGON_SERVER_TRUST_ACCOUNT 1809
00747 #define ERROR_DOMAIN_TRUST_INCONSISTENT 1810
00748 #define ERROR_SERVER_HAS_OPEN_HANDLES 1811
00749 #define ERROR_RESOURCE_DATA_NOT_FOUND 1812
00750 #define ERROR_RESOURCE_TYPE_NOT_FOUND 1813
00751 #define ERROR_RESOURCE_NAME_NOT_FOUND 1814
00752 #define ERROR_RESOURCE_LANG_NOT_FOUND 1815
00753 #define ERROR_NOT_ENOUGH_QUOTA 1816
00754 #define RPC_S_NO_INTERFACES 1817
00755 #define RPC_S_CALL_CANCELLED 1818
00756 #define RPC_S_BINDING_INCOMPLETE 1819
00757 #define RPC_S_COMM_FAILURE 1820
00758 #define RPC_S_UNSUPPORTED_AUTHN_LEVEL 1821
00759 #define RPC_S_NO_PRINC_NAME 1822
00760 #define RPC_S_NOT_RPC_ERROR 1823
00761 #define RPC_S_UUID_LOCAL_ONLY 1824
00762 #define RPC_S_SEC_PKG_ERROR 1825
00763 #define RPC_S_NOT_CANCELLED 1826
00764 #define RPC_X_INVALID_ES_ACTION 1827
00765 #define RPC_X_WRONG_ES_VERSION 1828
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00766 #define RPC_X_WRONG_STUB_VERSION 1829
00767 #define RPC_X_INVALID_PIPE_OBJECT 1830
00768 #define RPC_X_WRONG_PIPE_ORDER 1831
00769 #define RPC_X_WRONG_PIPE_VERSION 1832
00770 #define RPC_S_GROUP_MEMBER_NOT_FOUND 1898
00771 #define EPT_S_CANT_CREATE 1899
00772 #define RPC_S_INVALID_OBJECT 1900
00773 #define ERROR_INVALID_TIME 1901
00774 #define ERROR_INVALID_FORM_NAME 1902
00775 #define ERROR_INVALID_FORM_SIZE 1903
00776 #define ERROR_ALREADY_WAITING 1904
00777 #define ERROR_PRINTER_DELETED 1905
00778 #define ERROR_INVALID_PRINTER_STATE 1906
00779 #define ERROR_PASSWORD_MUST_CHANGE 1907
00780 #define ERROR_DOMAIN_CONTROLLER_NOT_FOUND 1908
00781 #define ERROR_ACCOUNT_LOCKED_OUT 1909
00782 #define OR_INVALID_OXID 1910
00783 #define OR_INVALID_OID 1911
00784 #define OR_INVALID_SET 1912
00785 #define RPC_S_SEND_INCOMPLETE 1913
00786 #define RPC_S_INVALID_ASYNC_HANDLE 1914
00787 #define RPC_S_INVALID_ASYNC_CALL 1915
00788 #define RPC_X_PIPE_CLOSED 1916
00789 #define RPC_X_PIPE_DISCIPLINE_ERROR 1917
00790 #define RPC_X_PIPE_EMPTY 1918
00791 #define ERROR_NO_SITENAME 1919
00792 #define ERROR_CANT_ACCESS_FILE 1920
00793 #define ERROR_CANT_RESOLVE_FILENAME 1921
00794 #define RPC_S_ENTRY_TYPE_MISMATCH 1922
00795 #define RPC_S_NOT_ALL_OBJS_EXPORTED 1923
00796 #define RPC_S_INTERFACE_NOT_EXPORTED 1924
00797 #define RPC_S_PROFILE_NOT_ADDED 1925
00798 #define RPC_S_PRF_ELT_NOT_ADDED 1926
00799 #define RPC_S_PRF_ELT_NOT_REMOVED 1927
00800 #define RPC_S_GRP_ELT_NOT_ADDED 1928
00801 #define RPC_S_GRP_ELT_NOT_REMOVED 1929
00802 #define ERROR_INVALID_PIXEL_FORMAT 2000
00803 #define ERROR_BAD_DRIVER 2001
00804 #define ERROR_INVALID_WINDOW_STYLE 2002
00805 #define ERROR_METAFILE_NOT_SUPPORTED 2003
00806 #define ERROR_TRANSFORM_NOT_SUPPORTED 2004
00807 #define ERROR_CLIPPING_NOT_SUPPORTED 2005
00808 #define ERROR_INVALID_CMM 2010
00809 #define ERROR_INVALID_PROFILE 2011
00810 #define ERROR_TAG_NOT_FOUND 2012
00811 #define ERROR_TAG_NOT_PRESENT 2013
00812 #define ERROR_DUPLICATE_TAG 2014
00813 #define ERROR_PROFILE_NOT_ASSOCIATED_WITH_DEVICE 2015
00814 #define ERROR_PROFILE_NOT_FOUND 2016
00815 #define ERROR_INVALID_COLORSPACE 2017
00816 #define ERROR_ICM_NOT_ENABLED 2018
00817 #define ERROR_DELETING_ICM_XFORM 2019
00818 #define ERROR_INVALID_TRANSFORM 2020
00819 #define ERROR_COLORSPACE_MISMATCH 2021
00820 #define ERROR_INVALID_COLORINDEX 2022
00821 #define ERROR_CONNECTED_OTHER_PASSWORD 2108
00822 #define ERROR_BAD_USERNAME 2202
00823 #define ERROR_NOT_CONNECTED 2250
00824 #define ERROR_OPEN_FILES 2401
00825 #define ERROR_ACTIVE_CONNECTIONS 2402
00826 #define ERROR_DEVICE_IN_USE 2404
00827 #define ERROR_UNKNOWN_PRINT_MONITOR 3000
00828 #define ERROR_PRINTER_DRIVER_IN_USE 3001
00829 #define ERROR_SPOOL_FILE_NOT_FOUND 3002
00830 #define ERROR_SPL_NO_STARTDOC 3003
00831 #define ERROR_SPL_NO_ADDJOB 3004
00832 #define ERROR_PRINT_PROCESSOR_ALREADY_INSTALLED 3005
00833 #define ERROR_PRINT_MONITOR_ALREADY_INSTALLED 3006
00834 #define ERROR_INVALID_PRINT_MONITOR 3007
00835 #define ERROR_PRINT_MONITOR_IN_USE 3008
00836 #define ERROR_PRINTER_HAS_JOBS_QUEUED 3009
00837 #define ERROR_SUCCESS_REBOOT_REQUIRED 3010
00838 #define ERROR_SUCCESS_RESTART_REQUIRED 3011
00839 #define ERROR_PRINTER_NOT_FOUND 3012
00840 #define ERROR_WINS_INTERNAL 4000
00841 #define ERROR_CAN_NOT_DEL_LOCAL_WINS 4001
00842 #define ERROR_STATIC_INIT 4002
00843 #define ERROR_INC_BACKUP 4003
00844 #define ERROR_FULL_BACKUP 4004
00845 #define ERROR_REC_NON_EXISTENT 4005
00846 #define ERROR_RPL_NOT_ALLOWED 4006
00847 #define ERROR_DHCP_ADDRESS_CONFLICT 4100
00848 #define ERROR_WMI_GUID_NOT_FOUND 4200
00849 #define ERROR_WMI_INSTANCE_NOT_FOUND 4201
00850 #define ERROR_WMI_ITEMID_NOT_FOUND 4202
00851 #define ERROR_WMI_TRY_AGAIN 4203
00852 #define ERROR_WMI_DP_NOT_FOUND 4204
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00853	#define	ERROR_WMI_UNRESOLVED_INSTANCE_REF	4205
00854	#define	ERROR_WMI_ALREADY_ENABLED	4206
00855	#define	ERROR_WMI_GUID_DISCONNECTED	4207
00856	#define	ERROR_WMI_SERVER_UNAVAILABLE	4208
00857	#define	ERROR_WMI_DP_FAILED	4209
00858	#define	ERROR_WMI_INVALID_MOF	4210
00859	#define	ERROR_WMI_INVALID_REGINFO	4211
00860	#define	ERROR_WMI_ALREADY_DISABLED	4212
00861	#define	ERROR_WMI_READ_ONLY	4213
00862	#define	ERROR_WMI_SET_FAILURE	4214
00863	#define	ERROR_INVALID_MEDIA	4300
00864	#define	ERROR_INVALID_LIBRARY	4301
00865	#define	ERROR_INVALID_MEDIA_POOL	4302
00866	#define	ERROR_DRIVE_MEDIA_MISMATCH	4303
00867	#define	ERROR_MEDIA_OFFLINE	4304
00868	#define	ERROR_LIBRARY_OFFLINE	4305
00869	#define	ERROR_EMPTY	4306
00870	#define	ERROR_NOT_EMPTY	4307
00871	#define	ERROR_MEDIA_UNAVAILABLE	4308
00872	#define	ERROR_RESOURCE_DISABLED	4309
00873	#define	ERROR_INVALID_CLEANER	4310
00874	#define	ERROR_UNABLE_TO_CLEAN	4311
00875	#define	ERROR_OBJECT_NOT_FOUND	4312
00876	#define	ERROR_DATABASE_FAILURE	4313
00877	#define	ERROR_DATABASE_FULL	4314
00878	#define	ERROR_MEDIA_INCOMPATIBLE	4315
00879	#define	ERROR_RESOURCE_NOT_PRESENT	4316
00880	#define	ERROR_INVALID_OPERATION	4317
00881	#define	ERROR_MEDIA_NOT_AVAILABLE	4318
00882	#define	ERROR_DEVICE_NOT_AVAILABLE	4319
00883	#define	ERROR_REQUEST_REFUSED	4320
00884	#define	ERROR_INVALID_DRIVE_OBJECT	4321
00885	#define	ERROR_LIBRARY_FULL	4322
00886	#define	ERROR_MEDIUM_NOT_ACCESSIBLE	4323
00887	#define	ERROR_UNABLE_TO_LOAD_MEDIUM	4324
00888	#define	ERROR_UNABLE_TO_INVENTORY_DRIVE	4325
00889	#define	ERROR_UNABLE_TO_INVENTORY_SLOT	4326
00890	#define	ERROR_UNABLE_TO_INVENTORY_TRANSPORT	4327
00891	#define	ERROR_TRANSPORT_FULL	4328
00892	#define	ERROR_CONTROLLING_IEPORT	4329
00893	#define	ERROR_UNABLE_TO_EJECT_MOUNTED_MEDIA	4330
00894	#define	ERROR_CLEANER_SLOT_SET	4331
00895	#define	ERROR_CLEANER_SLOT_NOT_SET	4332
00896	#define	ERROR_CLEANER_CARTRIDGE_SPENT	4333
00897	#define	ERROR_UNEXPECTED_OMID	4334
00898	#define	ERROR_CANT_DELETE_LAST_ITEM	4335
00899	#define	ERROR_MESSAGE_EXCEEDS_MAX_SIZE	4336
00900	#define	ERROR_VOLUME_CONTAINS_SYS_FILES	4337
00901	#define	ERROR_INDIGENOUS_TYPE	4338
00902	#define	ERROR_NO_SUPPORTING_DRIVES	4339
00903	#define	ERROR_FILE_OFFLINE	4350
00904	#define	ERROR_REMOTE_STORAGE_NOT_ACTIVE	4351
00905	#define	ERROR_REMOTE_STORAGE_MEDIA_ERROR	4352
00906	#define	ERROR_NOT_A_REPARSE_POINT	4390
00907	#define	ERROR_REPARSE_ATTRIBUTE_CONFLICT	4391
00908	#define	ERROR_INVALID_REPARSE_DATA	4392
00909	#define	ERROR_REPARSE_TAG_INVALID	4393
00910	#define	ERROR_REPARSE_TAG_MISMATCH	4394
00911	#define	ERROR_VOLUME_NOT_SIS_ENABLED	4500
00912	#define	ERROR_DEPENDENT_RESOURCE_EXISTS	5001
00913	#define	ERROR_DEPENDENCY_NOT_FOUND	5002
00914	#define	ERROR_DEPENDENCY_ALREADY_EXISTS	5003
00915	#define	ERROR_RESOURCE_NOT_ONLINE	5004
00916	#define	ERROR_HOST_NODE_NOT_AVAILABLE	5005
00917	#define	ERROR_RESOURCE_NOT_AVAILABLE	5006
00918	#define	ERROR_RESOURCE_NOT_FOUND	5007
00919	#define	ERROR_SHUTDOWN_CLUSTER	5008
00920	#define	ERROR_CANT_EVICT_ACTIVE_NODE	5009
00921	#define	ERROR_OBJECT_ALREADY_EXISTS	5010
00922	#define	ERROR_OBJECT_IN_LIST	5011
00923	#define	ERROR_GROUP_NOT_AVAILABLE	5012
00924	#define	ERROR_GROUP_NOT_FOUND	5013
00925	#define	ERROR_GROUP_NOT_ONLINE	5014
00926	#define	ERROR_HOST_NODE_NOT_RESOURCE_OWNER	5015
00927	#define	ERROR_HOST_NODE_NOT_GROUP_OWNER	5016
00928	#define	ERROR_RESMON_CREATE_FAILED	5017
00929	#define	ERROR_RESMON_ONLINE_FAILED	5018
00930	#define	ERROR_RESOURCE_ONLINE	5019
00931	#define	ERROR_QUORUM_RESOURCE	5020
00932	#define	ERROR_NOT_QUORUM_CAPABLE	5021
00933	#define	ERROR_CLUSTER_SHUTTING_DOWN	5022
00934	#define	ERROR_INVALID_STATE	5023
00935	#define	ERROR_RESOURCE_PROPERTIES_STORED	5024
00936	#define	ERROR_NOT_QUORUM_CLASS	5025
00937	#define	ERROR_CORE_RESOURCE	5026
00938	#define	ERROR_QUORUM_RESOURCE_ONLINE_FAILED	5027
00939	#define	ERROR_QUORUMLOG_OPEN_FAILED	5028

```
00940 #define ERROR_CLUSTERLOG_CORRUPT 5029
00941 #define ERROR_CLUSTERLOG_RECORD_EXCEEDS_MAXSIZE 5030
00942 #define ERROR_CLUSTERLOG_EXCEEDS_MAXSIZE 5031
00943 #define ERROR_CLUSTERLOG_CHKPOINT_NOT_FOUND 5032
00944 #define ERROR_CLUSTERLOG_NOT_ENOUGH_SPACE 5033
00945 #define ERROR_QUORUM_OWNER_ALIVE 5034
00946 #define ERROR_NETWORK_NOT_AVAILABLE 5035
00947 #define ERROR_NODE_NOT_AVAILABLE 5036
00948 #define ERROR_ALL_NODES_NOT_AVAILABLE 5037
00949 #define ERROR_RESOURCE_FAILED 5038
00950 #define ERROR_CLUSTER_INVALID_NODE 5039
00951 #define ERROR_CLUSTER_NODE_EXISTS 5040
00952 #define ERROR_CLUSTER_JOIN_IN_PROGRESS 5041
00953 #define ERROR_CLUSTER_NODE_NOT_FOUND 5042
00954 #define ERROR_CLUSTER_LOCAL_NODE_NOT_FOUND 5043
00955 #define ERROR_CLUSTER_NETWORK_EXISTS 5044
00956 #define ERROR_CLUSTER_NETWORK_NOT_FOUND 5045
00957 #define ERROR_CLUSTER_NETINTERFACE_EXISTS 5046
00958 #define ERROR_CLUSTER_NETINTERFACE_NOT_FOUND 5047
00959 #define ERROR_CLUSTER_INVALID_REQUEST 5048
00960 #define ERROR_CLUSTER_INVALID_NETWORK_PROVIDER 5049
00961 #define ERROR_CLUSTER_NODE_DOWN 5050
00962 #define ERROR_CLUSTER_NODE_UNREACHABLE 5051
00963 #define ERROR_CLUSTER_NODE_NOT_MEMBER 5052
00964 #define ERROR_CLUSTER_JOIN_NOT_IN_PROGRESS 5053
00965 #define ERROR_CLUSTER_INVALID_NETWORK 5054
00966 #define ERROR_CLUSTER_NODE_UP 5056
00967 #define ERROR_CLUSTER_IPADDR_IN_USE 5057
00968 #define ERROR_CLUSTER_NODE_NOT_PAUSED 5058
00969 #define ERROR_CLUSTER_NO_SECURITY_CONTEXT 5059
00970 #define ERROR_CLUSTER_NETWORK_NOT_INTERNAL 5060
00971 #define ERROR_CLUSTER_NODE_ALREADY_UP 5061
00972 #define ERROR_CLUSTER_NODE_ALREADY_DOWN 5062
00973 #define ERROR_CLUSTER_NETWORK_ALREADY_ONLINE 5063
00974 #define ERROR_CLUSTER_NETWORK_ALREADY_OFFLINE 5064
00975 #define ERROR_CLUSTER_NODE_ALREADY_MEMBER 5065
00976 #define ERROR_CLUSTER_LAST_INTERNAL_NETWORK 5066
00977 #define ERROR_CLUSTER_NETWORK_HAS_DEPENDENTS 5067
00978 #define ERROR_INVALID_OPERATION_ON_QUORUM 5068
00979 #define ERROR_DEPENDENCY_NOT_ALLOWED 5069
00980 #define ERROR_CLUSTER_NODE_PAUSED 5070
00981 #define ERROR_NODE_CANT_HOST_RESOURCE 5071
00982 #define ERROR_CLUSTER_NODE_NOT_READY 5072
00983 #define ERROR_CLUSTER_NODE_SHUTTING_DOWN 5073
00984 #define ERROR_CLUSTER_JOIN_ABORTED 5074
00985 #define ERROR_CLUSTER_INCOMPATIBLE_VERSIONS 5075
00986 #define ERROR_CLUSTER_MAXNUM_OF_RESOURCES_EXCEEDED 5076
00987 #define ERROR_CLUSTER_SYSTEM_CONFIG_CHANGED 5077
00988 #define ERROR_CLUSTER_RESOURCE_TYPE_NOT_FOUND 5078
00989 #define ERROR_CLUSTER_RESTYPE_NOT_SUPPORTED 5079
00990 #define ERROR_CLUSTER_RESNAME_NOT_FOUND 5080
00991 #define ERROR_CLUSTER_NO_RPC_PACKAGES_REGISTERED 5081
00992 #define ERROR_CLUSTER_OWNER_NOT_IN_PREFLIST 5082
00993 #define ERROR_CLUSTER_DATABASE_SEQMISMATCH 5083
00994 #define ERROR_RESMON_INVALID_STATE 5084
00995 #define ERROR_CLUSTER_GUM_NOT_LOCKER 5085
00996 #define ERROR_QUORUM_DISK_NOT_FOUND 5086
00997 #define ERROR_DATABASE_BACKUP_CORRUPT 5087
00998 #define ERROR_CLUSTER_NODE_ALREADY_HAS_DFS_ROOT 5088
00999 #define ERROR_RESOURCE_PROPERTY_UNCHANGEABLE 5089
01000 #define ERROR_ENCRYPTION_FAILED 6000
01001 #define ERROR_DECRYPTION_FAILED 6001
01002 #define ERROR_FILE_ENCRYPTED 6002
01003 #define ERROR_NO_RECOVERY_POLICY 6003
01004 #define ERROR_NO_EFS 6004
01005 #define ERROR_WRONG_EFS 6005
01006 #define ERROR_NO_USER_KEYS 6006
01007 #define ERROR_FILE_NOT_ENCRYPTED 6007
01008 #define ERROR_NOT_EXPORT_FORMAT 6008
01009 #define ERROR_FILE_READ_ONLY 6009
01010 #define ERROR_DIR_EFS_DISALLOWED 6010
01011 #define ERROR_EFS_SERVER_NOT_TRUSTED 6011
01012 #define ERROR_NO_BROWSER_SERVERS_FOUND 6118
01013 #define SCHED_E_SERVICE_NOT_LOCALSYSTEM 6200
01014 #define ERROR_CTX_WINSTATION_NAME_INVALID 7001
01015 #define ERROR_CTX_INVALID_PD 7002
01016 #define ERROR_CTX_PD_NOT_FOUND 7003
01017 #define ERROR_CTX_WD_NOT_FOUND 7004
01018 #define ERROR_CTX_CANNOT_MAKE_EVENTLOG_ENTRY 7005
01019 #define ERROR_CTX_SERVICE_NAME_COLLISION 7006
01020 #define ERROR_CTX_CLOSE_PENDING 7007
01021 #define ERROR_CTX_NO_OUTBUF 7008
01022 #define ERROR_CTX_MODEM_INF_NOT_FOUND 7009
01023 #define ERROR_CTX_INVALID_MODEMNAME 7010
01024 #define ERROR_CTX_MODEM_RESPONSE_ERROR 7011
01025 #define ERROR_CTX_MODEM_RESPONSE_TIMEOUT 7012
01026 #define ERROR_CTX_MODEM_RESPONSE_NO_CARRIER 7013
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01027	#define	ERROR_CTX_MODEM_RESPONSE_NO_DIALTONE	7014
01028	#define	ERROR_CTX_MODEM_RESPONSE_BUSY	7015
01029	#define	ERROR_CTX_MODEM_RESPONSE_VOICE	7016
01030	#define	ERROR_CTX_TD_ERROR	7017
01031	#define	ERROR_CTX_WINSTATION_NOT_FOUND	7022
01032	#define	ERROR_CTX_WINSTATION_ALREADY_EXISTS	7023
01033	#define	ERROR_CTX_WINSTATION_BUSY	7024
01034	#define	ERROR_CTX_BAD_VIDEO_MODE	7025
01035	#define	ERROR_CTX_GRAPHICS_INVALID	7035
01036	#define	ERROR_CTX_LOGON_DISABLED	7037
01037	#define	ERROR_CTX_NOT_CONSOLE	7038
01038	#define	ERROR_CTX_CLIENT_QUERY_TIMEOUT	7040
01039	#define	ERROR_CTX_CONSOLE_DISCONNECT	7041
01040	#define	ERROR_CTX_CONSOLE_CONNECT	7042
01041	#define	ERROR_CTX_SHADOW_DENIED	7044
01042	#define	ERROR_CTX_WINSTATION_ACCESS_DENIED	7045
01043	#define	ERROR_CTX_INVALID_WD	7049
01044	#define	ERROR_CTX_SHADOW_INVALID	7050
01045	#define	ERROR_CTX_SHADOW_DISABLED	7051
01046	#define	ERROR_CTX_CLIENT_LICENSE_IN_USE	7052
01047	#define	ERROR_CTX_CLIENT_LICENSE_NOT_SET	7053
01048	#define	ERROR_CTX_LICENSE_NOT_AVAILABLE	7054
01049	#define	ERROR_CTX_LICENSE_CLIENT_INVALID	7055
01050	#define	ERROR_CTX_LICENSE_EXPIRED	7056
01051	#define	FRS_ERR_INVALID_API_SEQUENCE	8001
01052	#define	FRS_ERR_STARTING_SERVICE	8002
01053	#define	FRS_ERR_STOPPING_SERVICE	8003
01054	#define	FRS_ERR_INTERNAL_API	8004
01055	#define	FRS_ERR_INTERNAL	8005
01056	#define	FRS_ERR_SERVICE_COMM	8006
01057	#define	FRS_ERR_INSUFFICIENT_PRIV	8007
01058	#define	FRS_ERR_AUTHENTICATION	8008
01059	#define	FRS_ERR_PARENT_INSUFFICIENT_PRIV	8009
01060	#define	FRS_ERR_PARENT_AUTHENTICATION	8010
01061	#define	FRS_ERR_CHILD_TO_PARENT_COMM	8011
01062	#define	FRS_ERR_PARENT_TO_CHILD_COMM	8012
01063	#define	FRS_ERR_SYSVOL_POPULATE	8013
01064	#define	FRS_ERR_SYSVOL_POPULATE_TIMEOUT	8014
01065	#define	FRS_ERR_SYSVOL_IS_BUSY	8015
01066	#define	FRS_ERR_SYSVOL_DEMOTE	8016
01067	#define	FRS_ERR_INVALID_SERVICE_PARAMETER	8017
01068	#define	ERROR_DS_NOT_INSTALLED	8200
01069	#define	ERROR_DS_MEMBERSHIP_EVALUATED_LOCALLY	8201
01070	#define	ERROR_DS_NO_ATTRIBUTE_OR_VALUE	8202
01071	#define	ERROR_DS_INVALID_ATTRIBUTE_SYNTAX	8203
01072	#define	ERROR_DS_ATTRIBUTE_TYPE_UNDEFINED	8204
01073	#define	ERROR_DS_ATTRIBUTE_OR_VALUE_EXISTS	8205
01074	#define	ERROR_DS_BUSY	8206
01075	#define	ERROR_DS_UNAVAILABLE	8207
01076	#define	ERROR_DS_NO_RIDS_ALLOCATED	8208
01077	#define	ERROR_DS_NO_MORE_RIDS	8209
01078	#define	ERROR_DS_INCORRECT_ROLE_OWNER	8210
01079	#define	ERROR_DS_RIDMGR_INIT_ERROR	8211
01080	#define	ERROR_DS_OBJ_CLASS_VIOLATION	8212
01081	#define	ERROR_DS_CANT_ON_NON_LEAF	8213
01082	#define	ERROR_DS_CANT_ON_RDN	8214
01083	#define	ERROR_DS_CANT_MOD_OBJ_CLASS	8215
01084	#define	ERROR_DS_CROSS_DOM_MOVE_ERROR	8216
01085	#define	ERROR_DS_GC_NOT_AVAILABLE	8217
01086	#define	ERROR_SHARED_POLICY	8218
01087	#define	ERROR_POLICY_OBJECT_NOT_FOUND	8219
01088	#define	ERROR_POLICY_ONLY_IN_DS	8220
01089	#define	ERROR_PROMOTION_ACTIVE	8221
01090	#define	ERROR_NO_PROMOTION_ACTIVE	8222
01091	#define	ERROR_DS_OPERATIONS_ERROR	8224
01092	#define	ERROR_DS_PROTOCOL_ERROR	8225
01093	#define	ERROR_DS_TIMELIMIT_EXCEEDED	8226
01094	#define	ERROR_DS_SIZELIMIT_EXCEEDED	8227
01095	#define	ERROR_DS_ADMIN_LIMIT_EXCEEDED	8228
01096	#define	ERROR_DS_COMPARE_FALSE	8229
01097	#define	ERROR_DS_COMPARE_TRUE	8230
01098	#define	ERROR_DS_AUTH_METHOD_NOT_SUPPORTED	8231
01099	#define	ERROR_DS_STRONG_AUTH_REQUIRED	8232
01100	#define	ERROR_DS_INAPPROPRIATE_AUTH	8233
01101	#define	ERROR_DS_AUTH_UNKNOWN	8234
01102	#define	ERROR_DS_REFERRAL	8235
01103	#define	ERROR_DS_UNAVAILABLE_CRIT_EXTENSION	8236
01104	#define	ERROR_DS_CONFIDENTIALITY_REQUIRED	8237
01105	#define	ERROR_DS_INAPPROPRIATE_MATCHING	8238
01106	#define	ERROR_DS_CONSTRAINT_VIOLATION	8239
01107	#define	ERROR_DS_NO_SUCH_OBJECT	8240
01108	#define	ERROR_DS_ALIAS_PROBLEM	8241
01109	#define	ERROR_DS_INVALID_DN_SYNTAX	8242
01110	#define	ERROR_DS_IS_LEAF	8243
01111	#define	ERROR_DS_ALIAS_DEREF_PROBLEM	8244
01112	#define	ERROR_DS_UNWILLING_TO_PERFORM	8245
01113	#define	ERROR_DS_LOOP_DETECT	8246

```
01114 #define ERROR_DS_NAMING_VIOLATION 8247
01115 #define ERROR_DS_OBJECT_RESULTS_TOO_LARGE 8248
01116 #define ERROR_DS_AFFECTS_MULTIPLE_DSAS 8249
01117 #define ERROR_DS_SERVER_DOWN 8250
01118 #define ERROR_DS_LOCAL_ERROR 8251
01119 #define ERROR_DS_ENCODING_ERROR 8252
01120 #define ERROR_DS_DECODING_ERROR 8253
01121 #define ERROR_DS_FILTER_UNKNOWN 8254
01122 #define ERROR_DS_PARAM_ERROR 8255
01123 #define ERROR_DS_NOT_SUPPORTED 8256
01124 #define ERROR_DS_NO_RESULTS_RETURNED 8257
01125 #define ERROR_DS_CONTROL_NOT_FOUND 8258
01126 #define ERROR_DS_CLIENT_LOOP 8259
01127 #define ERROR_DS_REFERRAL_LIMIT_EXCEEDED 8260
01128 #define ERROR_DS_ROOT_MUST_BE_NC 8301
01129 #define ERROR_DS_ADD_REPLICA_INHIBITED 8302
01130 #define ERROR_DS_ATT_NOT_DEF_IN_SCHEMA 8303
01131 #define ERROR_DS_MAX_OBJ_SIZE_EXCEEDED 8304
01132 #define ERROR_DS_OBJ_STRING_NAME_EXISTS 8305
01133 #define ERROR_DS_NO_RDN_DEFINED_IN_SCHEMA 8306
01134 #define ERROR_DS_RDN_DOESNT_MATCH_SCHEMA 8307
01135 #define ERROR_DS_NO_REQUESTED_ATTRS_FOUND 8308
01136 #define ERROR_DS_USER_BUFFER_TO_SMALL 8309
01137 #define ERROR_DS_ATT_IS_NOT_ON_OBJ 8310
01138 #define ERROR_DS_ILLEGAL_MOD_OPERATION 8311
01139 #define ERROR_DS_OBJ_TOO_LARGE 8312
01140 #define ERROR_DS_BAD_INSTANCE_TYPE 8313
01141 #define ERROR_DS_MASTERDSA_REQUIRED 8314
01142 #define ERROR_DS_OBJECT_CLASS_REQUIRED 8315
01143 #define ERROR_DS_MISSING_REQUIRED_ATT 8316
01144 #define ERROR_DS_ATT_NOT_DEF_FOR_CLASS 8317
01145 #define ERROR_DS_ATT_ALREADY_EXISTS 8318
01146 #define ERROR_DS_CANT_ADD_ATT_VALUES 8320
01147 #define ERROR_DS_SINGLE_VALUE_CONSTRAINT 8321
01148 #define ERROR_DS_RANGE_CONSTRAINT 8322
01149 #define ERROR_DS_ATT_VAL_ALREADY_EXISTS 8323
01150 #define ERROR_DS_CANT_REM_MISSING_ATT 8324
01151 #define ERROR_DS_CANT_REM_MISSING_ATT_VAL 8325
01152 #define ERROR_DS_ROOT_CANT_BE_SUBREF 8326
01153 #define ERROR_DS_NO_CHAINING 8327
01154 #define ERROR_DS_NO_CHAINED_EVAL 8328
01155 #define ERROR_DS_NO_PARENT_OBJECT 8329
01156 #define ERROR_DS_PARENT_IS_AN_ALIAS 8330
01157 #define ERROR_DS_CANT_MIX_MASTER_AND_REPS 8331
01158 #define ERROR_DS_CHILDREN_EXIST 8332
01159 #define ERROR_DS_OBJ_NOT_FOUND 8333
01160 #define ERROR_DS_ALIASSED_OBJ_MISSING 8334
01161 #define ERROR_DS_BAD_NAME_SYNTAX 8335
01162 #define ERROR_DS_ALIAS_POINTS_TO_ALIAS 8336
01163 #define ERROR_DS_CANT_DEREF_ALIAS 8337
01164 #define ERROR_DS_OUT_OF_SCOPE 8338
01165 #define ERROR_DS_CANT_DELETE_DSA_OBJ 8340
01166 #define ERROR_DS_GENERIC_ERROR 8341
01167 #define ERROR_DS_DSA_MUST_BE_INT_MASTER 8342
01168 #define ERROR_DS_CLASS_NOT_DSA 8343
01169 #define ERROR_DS_INSUFF_ACCESS_RIGHTS 8344
01170 #define ERROR_DS_ILLEGAL_SUPERIOR 8345
01171 #define ERROR_DS_ATTRIBUTE_OWNED_BY_SAM 8346
01172 #define ERROR_DS_NAME_TOO_MANY_PARTS 8347
01173 #define ERROR_DS_NAME_TOO_LONG 8348
01174 #define ERROR_DS_NAME_VALUE_TOO_LONG 8349
01175 #define ERROR_DS_NAME_UNPARSEABLE 8350
01176 #define ERROR_DS_NAME_TYPE_UNKNOWN 8351
01177 #define ERROR_DS_NOT_AN_OBJECT 8352
01178 #define ERROR_DS_SEC_DESC_TOO_SHORT 8353
01179 #define ERROR_DS_SEC_DESC_INVALID 8354
01180 #define ERROR_DS_NO_DELETED_NAME 8355
01181 #define ERROR_DS_SUBREF_MUST_HAVE_PARENT 8356
01182 #define ERROR_DS_NCNAME_MUST_BE_NC 8357
01183 #define ERROR_DS_CANT_ADD_SYSTEM_ONLY 8358
01184 #define ERROR_DS_CLASS_MUST_BE_CONCRETE 8359
01185 #define ERROR_DS_INVALID_DMD 8360
01186 #define ERROR_DS_OBJ_GUID_EXISTS 8361
01187 #define ERROR_DS_NOT_ON_BACKLINK 8362
01188 #define ERROR_DS_NO_CROSSREF_FOR_NC 8363
01189 #define ERROR_DS_SHUTTING_DOWN 8364
01190 #define ERROR_DS_UNKNOWN_OPERATION 8365
01191 #define ERROR_DS_INVALID_ROLE_OWNER 8366
01192 #define ERROR_DS_COULDNT_CONTACT_FSMO 8367
01193 #define ERROR_DS_CROSS_NC_DN_RENAME 8368
01194 #define ERROR_DS_CANT_MOD_SYSTEM_ONLY 8369
01195 #define ERROR_DS_REPLICATOR_ONLY 8370
01196 #define ERROR_DS_OBJ_CLASS_NOT_DEFINED 8371
01197 #define ERROR_DS_OBJ_CLASS_NOT_SUBCLASS 8372
01198 #define ERROR_DS_NAME_REFERENCE_INVALID 8373
01199 #define ERROR_DS_CROSS_REF_EXISTS 8374
01200 #define ERROR_DS_CANT_DEL_MASTER_CROSSREF 8375
```

01201	#define	ERROR_DS_SUBTREE_NOTIFY_NOT_NC_HEAD	8376
01202	#define	ERROR_DS_NOTIFY_FILTER_TOO_COMPLEX	8377
01203	#define	ERROR_DS_DUP_RDN	8378
01204	#define	ERROR_DS_DUP_OID	8379
01205	#define	ERROR_DS_DUP_MAPI_ID	8380
01206	#define	ERROR_DS_DUP_SCHEMA_ID_GUID	8381
01207	#define	ERROR_DS_DUP_LDAP_DISPLAY_NAME	8382
01208	#define	ERROR_DS_SEMANTIC_ATT_TEST	8383
01209	#define	ERROR_DS_SYNTAX_MISMATCH	8384
01210	#define	ERROR_DS_EXISTS_IN_MUST_HAVE	8385
01211	#define	ERROR_DS_EXISTS_IN_MAY_HAVE	8386
01212	#define	ERROR_DS_NONEXISTENT_MAY_HAVE	8387
01213	#define	ERROR_DS_NONEXISTENT_MUST_HAVE	8388
01214	#define	ERROR_DS_AUX_CLS_TEST_FAIL	8389
01215	#define	ERROR_DS_NONEXISTENT_POSS_SUP	8390
01216	#define	ERROR_DS_SUB_CLS_TEST_FAIL	8391
01217	#define	ERROR_DS_BAD_RDN_ATT_ID_SYNTAX	8392
01218	#define	ERROR_DS_EXISTS_IN_AUX_CLS	8393
01219	#define	ERROR_DS_EXISTS_IN_SUB_CLS	8394
01220	#define	ERROR_DS_EXISTS_IN_POSS_SUP	8395
01221	#define	ERROR_DS_RECALCSHEMA_FAILED	8396
01222	#define	ERROR_DS_TREE_DELETE_NOT_FINISHED	8397
01223	#define	ERROR_DS_CANT_DELETE	8398
01224	#define	ERROR_DS_ATT_SCHEMA_REQ_ID	8399
01225	#define	ERROR_DS_BAD_ATT_SCHEMA_SYNTAX	8400
01226	#define	ERROR_DS_CANT_CACHE_ATT	8401
01227	#define	ERROR_DS_CANT_CACHE_CLASS	8402
01228	#define	ERROR_DS_CANT_REMOVE_ATT_CACHE	8403
01229	#define	ERROR_DS_CANT_REMOVE_CLASS_CACHE	8404
01230	#define	ERROR_DS_CANT_RETRIEVE_DN	8405
01231	#define	ERROR_DS_MISSING_SUPREF	8406
01232	#define	ERROR_DS_CANT_RETRIEVE_INSTANCE	8407
01233	#define	ERROR_DS_CODE_INCONSISTENCY	8408
01234	#define	ERROR_DS_DATABASE_ERROR	8409
01235	#define	ERROR_DS_GOVERNSID_MISSING	8410
01236	#define	ERROR_DS_MISSING_EXPECTED_ATT	8411
01237	#define	ERROR_DS_NCNAME_MISSING_CR_REF	8412
01238	#define	ERROR_DS_SECURITY_CHECKING_ERROR	8413
01239	#define	ERROR_DS_SCHEMA_NOT_LOADED	8414
01240	#define	ERROR_DS_SCHEMA_ALLOC_FAILED	8415
01241	#define	ERROR_DS_ATT_SCHEMA_REQ_SYNTAX	8416
01242	#define	ERROR_DS_GCVERIFY_ERROR	8417
01243	#define	ERROR_DS_DRA_SCHEMA_MISMATCH	8418
01244	#define	ERROR_DS_CANT_FIND_DSA_OBJ	8419
01245	#define	ERROR_DS_CANT_FIND_EXPECTED_NC	8420
01246	#define	ERROR_DS_CANT_FIND_NC_IN_CACHE	8421
01247	#define	ERROR_DS_CANT_RETRIEVE_CHILD	8422
01248	#define	ERROR_DS_SECURITY_ILLEGAL_MODIFY	8423
01249	#define	ERROR_DS_CANT_REPLACE_HIDDEN_REC	8424
01250	#define	ERROR_DS_BAD_HIERARCHY_FILE	8425
01251	#define	ERROR_DS_BUILD_HIERARCHY_TABLE_FAILED	8426
01252	#define	ERROR_DS_CONFIG_PARAM_MISSING	8427
01253	#define	ERROR_DS_COUNTING_AB_INDICES_FAILED	8428
01254	#define	ERROR_DS_HIERARCHY_TABLE_MALLOC_FAILED	8429
01255	#define	ERROR_DS_INTERNAL_FAILURE	8430
01256	#define	ERROR_DS_UNKNOWN_ERROR	8431
01257	#define	ERROR_DS_ROOT_REQUIRES_CLASS_TOP	8432
01258	#define	ERROR_DS_REFUSING_FSMO_ROLES	8433
01259	#define	ERROR_DS_MISSING_FSMO_SETTINGS	8434
01260	#define	ERROR_DS_UNABLE_TO_SURRENDER_ROLES	8435
01261	#define	ERROR_DS_DRA_GENERIC	8436
01262	#define	ERROR_DS_DRA_INVALID_PARAMETER	8437
01263	#define	ERROR_DS_DRA_BUSY	8438
01264	#define	ERROR_DS_DRA_BAD_DN	8439
01265	#define	ERROR_DS_DRA_BAD_NC	8440
01266	#define	ERROR_DS_DRA_DN_EXISTS	8441
01267	#define	ERROR_DS_DRA_INTERNAL_ERROR	8442
01268	#define	ERROR_DS_DRA_INCONSISTENT_DIT	8443
01269	#define	ERROR_DS_DRA_CONNECTION_FAILED	8444
01270	#define	ERROR_DS_DRA_BAD_INSTANCE_TYPE	8445
01271	#define	ERROR_DS_DRA_OUT_OF_MEM	8446
01272	#define	ERROR_DS_DRA_MAIL_PROBLEM	8447
01273	#define	ERROR_DS_DRA_REF_ALREADY_EXISTS	8448
01274	#define	ERROR_DS_DRA_REF_NOT_FOUND	8449
01275	#define	ERROR_DS_DRA_OBJ_IS_REP_SOURCE	8450
01276	#define	ERROR_DS_DRA_DB_ERROR	8451
01277	#define	ERROR_DS_DRA_NO_REPLICA	8452
01278	#define	ERROR_DS_DRA_ACCESS_DENIED	8453
01279	#define	ERROR_DS_DRA_NOT_SUPPORTED	8454
01280	#define	ERROR_DS_DRA_RPC_CANCELLED	8455
01281	#define	ERROR_DS_DRA_SOURCE_DISABLED	8456
01282	#define	ERROR_DS_DRA_SINK_DISABLED	8457
01283	#define	ERROR_DS_DRA_NAME_COLLISION	8458
01284	#define	ERROR_DS_DRA_SOURCE_REINSTALLED	8459
01285	#define	ERROR_DS_DRA_MISSING_PARENT	8460
01286	#define	ERROR_DS_DRA_PREEMPTED	8461
01287	#define	ERROR_DS_DRA_ABANDON_SYNC	8462

```
01288 #define ERROR_DS_DRA_SHUTDOWN 8463
01289 #define ERROR_DS_DRA_INCOMPATIBLE_PARTIAL_SET 8464
01290 #define ERROR_DS_DRA_SOURCE_IS_PARTIAL_REPLICA 8465
01291 #define ERROR_DS_DRA_EXTN_CONNECTION_FAILED 8466
01292 #define ERROR_DS_INSTALL_SCHEMA_MISMATCH 8467
01293 #define ERROR_DS_DUP_LINK_ID 8468
01294 #define ERROR_DS_NAME_ERROR_RESOLVING 8469
01295 #define ERROR_DS_NAME_ERROR_NOT_FOUND 8470
01296 #define ERROR_DS_NAME_ERROR_NOT_UNIQUE 8471
01297 #define ERROR_DS_NAME_ERROR_NO_MAPPING 8472
01298 #define ERROR_DS_NAME_ERROR_DOMAIN_ONLY 8473
01299 #define ERROR_DS_NAME_ERROR_NO_SYNTACTICAL_MAPPING 8474
01300 #define ERROR_DS_CONSTRUCTED_ATT_MOD 8475
01301 #define ERROR_DS_WRONG_OM_OBJ_CLASS 8476
01302 #define ERROR_DS_DRA_REPL_PENDING 8477
01303 #define ERROR_DS_DS_REQUIRED 8478
01304 #define ERROR_DS_INVALID_LDAP_DISPLAY_NAME 8479
01305 #define ERROR_DS_NON_BASE_SEARCH 8480
01306 #define ERROR_DS_CANT_RETRIEVE_ATTS 8481
01307 #define ERROR_DS_BACKLINK_WITHOUT_LINK 8482
01308 #define ERROR_DS_EPOCH_MISMATCH 8483
01309 #define ERROR_DS_SRC_NAME_MISMATCH 8484
01310 #define ERROR_DS_SRC_AND_DST_NC_IDENTICAL 8485
01311 #define ERROR_DS_DST_NC_MISMATCH 8486
01312 #define ERROR_DS_NOT_AUTHORITIVE_FOR_DST_NC 8487
01313 #define ERROR_DS_SRC_GUID_MISMATCH 8488
01314 #define ERROR_DS_CANT_MOVE_DELETED_OBJECT 8489
01315 #define ERROR_DS_PDC_OPERATION_IN_PROGRESS 8490
01316 #define ERROR_DS_CROSS_DOMAIN_CLEANUP_REQD 8491
01317 #define ERROR_DS_ILLEGAL_XDOM_MOVE_OPERATION 8492
01318 #define ERROR_DS_CANT_WITH_ACCT_GROUP_MEMBERSHPS 8493
01319 #define ERROR_DS_NC_MUST_HAVE_NC_PARENT 8494
01320 #define ERROR_DS_CR_IMPOSSIBLE_TO_VALIDATE 8495
01321 #define ERROR_DS_DST_DOMAIN_NOT_NATIVE 8496
01322 #define ERROR_DS_MISSING_INFRASTRUCTURE_CONTAINER 8497
01323 #define ERROR_DS_CANT_MOVE_ACCOUNT_GROUP 8498
01324 #define ERROR_DS_CANT_MOVE_RESOURCE_GROUP 8499
01325 #define ERROR_DS_INVALID_SEARCH_FLAG 8500
01326 #define ERROR_DS_NO_TREE_DELETE_ABOVE_NC 8501
01327 #define ERROR_DS_COULDNT_LOCK_TREE_FOR_DELETE 8502
01328 #define ERROR_DS_COULDNT_IDENTIFY_OBJECTS_FOR_TREE_DELETE 8503
01329 #define ERROR_DS_SAM_INIT_FAILURE 8504
01330 #define ERROR_DS_SENSITIVE_GROUP_VIOLATION 8505
01331 #define ERROR_DS_CANT_MOD_PRIMARYGROUPID 8506
01332 #define ERROR_DS_ILLEGAL_BASE_SCHEMA_MOD 8507
01333 #define ERROR_DS_NONSAFE_SCHEMA_CHANGE 8508
01334 #define ERROR_DS_SCHEMA_UPDATE_DISALLOWED 8509
01335 #define ERROR_DS_CANT_CREATE_UNDER_SCHEMA 8510
01336 #define ERROR_DS_INSTALL_NO_SRC_SCH_VERSION 8511
01337 #define ERROR_DS_INSTALL_NO_SCH_VERSION_IN_INIFILE 8512
01338 #define ERROR_DS_INVALID_GROUP_TYPE 8513
01339 #define ERROR_DS_NO_NEST_GLOBALGROUP_IN_MIXEDDOMAIN 8514
01340 #define ERROR_DS_NO_NEST_LOCALGROUP_IN_MIXEDDOMAIN 8515
01341 #define ERROR_DS_GLOBAL_CANT_HAVE_LOCAL_MEMBER 8516
01342 #define ERROR_DS_GLOBAL_CANT_HAVE_UNIVERSAL_MEMBER 8517
01343 #define ERROR_DS_UNIVERSAL_CANT_HAVE_LOCAL_MEMBER 8518
01344 #define ERROR_DS_GLOBAL_CANT_HAVE_CROSSDOMAIN_MEMBER 8519
01345 #define ERROR_DS_LOCAL_CANT_HAVE_CROSSDOMAIN_LOCAL_MEMBER 8520
01346 #define ERROR_DS_HAVE_PRIMARY_MEMBERS 8521
01347 #define ERROR_DS_STRING_SD_CONVERSION_FAILED 8522
01348 #define ERROR_DS_NAMING_MASTER_GC 8523
01349 #define ERROR_DS_LOOKUP_FAILURE 8524
01350 #define ERROR_DS_COULDNT_UPDATE_SPNS 8525
01351 #define ERROR_DS_CANT_RETRIEVE_SD 8526
01352 #define ERROR_DS_KEY_NOT_UNIQUE 8527
01353 #define ERROR_DS_WRONG_LINKED_ATT_SYNTAX 8528
01354 #define ERROR_DS_SAM_NEED_BOOTKEY_PASSWORD 8529
01355 #define ERROR_DS_SAM_NEED_BOOTKEY_FLOPPY 8530
01356 #define ERROR_DS_CANT_START 8531
01357 #define ERROR_DS_INIT_FAILURE 8532
01358 #define ERROR_DS_NO_PKT_PRIVACY_ON_CONNECTION 8533
01359 #define ERROR_DS_SOURCE_DOMAIN_IN_FOREST 8534
01360 #define ERROR_DS_DESTINATION_DOMAIN_NOT_IN_FOREST 8535
01361 #define ERROR_DS_DESTINATION_AUDITING_NOT_ENABLED 8536
01362 #define ERROR_DS_CANT_FIND_DC_FOR_SRC_DOMAIN 8537
01363 #define ERROR_DS_SRC_OBJ_NOT_GROUP_OR_USER 8538
01364 #define ERROR_DS_SRC_SID_EXISTS_IN_FOREST 8539
01365 #define ERROR_DS_SRC_AND_DST_OBJECT_CLASS_MISMATCH 8540
01366 #define ERROR_DS_SAM_INIT_FAILURE 8541
01367 #define ERROR_DS_DRA_SCHEMA_INFO_SHIP 8542
01368 #define ERROR_DS_DRA_SCHEMA_CONFLICT 8543
01369 #define ERROR_DS_DRA_EARLIER_SCHEMA_CONFLICT 8544
01370 #define ERROR_DS_DRA_OBJ_NC_MISMATCH 8545
01371 #define ERROR_DS_NC_STILL_HAS_DSAS 8546
01372 #define ERROR_DS_GC_REQUIRED 8547
01373 #define ERROR_DS_LOCAL_MEMBER_OF_LOCAL_ONLY 8548
01374 #define ERROR_DS_NO_FPO_IN_UNIVERSAL_GROUPS 8549
```

```
01375 #define ERROR_DS_CANT_ADD_TO_GC 8550
01376 #define ERROR_DS_NO_CHECKPOINT_WITH_PDC 8551
01377 #define ERROR_DS_SOURCE_AUDITING_NOT_ENABLED 8552
01378 #define ERROR_DS_CANT_CREATE_IN_NONDOMAIN_NC 8553
01379 #define ERROR_DS_INVALID_NAME_FOR_SPN 8554
01380 #define ERROR_DS_FILTER_USES_CONSTRUCTED_ATTRS 8555
01381 #define ERROR_DS_UNICODEPWD_NOT_IN_QUOTES 8556
01382 #define ERROR_DS_MACHINE_ACCOUNT_QUOTA_EXCEEDED 8557
01383 #define ERROR_DS_MUST_BE_RUN_ON_DST_DC 8558
01384 #define ERROR_DS_SRC_DC_MUST_BE_SP4_OR_GREATER 8559
01385 #define ERROR_DS_CANT_TREE_DELETE_CRITICAL_OBJ 8560
01386 #define DNS_ERROR_RCODE_FORMAT_ERROR 9001
01387 #define DNS_ERROR_RCODE_SERVER_FAILURE 9002
01388 #define DNS_ERROR_RCODE_NAME_ERROR 9003
01389 #define DNS_ERROR_RCODE_NOT_IMPLEMENTED 9004
01390 #define DNS_ERROR_RCODE_REFUSED 9005
01391 #define DNS_ERROR_RCODE_YXDOMAIN 9006
01392 #define DNS_ERROR_RCODE_YXRRSET 9007
01393 #define DNS_ERROR_RCODE_NXRRSET 9008
01394 #define DNS_ERROR_RCODE_NOTAUTH 9009
01395 #define DNS_ERROR_RCODE_NOTZONE 9010
01396 #define DNS_ERROR_RCODE_BADSIG 9016
01397 #define DNS_ERROR_RCODE_BADKEY 9017
01398 #define DNS_ERROR_RCODE_BADTIME 9018
01399 #define DNS_INFO_NO_RECORDS 9501
01400 #define DNS_ERROR_BAD_PACKET 9502
01401 #define DNS_ERROR_NO_PACKET 9503
01402 #define DNS_ERROR_RCODE 9504
01403 #define DNS_ERROR_UNSECURE_PACKET 9505
01404 #define DNS_ERROR_INVALID_TYPE 9551
01405 #define DNS_ERROR_INVALID_IP_ADDRESS 9552
01406 #define DNS_ERROR_INVALID_PROPERTY 9553
01407 #define DNS_ERROR_TRY_AGAIN_LATER 9554
01408 #define DNS_ERROR_NOT_UNIQUE 9555
01409 #define DNS_ERROR_NON_RFC_NAME 9556
01410 #define DNS_STATUS_FQDN 9557
01411 #define DNS_STATUS_DOTTED_NAME 9558
01412 #define DNS_STATUS_SINGLE_PART_NAME 9559
01413 #define DNS_ERROR_INVALID_NAME_CHAR 9560
01414 #define DNS_ERROR_NUMERIC_NAME 9561
01415 #define DNS_ERROR_ZONE_DOES_NOT_EXIST 9601
01416 #define DNS_ERROR_NO_ZONE_INFO 9602
01417 #define DNS_ERROR_INVALID_ZONE_OPERATION 9603
01418 #define DNS_ERROR_ZONE_CONFIGURATION_ERROR 9604
01419 #define DNS_ERROR_ZONE_HAS_NO_SOA_RECORD 9605
01420 #define DNS_ERROR_ZONE_HAS_NO_NS_RECORDS 9606
01421 #define DNS_ERROR_ZONE_LOCKED 9607
01422 #define DNS_ERROR_ZONE_CREATION_FAILED 9608
01423 #define DNS_ERROR_ZONE_ALREADY_EXISTS 9609
01424 #define DNS_ERROR_AUTOZONE_ALREADY_EXISTS 9610
01425 #define DNS_ERROR_INVALID_ZONE_TYPE 9611
01426 #define DNS_ERROR_SECONDARY_REQUIRES_MASTER_IP 9612
01427 #define DNS_ERROR_ZONE_NOT_SECONDARY 9613
01428 #define DNS_ERROR_NEED_SECONDARY_ADDRESSES 9614
01429 #define DNS_ERROR_WINS_INIT_FAILED 9615
01430 #define DNS_ERROR_NEED_WINS_SERVERS 9616
01431 #define DNS_ERROR_NBSTAT_INIT_FAILED 9617
01432 #define DNS_ERROR_SOA_DELETE_INVALID 9618
01433 #define DNS_ERROR_PRIMARY_REQUIRES_DATAFILE 9651
01434 #define DNS_ERROR_INVALID_DATAFILE_NAME 9652
01435 #define DNS_ERROR_DATAFILE_OPEN_FAILURE 9653
01436 #define DNS_ERROR_FILE_WRITEBACK_FAILED 9654
01437 #define DNS_ERROR_DATAFILE_PARSING 9655
01438 #define DNS_ERROR_RECORD_DOES_NOT_EXIST 9701
01439 #define DNS_ERROR_RECORD_FORMAT 9702
01440 #define DNS_ERROR_NODE_CREATION_FAILED 9703
01441 #define DNS_ERROR_UNKNOWN_RECORD_TYPE 9704
01442 #define DNS_ERROR_RECORD_TIMED_OUT 9705
01443 #define DNS_ERROR_NAME_NOT_IN_ZONE 9706
01444 #define DNS_ERROR_CNAME_LOOP 9707
01445 #define DNS_ERROR_NODE_IS_CNAME 9708
01446 #define DNS_ERROR_CNAME_COLLISION 9709
01447 #define DNS_ERROR_RECORD_ONLY_AT_ZONE_ROOT 9710
01448 #define DNS_ERROR_RECORD_ALREADY_EXISTS 9711
01449 #define DNS_ERROR_SECONDARY_DATA 9712
01450 #define DNS_ERROR_NO_CREATE_CACHE_DATA 9713
01451 #define DNS_ERROR_NAME_DOES_NOT_EXIST 9714
01452 #define DNS_WARNING_PTR_CREATE_FAILED 9715
01453 #define DNS_WARNING_DOMAIN_UNDELETED 9716
01454 #define DNS_ERROR_DS_UNAVAILABLE 9717
01455 #define DNS_ERROR_DS_ZONE_ALREADY_EXISTS 9718
01456 #define DNS_ERROR_NO_BOOTFILE_IF_DS_ZONE 9719
01457 #define DNS_INFO_AXFR_COMPLETE 9751
01458 #define DNS_ERROR_AXFR 9752
01459 #define DNS_INFO_ADDED_LOCAL_WINS 9753
01460 #define DNS_STATUS_CONTINUE_NEEDED 9801
01461 #define DNS_ERROR_NO_TCPIP 9851
```

```
01462 #define DNS_ERROR_NO_DNS_SERVERS 9852
01463
01464 /* HRESULT values for OLE, SHELL and other Interface stuff */
01465 /* the codes 4000-40ff are reserved for OLE */
01466 #define NOERROR 0L
01467 #define S_OK ((HRESULT)0L)
01468 #define S_FALSE ((HRESULT)1L)
01469
01470 #define E_PENDING 0x8000000AL
01471
01472
01473 #define E_NOTIMPL 0x80004001L
01474 #define E_NOINTERFACE 0x80004002L
01475 #define E_POINTER 0x80004003L
01476 #define E_ABORT 0x80004004L
01477 #define E_FAIL 0x80004005L
01478 /* FIXME: E_UNSPEC is not a standard value but it is used by
01479  * FileMoniker, IOleLink and DoDragDrop as a return value.
01480  */
01481 #define E_UNSPEC E_FAIL
01482
01483
01484 #define CO_E_INIT_TLS 0x80004006L
01485 #define CO_E_INIT_SHARED_ALLOCATOR 0x80004007L
01486 #define CO_E_INIT_MEMORY_ALLOCATOR 0x80004008L
01487 #define CO_E_INIT_CLASS_CACHE 0x80004009L
01488 #define CO_E_INIT_RPC_CHANNEL 0x8000400AL
01489 #define CO_E_INIT_TLS_SET_CHANNEL_CONTROL 0x8000400BL
01490 #define CO_E_INIT_TLS_CHANNEL_CONTROL 0x8000400CL
01491 #define CO_E_INIT_UNACCEPTED_USER_ALLOCATOR 0x8000400DL
01492 #define CO_E_INIT_SCM_MUTEX_EXISTS 0x8000400EL
01493 #define CO_E_INIT_SCM_FILE_MAPPING_EXISTS 0x8000400FL
01494 #define CO_E_INIT_SCM_MAP_VIEW_OF_FILE 0x80004010L
01495 #define CO_E_INIT_SCM_EXEC_FAILURE 0x80004011L
01496 #define CO_E_INIT_ONLY_SINGLE_THREADED 0x80004012L
01497
01498 #define E_UNEXPECTED 0x8000FFFFL
01499
01500 #define RPC_E_CALL_REJECTED 0x80010001L
01501 #define RPC_E_CALL_CANCELED 0x80010002L
01502 #define RPC_E_CANTPOST_INSENCALL 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
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_UNSUPPORTED 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_SIZE_TOO_BIG 0x800288C5L
01588 #define TYPE_E_DUPLICATEID 0x800288C6L
01589 #define TYPE_E_INVALIDID 0x800288CFL
01590 #define TYPE_E_TYPEMISMATCH 0x80028CA0L
01591 #define TYPE_E_OUTOFBOUNDS 0x80028CA1L
01592 #define TYPE_E_IOERROR 0x80028CA2L
01593 #define TYPE_E_CANTCREATETMPFILE 0x80028CA3L
01594 #define TYPE_E_CANTLOADLIBRARY 0x80029C4AL
01595 #define TYPE_E_INCONSISTENTPROPFUNCS 0x80029C83L
01596 #define TYPE_E_CIRCULARTYPE 0x80029C84L
01597
01598 #define STG_S_CONVERTED 0x00030200L
01599 #define STG_S_BLOCK 0x00030201L
01600 #define STG_S_RETRYNOW 0x00030202L
01601 #define STG_S_MONITORING 0x00030203L
01602 #define STG_S_MULTIPLEOPENS 0x00030204L
01603 #define STG_S_CONSOLIDATIONFAILED 0x00030205L
01604 #define STG_S_CANNOTCONSOLIDATE 0x00030206L
01605
01606 #define STG_E_INVALIDFUNCTION 0x80030001L
01607 #define STG_E_FILENOTFOUND 0x80030002L
01608 #define STG_E_PATHNOTFOUND 0x80030003L
01609 #define STG_E_TOOMANYOPENFILES 0x80030004L
01610 #define STG_E_ACCESSDENIED 0x80030005L
01611 #define STG_E_INVALIDHANDLE 0x80030006L
01612 #define STG_E_INSUFFICIENTMEMORY 0x80030008L
01613 #define STG_E_INVALIDPOINTER 0x80030009L
01614 #define STG_E_NOMOREFILES 0x80030012L
01615 #define STG_E_DISKISWRITEPROTECTED 0x80030013L
01616 #define STG_E_SEEKERROR 0x80030019L
01617 #define STG_E_WRITEFAULT 0x8003001DL
01618 #define STG_E_READFAULT 0x8003001EL
01619 #define STG_E_SHAREVIOLATION 0x80030020L
01620 #define STG_E_LOCKVIOLATION 0x80030021L
01621 #define STG_E_FILEALREADYEXISTS 0x80030050L
01622 #define STG_E_INVALIDPARAMETER 0x80030057L
01623 #define STG_E_MEDIUMFULL 0x80030070L
01624 #define STG_E_ABNORMALAPIEXIT 0x800300FAL
01625 #define STG_E_INVALIDHEADER 0x800300FBL
01626 #define STG_E_INVALIDNAME 0x800300FCL
01627 #define STG_E_UNKNOWN 0x800300FDL
01628 #define STG_E_UNIMPLEMENTEDFUNCTION 0x800300FEL
01629 #define STG_E_INVALIDFLAG 0x800300FFL
01630 #define STG_E_INUSE 0x80030100L
01631 #define STG_E_NOTCURRENT 0x80030101L
01632 #define STG_E_REVERTED 0x80030102L
01633 #define STG_E_CANTSAVE 0x80030103L
01634 #define STG_E_OLDFORMAT 0x80030104L
01635 #define STG_E_OLDDLL 0x80030105L
```

```
01636 #define STG_E_SHAREREQUIRED 0x80030106L
01637 #define STG_E_NOTFILEBASEDSTORAGE 0x80030107L
01638 #define STG_E_EXTANTMARSHALLINGS 0x80030108L
01639
01640 #define OLE_S_FIRST 0x00040000L
01641 #define OLE_S_USEREG 0x00040000L
01642 #define OLE_S_STATIC 0x00040001L
01643 #define OLE_S_MAC_CLIPFORMAT 0x00040002L
01644 #define OLE_S_LAST 0x000400FFL
01645
01646 #define OLE_E_FIRST 0x80040000L
01647 #define OLE_E_OLEVERB 0x80040000L
01648 #define OLE_E_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_STATIC 0x8004000BL
01659 #define OLE_E_PROMPTSAVECANCELLED 0x8004000CL
01660 #define OLE_E_INVALIDDIRECT 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
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
```

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01810 #define MK_E_EXCEEDEDDEADLINE 0x800401E1L
01811 #define MK_E_NEEDGENERIC 0x800401E2L
01812 #define MK_E_UNAVAILABLE 0x800401E3L
01813 #define MK_E_SYNTAX 0x800401E4L
01814 #define MK_E_NOOBJECT 0x800401E5L
01815 #define MK_E_INVALIDEXTENSION 0x800401E6L
01816 #define MK_E_INTERMEDIATEINTERFACENOTSUPPORTED 0x800401E7L
01817 #define MK_E_NOTBINDABLE 0x800401E8L
01818 #define MK_E_NOTBOUND 0x800401E9L
01819 #define MK_E_CANTOPENFILE 0x800401EAL
01820 #define MK_E_MUSTBOTHERUSER 0x800401EBL
01821 #define MK_E_NOINVERSE 0x800401ECL
01822 #define MK_E_NOSTORAGE 0x800401EDL
01823 #define MK_E_NOPREFIX 0x800401EEL
01824 #define MK_E_ENUMERATION_FAILED 0x800401EFL
01825 #define MK_E_LAST 0x800401EFL
01826
01827 #define CO_S_FIRST 0x000401F0L
01828 #define CO_S_LAST 0x000401FFL
01829
01830 #define CO_E_FIRST 0x800401F0L
01831 #define CO_E_NOTINITIALIZED 0x800401F0L
01832 #define CO_E_ALREADYINITIALIZED 0x800401F1L
01833 #define CO_E_CANTDETERMINECLASS 0x800401F2L
01834 #define CO_E_CLASSSTRING 0x800401F3L
01835 #define CO_E_IIDSTRING 0x800401F4L
01836 #define CO_E_APPNOTFOUND 0x800401F5L
01837 #define CO_E_APPSINGLEUSE 0x800401F6L
01838 #define CO_E_ERRORINAPP 0x800401F7L
01839 #define CO_E_DLLNOTFOUND 0x800401F8L
01840 #define CO_E_ERRORINDLL 0x800401F9L
01841 #define CO_E_WRONGOSFORAPP 0x800401FAL
01842 #define CO_E_OBJNOTREG 0x800401FBL
01843 #define CO_E_OBJISREG 0x800401FCL
01844 #define CO_E_OBJNOTCONNECTED 0x800401FDL
01845 #define CO_E_APPDIDNTREG 0x800401FEL
01846 #define CO_E_RELEASED 0x800401FFL
01847 #define CO_E_LAST 0x800401FFL
01848 #define CO_E_FAILEDTOIMPERSONATE 0x80040200L
01849 #define CO_E_FAILEDTOGETSECCTX 0x80040201L
01850 #define CO_E_FAILEDTOOPENTHREADTOKEN 0x80040202L
01851 #define CO_E_FAILEDTOGETTOKENINFO 0x80040203L
01852 #define CO_E_TRUSTEEDOESNTMATCHCLIENT 0x80040204L
01853 #define CO_E_FAILEDTOQUERYCLIENTBLANKET 0x80040205L
01854 #define CO_E_FAILEDTOSETDACL 0x80040206L
01855 #define CO_E_ACCESSCHECKFAILED 0x80040207L
01856 #define CO_E_NETACCESSAPIFAILED 0x80040208L
01857 #define CO_E_WRONGTRUSTEENAMESYNTAX 0x80040209L
01858 #define CO_E_INVALIDSID 0x8004020AL
01859 #define CO_E_CONVERSIONFAILED 0x8004020BL
01860 #define CO_E_NOMATCHINGSIDFOUND 0x8004020CL
01861 #define CO_E_LOOKUPACCSIDFAILED 0x8004020DL
01862 #define CO_E_NOMATCHINGNAMEFOUND 0x8004020EL
01863 #define CO_E_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 FONTMAPPER_MAX 10
00016
00017 typedef struct
00018 {
00019     WORD    wFirst;
00020     WORD    wSecond;
00021     INT     iKernAmount;
00022 } KERNINGPAIR, *LPKERNINGPAIR;
00023
00024 typedef struct tagPIXELFORMATDESCRIPTOR {
00025     WORD    nSize;
00026     WORD    nVersion;
00027     DWORD   dwFlags;
00028     BYTE    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 } LOGCOLORSPACE, *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_PAPERNAME      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 GETTECHNOLGY         20
00267 #define GETTECHNOLOGY        20 /* yes, both of them */
00268 #define SETLINECAP           21
00269 #define SETLINEJOIN          22
00270 #define SETMITERLIMIT        23
00271 #define BANDINFO             24
00272 #define DRAWPATTERNRECT      25
00273 #define GETVECTORPENSIZE     26
00274 #define GETVECTORBRUSHSIZE   27
00275 #define ENABLEDUPLEX         28
00276 #define GETSETPAPERBINS      29
00277 #define GETSETPRINTORIENT    30
00278 #define ENUMPAPERBINS        31
00279 #define SETDIBSCALING        32
00280 #define EPSPRINTING          33
00281 #define ENUMPAPERMETRICS     34
00282 #define GETSETPAPERMETRICS   35
00283 #define POSTSCRIPT_DATA      37
00284 #define POSTSCRIPT_IGNORE    38
00285 #define MOUSETRAILS          39
00286 #define GETDEVICEUNITS       42
00287
00288 #define DESKTOPVERTRES        117
00289 #define DESKTOPHORZRES       118
00290
00291 #define GETEXTENDEDTEXTMETRICS 256
00292 #define GETEXTENTTABLE        257
00293 #define GETPAIRKERNTABLE      258
00294 #define GETTRACKKERNTABLE     259
00295 #define EXTTEXTOUT            512
00296 #define GETFACENAME           513
00297 #define DOWNLOADFACE          514
00298 #define ENABLERELATIVEWIDTHS  768
00299 #define ENABLEPAIRKERNING     769
00300 #define SETKERNTRACK          770
00301 #define SETALLJUSTVALUES      771
00302 #define SETCHARSET            772
00303
00304 #define STRETCHBLT            2048
00305 #define GETSETSCREENPARAMS    3072
00306 #define QUERYDIBSUPPORT      3073
00307 #define BEGIN_PATH            4096
00308 #define CLIP_TO_PATH          4097
00309 #define END_PATH              4098
00310 #define EXT_DEVICE_CAPS       4099
00311 #define RESTORE_CTM           4100
00312 #define SAVE_CTM              4101
00313 #define SET_ARC_DIRECTION     4102
00314 #define SET_BACKGROUND_COLOR  4103
00315 #define SET_POLY_MODE         4104
00316 #define SET_SCREEN_ANGLE      4105
00317 #define SET_SPREAD            4106
00318 #define TRANSFORM_CTM         4107
00319 #define SET_CLIP_BOX          4108
00320 #define SET_BOUNDS            4109
00321 #define SET_MIRROR_MODE       4110
00322 #define OPENCHANNEL           4110
00323 #define DOWNLOADHEADER        4111
00324 #define CLOSECHANNEL          4112
00325 #define POSTSCRIPT_PASSTHROUGH 4115
00326 #define ENCAPSULATED_POSTSCRIPT 4116
00327 #define POSTSCRIPT_IDENTIFY   4117
00328 #define POSTSCRIPT_INJECTION  4118
00329
00330 /* for POSTSCRIPT_IDENTIFY */
00331 #define PSIDENT_GDICENTRIC    0
00332 #define PSIDENT_PSCENTRIC     1
00333
00334
00335 #define QDI_SETDIBITS          1
00336 #define QDI_GETDIBITS          2
00337 #define QDI_DIBTOSCREEN        4

```

```

00338 #define QDI_STRETCHDIB          8
00339
00340 /* Spooler Error Codes */
00341 #define SP_NOTREPORTED    0x4000
00342 #define SP_ERROR          (-1)
00343 #define SP_APPABORT       (-2)
00344 #define SP_USERABORT      (-3)
00345 #define SP_OUTOFDISK      (-4)
00346 #define SP_OUTOFMEMORY    (-5)
00347
00348 #define PR_JOBSTATUS      0
00349
00350 /* Raster operations */
00351
00352 #define R2_BLACK          1
00353 #define R2_NOTMERGEPEN    2
00354 #define R2_MASKNOTPEN     3
00355 #define R2_NOTCOPYPEN    4
00356 #define R2_MASKPENNOT    5
00357 #define R2_NOT            6
00358 #define R2_XORPEN        7
00359 #define R2_NOTMASKPEN     8
00360 #define R2_MASKPEN       9
00361 #define R2_NOTXORPEN     10
00362 #define R2_NOP           11
00363 #define R2_MERGEOTPEN    12
00364 #define R2_COPYPEN       13
00365 #define R2_MERGEENNOT    14
00366 #define R2_MERGEEN       15
00367 #define R2_WHITE         16
00368
00369 #define SRCCOPY            0xcc0020
00370 #define SRCPAINT           0xee0086
00371 #define SRCAND             0x8800c6
00372 #define SRCINVERT         0x660046
00373 #define SRCERASE          0x440328
00374 #define NOTSRCCOPY        0x330008
00375 #define NOTSRCERASE       0x1100a6
00376 #define MERGECOPY         0xc000ca
00377 #define MERGEPAINT        0xbb0226
00378 #define PATCOPY           0xf00021
00379 #define PATPAINT          0xfb0a09
00380 #define PATINVERT         0x5a0049
00381 #define DSTINVERT         0x550009
00382 #define BLACKNESS         0x000042
00383 #define WHITENESS         0xff0062
00384
00385 /* StretchBlt() modes */
00386 #define BLACKONWHITE      1
00387 #define WHITEONBLACK      2
00388 #define COLORONCOLOR      3
00389 #define HALFTONE          4
00390 #define MAXSTRETCHBLTMODE 4
00391
00392 #define STRETCH_ANDSCANS   BLACKONWHITE
00393 #define STRETCH_ORSCANS    WHITEONBLACK
00394 #define STRETCH_DELETESCANS COLORONCOLOR
00395 #define STRETCH_HALFTONE   HALFTONE
00396
00397 /* Colors */
00398
00399 #define RGB(r,g,b)         ((COLORREF)((r) | ((g) << 8) | ((b) << 16)))
00400 #define PALETTERGB(r,g,b) (0x02000000 | RGB(r,g,b))
00401 #define PALETTEINDEX(i)   ((COLORREF)(0x01000000 | (WORD)(i)))
00402
00403 #define GetRValue(rgb)     ((rgb) & 0xff)
00404 #define GetGValue(rgb)     (((rgb) >> 8) & 0xff)
00405 #define GetBValue(rgb)     (((rgb) >> 16) & 0xff)
00406
00407 #define GetKValue(cmyk)    ((BYTE) (cmyk) )
00408 #define GetYValue(cmyk)    ((BYTE) ((cymk) >> 8))
00409 #define GetMValue(cmyk)    ((BYTE) ((cymk) >> 16))
00410 #define GetCValue(cmyk)    ((BYTE) ((cymk) >> 24))
00411
00412 #define CMYK(c,m,y,k)
((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_SRCCODEPAGE 2
00596 #define TCI_SRCFONTSIG 3
00597

```

```

00598 typedef struct
00599 {
00600     DWORD lsUsb[4];
00601     DWORD lsCsbDefault[2];
00602     DWORD lsCsbSupported[2];
00603 } LOCALESIGNATURE, *PLOCALESIGNATUR, *LPLOCALESIGNATUREE;
00604
00605
00606 /* Flags for ModifyWorldTransform */
00607 #define MWT_IDENTITY 1
00608 #define MWT_LEFTMULTIPLY 2
00609 #define MWT_RIGHTMULTIPLY 3
00610 #define MWT_MIN MWT_IDENTITY
00611 #define MWT_MAX MWT_RIGHTMULTIPLY
00612
00613 /* Object Definitions for EnumObjects() */
00614 #define OBJ_PEN 1
00615 #define OBJ_BRUSH 2
00616 #define OBJ_DC 3
00617 #define OBJ_METADC 4
00618 #define OBJ_PAL 5
00619 #define OBJ_FONT 6
00620 #define OBJ_BITMAP 7
00621 #define OBJ_REGION 8
00622 #define OBJ_METAFILE 9
00623 #define OBJ_MEMDC 10
00624 #define OBJ_EXTPEN 11
00625 #define OBJ_ENHMETADC 12
00626 #define OBJ_ENHMETAFILE 13
00627
00628 typedef struct
00629 {
00630     FLOAT eM11;
00631     FLOAT eM12;
00632     FLOAT eM21;
00633     FLOAT eM22;
00634     FLOAT eDx;
00635     FLOAT eDy;
00636 } XFORM, *PXFORM, *LPXFORM;
00637
00638 /* lfWeight values */
00639 #define FW_DONTCARE 0
00640 #define FW_THIN 100
00641 #define FW_EXTRALIGHT 200
00642 #define FW_ULTRALIGHT 200
00643 #define FW_LIGHT 300
00644 #define FW_NORMAL 400
00645 #define FW_REGULAR 400
00646 #define FW_MEDIUM 500
00647 #define FW_SEMIBOLD 600
00648 #define FW_DEMIBOLD 600
00649 #define FW_BOLD 700
00650 #define FW_EXTRABOLD 800
00651 #define FW_ULTRABOLD 800
00652 #define FW_HEAVY 900
00653 #define FW_BLACK 900
00654
00655 /* lfCharSet values */
00656 #define ANSI_CHARSET (BYTE)0 /* CP1252, ansi-0, iso8859-{1,15} */
00657 #define DEFAULT_CHARSET (BYTE)1
00658 #define SYMBOL_CHARSET (BYTE)2
00659 #define SHIFTJIS_CHARSET (BYTE)128 /* CP932 */
00660 #define HANGEUL_CHARSET (BYTE)129 /* CP949, ksc5601.1987-0 */
00661 #define HANGUL_CHARSET HANGEUL_CHARSET
00662 #define GB2312_CHARSET (BYTE)134 /* CP936, gb2312.1980-0 */
00663 #define CHINESEBIG5_CHARSET (BYTE)136 /* CP950, big5.et-0 */
00664 #define GREEK_CHARSET (BYTE)161 /* CP1253 */
00665 #define TURKISH_CHARSET (BYTE)162 /* CP1254, -iso8859-9 */
00666 #define HEBREW_CHARSET (BYTE)177 /* CP1255, -iso8859-8 */
00667 #define ARABIC_CHARSET (BYTE)178 /* CP1256, -iso8859-6 */
00668 #define BALTIC_CHARSET (BYTE)186 /* CP1257, -iso8859-13 */
00669 #define RUSSIAN_CHARSET (BYTE)204 /* CP1251, -iso8859-5 */
00670 #define EE_CHARSET (BYTE)238 /* CP1250, -iso8859-2 */
00671 #define EASTEUROPE_CHARSET EE_CHARSET
00672 #define THAI_CHARSET (BYTE)222 /* CP874, iso8859-11, tis620 */
00673 #define JOHAB_CHARSET (BYTE)130 /* korean (johab) CP1361 */
00674 #define MAC_CHARSET (BYTE)77
00675 #define OEM_CHARSET (BYTE)255
00676 /* I don't know if the values of *_CHARSET macros are defined in Windows
00677 * or if we can choose them as we want. -- srtxg
00678 */
00679 #define VISCII_CHARSET (BYTE)240 /* viscii.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 */

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```

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;
00995     INT           otmsStrikeoutPosition;
00996     INT           otmsUnderscoreSize;
00997     INT           otmsUnderscorePosition;
00998     LPSTR         otmpFamilyName;
00999     LPSTR         otmpFaceName;
01000     LPSTR         otmpStyleName;
01001     LPSTR         otmpFullName;
01002 } OUTLINETEXTMETRICA, *POUTLINETEXTMETRICA, *LPOUTLINETEXTMETRICA;
01003
01004 typedef struct _OUTLINETEXTMETRICW
01005 {
01006     UINT          otmSize;
01007     TEXTMETRICW   otmTextMetrics;
01008     BYTE          otmFiller;
01009     PANOSE        otmPanoseNumber;
01010     UINT          otmfsSelection;
01011     UINT          otmfsType;
01012     INT           otmsCharSlopeRise;
01013     INT           otmsCharSlopeRun;
01014     INT           otmItalicAngle;
01015     UINT          otmEMSquare;
01016     INT           otmAscent;
01017     INT           otmDescent;
01018     UINT          otmLineGap;
01019     UINT          otmsCapEmHeight;
01020     UINT          otmsXHeight;
01021     RECT          otmrcFontBox;
01022     INT           otmMacAscent;
01023     INT           otmMacDescent;
01024     UINT          otmMacLineGap;
01025     UINT          otmusMinimumPPEM;
01026     POINT         otmptSubscriptSize;
01027     POINT         otmptSubscriptOffset;
01028     POINT         otmptSuperscriptSize;
01029     POINT         otmptSuperscriptOffset;
01030     UINT          otmsStrikeoutSize;
01031     INT           otmsStrikeoutPosition;
01032     INT           otmsUnderscoreSize;
```

```

01033     INT            otmsUnderscorePosition;
01034     LPSTR           otmpFamilyName;
01035     LPSTR           otmpFaceName;
01036     LPSTR           otmpStyleName;
01037     LPSTR           otmpFullName;
01038 } OUTLINETEXTMETRICW, *POUTLINETEXTMETRICW, *LPOUTLINETEXTMETRICW;
01039
01040 DECL_WINELIB_TYPE_AW(OUTLINETEXTMETRIC)
01041 DECL_WINELIB_TYPE_AW(POUTLINETEXTMETRIC)
01042 DECL_WINELIB_TYPE_AW(LPOUTLINETEXTMETRIC)
01043
01044 typedef struct
01045 {
01046     INT            x;
01047     INT            y;
01048     UINT           n;
01049     LPCSTR         lpstr;
01050     UINT           uiFlags;
01051     RECT           rcl;
01052     INT            *pdx;
01053 } POLYTEXTA, *PPOLYTEXTA, *LPPOLYTEXTA;
01054
01055 typedef struct
01056 {
01057     INT            x;
01058     INT            y;
01059     UINT           n;
01060     LPCWSTR        lpstr;
01061     UINT           uiFlags;
01062     RECT           rcl;
01063     INT            *pdx;
01064 } POLYTEXTW, *PPOLYTEXTW, *LPPOLYTEXTW;
01065
01066 DECL_WINELIB_TYPE_AW(POLYTEXT)
01067 DECL_WINELIB_TYPE_AW(PPOLYTEXT)
01068 DECL_WINELIB_TYPE_AW(LPPOLYTEXT)
01069
01070
01071 /* ntmFlags field flags */
01072 #define NTM_REGULAR      0x00000040L
01073 #define NTM_BOLD         0x00000020L
01074 #define NTM_ITALIC       0x00000001L
01075
01076 typedef struct
01077 {
01078     LONG           tmHeight;
01079     LONG           tmAscent;
01080     LONG           tmDescent;
01081     LONG           tmInternalLeading;
01082     LONG           tmExternalLeading;
01083     LONG           tmAveCharWidth;
01084     LONG           tmMaxCharWidth;
01085     LONG           tmWeight;
01086     LONG           tmOverhang;
01087     LONG           tmDigitizedAspectX;
01088     LONG           tmDigitizedAspectY;
01089     BYTE           tmFirstChar;
01090     BYTE           tmLastChar;
01091     BYTE           tmDefaultChar;
01092     BYTE           tmBreakChar;
01093     BYTE           tmItalic;
01094     BYTE           tmUnderlined;
01095     BYTE           tmStruckOut;
01096     BYTE           tmPitchAndFamily;
01097     BYTE           tmCharSet;
01098     DWORD          ntmFlags;
01099     UINT           ntmSizeEM;
01100     UINT           ntmCellHeight;
01101     UINT           ntmAvgWidth;
01102 } NEWTEXTMETRICA, *PNEWTEXTMETRICA, *LPNEWTEXTMETRICA;
01103
01104 typedef struct
01105 {
01106     LONG           tmHeight;
01107     LONG           tmAscent;
01108     LONG           tmDescent;
01109     LONG           tmInternalLeading;
01110     LONG           tmExternalLeading;
01111     LONG           tmAveCharWidth;
01112     LONG           tmMaxCharWidth;
01113     LONG           tmWeight;
01114     LONG           tmOverhang;
01115     LONG           tmDigitizedAspectX;
01116     LONG           tmDigitizedAspectY;
01117     WCHAR          tmFirstChar;
01118     WCHAR          tmLastChar;
01119     WCHAR          tmDefaultChar;

```

```

01120     WCHAR        tmBreakChar;
01121     BYTE          tmItalic;
01122     BYTE          tmUnderlined;
01123     BYTE          tmStruckOut;
01124     BYTE          tmPitchAndFamily;
01125     BYTE          tmCharSet;
01126     DWORD         ntmFlags;
01127     UINT          ntmSizeEM;
01128     UINT          ntmCellHeight;
01129     UINT          ntmAvgWidth;
01130 } NEWTEXTMETRICW, *PNEWTEXTMETRICW, *LPNEWTEXTMETRICW;
01131
01132 DECL_WINELIB_TYPE_AW(NEWTEXTMETRIC)
01133 DECL_WINELIB_TYPE_AW(PNEWTEXTMETRIC)
01134 DECL_WINELIB_TYPE_AW(LPNEWTEXTMETRIC)
01135
01136 typedef struct
01137 {
01138     NEWTEXTMETRICA ntmTm;
01139     FONTSIGNATURE  ntmFontSig;
01140 } NEWTEXTMETRICEXA, *LPNEWTEXTMETRICEXA;
01141
01142 typedef struct
01143 {
01144     NEWTEXTMETRICW ntmTm;
01145     FONTSIGNATURE  ntmFontSig;
01146 } NEWTEXTMETRICEXW, *LPNEWTEXTMETRICEXW;
01147
01148 DECL_WINELIB_TYPE_AW(NEWTEXTMETRICEX)
01149 DECL_WINELIB_TYPE_AW(LPNEWTEXTMETRICEX)
01150
01151 typedef int CALLBACK (*OLDFONTENUMPROCA) (const LOGFONTA*, const TEXTMETRICA*,
01152                                           DWORD, LPARAM);
01153 typedef int CALLBACK (*OLDFONTENUMPROCW) (const LOGFONTW*, const TEXTMETRICW*,
01154                                           DWORD, LPARAM);
01155 DECL_WINELIB_TYPE_AW(OLDFONTENUMPROC)
01156
01157 typedef OLDFONTENUMPROCA FONTENUMPROCA;
01158 typedef OLDFONTENUMPROCW FONTENUMPROCW;
01159 DECL_WINELIB_TYPE_AW(FONTENUMPROC)
01160
01161 typedef int CALLBACK (*FONTENUMPROCEXA) (LPENUMLOGFONTEXA, LPNEWTEXTMETRICEXA, DWORD, LPARAM);
01162 typedef int CALLBACK (*FONTENUMPROCEXW) (LPENUMLOGFONTEXW, LPNEWTEXTMETRICEXW, DWORD, LPARAM);
01163 DECL_WINELIB_TYPE_AW(FONTENUMPROCEX)
01164
01165 typedef INT CALLBACK (*GOBJENUMPROC) (LPVOID, LPARAM);
01166 typedef VOID CALLBACK (*LINEDDAPROC) (INT, INT, LPARAM);
01167
01168 /* tmPitchAndFamily bits */
01169 #define TMPF_FIXED_PITCH 1 /* means variable pitch */
01170 #define TMPF_VECTOR 2
01171 #define TMPF_TRUETYPE 4
01172 #define TMPF_DEVICE 8
01173
01174 /* Text alignment */
01175 #define TA_NOUPDATECP 0x00
01176 #define TA_UPDATECP 0x01
01177 #define TA_LEFT 0x00
01178 #define TA_RIGHT 0x02
01179 #define TA_CENTER 0x06
01180 #define TA_TOP 0x00
01181 #define TA_BOTTOM 0x08
01182 #define TA_BASELINE 0x18
01183 #define TA_RTLREADING 0x100
01184 #define TA_MASK TA_BASELINE+TA_CENTER+TA_UPDATECP+TA_RTLREADING
01185
01186 #define VTA_BASELINE TA_BASELINE
01187 #define VTA_LEFT TA_BOTTOM
01188 #define VTA_RIGHT TA_TOP
01189 #define VTA_CENTER TA_CENTER
01190 #define VTA_BOTTOM TA_RIGHT
01191 #define VTA_TOP TA_LEFT
01192
01193
01194 /* ExtTextOut() parameters */
01195 #define ETO_GRAYED 0x0001
01196 #define ETO_OPAQUE 0x0002
01197 #define ETO_CLIPPED 0x0004
01198 #define ETO_GLYPH_INDEX 0x0010
01199 #define ETO_RTLREADING 0x0080
01200 #define ETO_IGNORELANGUAGE 0x1000
01201
01202 #define ASPECT_FILTERING 0x0001
01203
01204 typedef struct
01205 {
01206     UINT gmBlackBoxX;

```



```

01207     UINT      gmBlackBoxY;
01208     POINT      gmptGlyphOrigin;
01209     SHORT      gmCellIncX;
01210     SHORT      gmCellIncY;
01211 } GLYPHMETRICS, *LPGLYPHMETRICS;
01212
01213
01214 #define GGO_METRICS          0
01215 #define GGO_BITMAP          1
01216 #define GGO_NATIVE          2
01217 #define GGO_GRAY2_BITMAP    4
01218 #define GGO_GRAY4_BITMAP    5
01219 #define GGO_GRAY8_BITMAP    6
01220 #define GGO_GLYPH_INDEX     0x80
01221
01222 typedef struct
01223 {
01224     WORD      fract;
01225     SHORT      value;
01226 } FIXED;
01227
01228 typedef struct tagPOINTFX
01229 {
01230     FIXED x;
01231     FIXED y;
01232 } POINTFX, *LPPOINTFX;
01233
01234 typedef struct tagTTPOLYCURVE
01235 {
01236     WORD wType;
01237     WORD 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_DISPFILE 6
01527
01528 /* CURVECAPS */
01529 #define CC_NONE 0x0000
01530 #define CC_CIRCLES 0x0001
01531 #define CC_PIE 0x0002
01532 #define CC_CHORD 0x0004
01533 #define CC_ELLIPSES 0x0008
01534 #define CC_WIDE 0x0010
01535 #define CC_STYLED 0x0020
01536 #define CC_WIDESTYLED 0x0040
01537 #define CC_INTERIORS 0x0080
01538 #define CC_ROUNDRECT 0x0100
01539
01540 /* LINECAPS */
01541 #define LC_NONE 0x0000
01542 #define LC_POLYLINE 0x0002
01543 #define LC_MARKER 0x0004
01544 #define LC_POLYMARKER 0x0008
01545 #define LC_WIDE 0x0010
01546 #define LC_STYLED 0x0020
01547 #define LC_WIDESTYLED 0x0040
01548 #define LC_INTERIORS 0x0080
01549
01550 /* POLYGONALCAPS */
01551 #define PC_NONE 0x0000
01552 #define PC_POLYGON 0x0001
01553 #define PC_RECTANGLE 0x0002
01554 #define PC_WINDPOLYGON 0x0004
```

```

01555 #define PC_TRAPEZOID      0x0004
01556 #define PC_SCANLINE      0x0008
01557 #define PC_WIDE          0x0010
01558 #define PC_STYLED        0x0020
01559 #define PC_WIDESTYLED    0x0040
01560 #define PC_INTERIORS     0x0080
01561 #define PC_POLYPOLYGON   0x0100
01562 #define PC_PATHS         0x0200
01563
01564 /* TEXTCAPS */
01565 #define TC_OP_CHARACTER    0x0001
01566 #define TC_OP_STROKE     0x0002
01567 #define TC_CP_STROKE     0x0004
01568 #define TC_CR_90         0x0008
01569 #define TC_CR_ANY        0x0010
01570 #define TC_SF_X_YINDEP   0x0020
01571 #define TC_SA_DOUBLE     0x0040
01572 #define TC_SA_INTEGER    0x0080
01573 #define TC_SA_CONTIN     0x0100
01574 #define TC_EA_DOUBLE     0x0200
01575 #define TC_IA_ABLE       0x0400
01576 #define TC_UA_ABLE       0x0800
01577 #define TC_SO_ABLE       0x1000
01578 #define TC_RA_ABLE       0x2000
01579 #define TC_VA_ABLE       0x4000
01580 #define TC_RESERVED      0x8000
01581 #define TC_SCROLLBLT     0x00010000
01582
01583 /* CLIPCAPS */
01584 #define CP_NONE           0x0000
01585 #define CP_RECTANGLE     0x0001
01586 #define CP_REGION        0x0002
01587
01588 /* RASTERCAPS */
01589 #define RC_NONE           0x0000
01590 #define RC_BITBLT        0x0001
01591 #define RC_BANDING       0x0002
01592 #define RC_SCALING       0x0004
01593 #define RC_BITMAP64      0x0008
01594 #define RC_GDI20_OUTPUT  0x0010
01595 #define RC_GDI20_STATE   0x0020
01596 #define RC_SAVEBITMAP    0x0040
01597 #define RC_DI_BITMAP     0x0080
01598 #define RC_PALETTE       0x0100
01599 #define RC_DIBTODEV      0x0200
01600 #define RC_BIGFONT       0x0400
01601 #define RC_STRETCHBLT    0x0800
01602 #define RC_FLOODFILL     0x1000
01603 #define RC_STRETCHDIB    0x2000
01604 #define RC_OP_DX_OUTPUT  0x4000
01605 #define RC_DEVBITS       0x8000
01606
01607 /* CAPS1 */
01608
01609 #define C1_TRANSPARENT    0x0001
01610 #define TC_TT_ABLE       0x0002
01611 #define C1_TT_CR_ANY     0x0004
01612 #define C1_EMF_COMPLIANT 0x0008
01613 #define C1_DIBENGINE     0x0010
01614 #define C1_GAMMA_RAMP    0x0040
01615 #define C1_REINIT_ABLE   0x0080
01616 #define C1_GLYPH_INDEX   0x0100
01617 #define C1_BIT_PACKED    0x0200
01618 #define C1_BYTE_PACKED   0x0400
01619 #define C1_COLORCURSOR   0x0800
01620 #define C1_CMYK_ABLE     0x1000
01621 #define C1_SLOW_CARD     0x2000
01622
01623 /* Device-independent bitmaps */
01624
01625 typedef struct {
01626     BYTE rgbBlue;
01627     BYTE rgbGreen;
01628     BYTE rgbRed;
01629     BYTE rgbReserved;
01630 } RGBQUAD, *LPRGBQUAD;
01631
01632 typedef struct {
01633     BYTE rgbtBlue;
01634     BYTE rgbtGreen;
01635     BYTE rgbtRed;
01636 } RGBTRIPLE;
01637
01638 #include "pshpack2.h"
01639 typedef struct
01640 {
01641     WORD    bfType;

```

```

01642     DWORD    bfSize;
01643     WORD      bfReserved1;
01644     WORD      bfReserved2;
01645     DWORD    bfOffBits;
01646 } BITMAPFILEHEADER, *PBITMAPFILEHEADER, *LPBITMAPFILEHEADER;
01647 #include "poppack.h"
01648
01649 #define MAKEPOINTS(l)  (((POINTS *) &(l)))
01650
01651 typedef struct
01652 {
01653     DWORD    biSize;
01654     LONG     biWidth;
01655     LONG     biHeight;
01656     WORD     biPlanes;
01657     WORD     biBitCount;
01658     DWORD    biCompression;
01659     DWORD    biSizeImage;
01660     LONG     biXPelsPerMeter;
01661     LONG     biYPelsPerMeter;
01662     DWORD    biClrUsed;
01663     DWORD    biClrImportant;
01664 } BITMAPINFOHEADER, *PBITMAPINFOHEADER, *LPBITMAPINFOHEADER;
01665
01666 typedef struct
01667 {
01668     DWORD    bV4Size;
01669     LONG     bV4Width;
01670     LONG     bV4Height;
01671     WORD     bV4Planes;
01672     WORD     bV4BitCount;
01673     DWORD    bV4Compression;
01674     DWORD    bV4SizeImage;
01675     LONG     bV4XPelsPerMeter;
01676     LONG     bV4YPelsPerMeter;
01677     DWORD    bV4ClrUsed;
01678     DWORD    bV4ClrImportant;
01679     DWORD    bV4RedMask;
01680     DWORD    bV4GreenMask;
01681     DWORD    bV4BlueMask;
01682     DWORD    bV4AlphaMask;
01683     DWORD    bV4CSType;
01684     CIEXYZTRIPLE bV4EndPoints;
01685     DWORD    bV4GammaRed;
01686     DWORD    bV4GammaGreen;
01687     DWORD    bV4GammaBlue;
01688 } BITMAPV4HEADER, *PBITMAPV4HEADER;
01689
01690 typedef struct {
01691     DWORD    bV5Size;
01692     LONG     bV5Width;
01693     LONG     bV5Height;
01694     WORD     bV5Planes;
01695     WORD     bV5BitCount;
01696     DWORD    bV5Compression;
01697     DWORD    bV5SizeImage;
01698     LONG     bV5XPelsPerMeter;
01699     LONG     bV5YPelsPerMeter;
01700     DWORD    bV5ClrUsed;
01701     DWORD    bV5ClrImportant;
01702     DWORD    bV5RedMask;
01703     DWORD    bV5GreenMask;
01704     DWORD    bV5BlueMask;
01705     DWORD    bV5AlphaMask;
01706     DWORD    bV5CSType;
01707     CIEXYZTRIPLE bV5Endpoints;
01708     DWORD    bV5GammaRed;
01709     DWORD    bV5GammaGreen;
01710     DWORD    bV5GammaBlue;
01711     DWORD    bV5Intent;
01712     DWORD    bV5ProfileData;
01713     DWORD    bV5ProfileSize;
01714     DWORD    bV5Reserved;
01715 } BITMAPV5HEADER, *PBITMAPV5HEADER, *LPBITMAPV5HEADER;
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 } EMRDELETIColorSPACE, *PEMRDELETIColorSPACE,
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 } EMRINVERTTRGN, *PEMRINVERTTRGN,
02187 EMRPAINTRGN, *PEMRPAINTRGN;
02188
02189 typedef struct {
02190     EMR    emr;
02191     POINTL ptl;
02192 } EMRLINETO, *PEMRLINETO,
02193 EMRMOVETOEX, *PEMRMOVETOEX;
02194
02195 typedef struct {
02196     EMR    emr;
02197     RECTL  rclBounds;
02198     LONG   xDest;
02199     LONG   yDest;
02200     LONG   cxDest;
02201     LONG   cyDest;
02202     DWORD  dwRop;
02203     LONG   xSrc;
02204     LONG   ySrc;
02205     XFORM  xformSrc;
02206     COLORREF crBkColorSrc;
02207     DWORD  iUsageSrc;
02208     DWORD  offBmiSrc;
02209     DWORD  cbBmiSrc;
02210     DWORD  offBitsSrc;
02211     DWORD  cbBitsSrc;
02212     LONG   xMask;
02213     LONG   yMask;
02214     DWORD  iUsageMask;
02215     DWORD  offBmiMask;
02216     DWORD  cbBmiMask;
02217     DWORD  offBitsMask;
02218     DWORD  cbBitsMask;
02219 } EMRMASKBLT, *PEMRMASKBLT;
02220
02221 typedef struct {
02222     EMR    emr;
02223     XFORM  xform;
02224     DWORD  iMode;
02225 } EMRMODIFYWORLDTRANSFORM, *PEMRMODIFYWORLDTRANSFORM;
02226
02227 typedef struct {
02228     EMR    emr;
02229     POINTL ptlOffset;
02230 } EMROFFSETCLIPRGN, *PEMROFFSETCLIPRGN;
02231
02232 typedef struct {
02233     EMR    emr;
02234     RECTL  rclBounds;
02235     POINTL aptlDst[3];
02236     LONG   xSrc;
02237     LONG   ySrc;
02238     LONG   cxSrc;
02239     LONG   cySrc;
02240     XFORM  xformSrc;
02241     COLORREF crBkColorSrc;
02242     DWORD  iUsageSrc;
02243     DWORD  offBmiSrc;
02244     DWORD  cbBmiSrc;
02245     DWORD  offBitsSrc;
02246     DWORD  cbBitsSrc;
02247     LONG   xMask;
02248     LONG   yMask;
02249     DWORD  iUsageMask;
02250     DWORD  offBmiMask;
```

```
02251     DWORD    cbBmiMask;
02252     DWORD    offBitsMask;
02253     DWORD    cbBitsMask;
02254 } EMRPLGBLT, *PEMRPLGBLT;
02255
02256 typedef struct {
02257     EMR    emr;
02258     RECTL  rclBounds;
02259     DWORD  cptl;
02260     POINTL aptl[1];
02261 } EMRPOLYLINE, *PEMRPOLYLINE,
02262 EMRPOLYBEZIER, *PEMRPOLYBEZIER,
02263 EMRPOLYGON, *PEMRPOLYGON,
02264 EMRPOLYBEZIERTO, *PEMRPOLYBEZIERTO,
02265 EMRPOLYLINETO, *PEMRPOLYLINETO;
02266
02267 typedef struct {
02268     EMR    emr;
02269     RECTL  rclBounds;
02270     DWORD  cptl;
02271     POINTL aptl[1];
02272     BYTE  abTypes[1];
02273 } EMRPOLYDRAW, *PEMRPOLYDRAW;
02274
02275 typedef struct {
02276     EMR    emr;
02277     RECTL  rclBounds;
02278     DWORD  nPolys;
02279     DWORD  cptl;
02280     DWORD  aPolyCounts[1];
02281     POINTL aptl[1];
02282 } EMRPOLYPOLYLINE, *PEMRPOLYPOLYLINE,
02283 EMRPOLYPOLYGON, *PEMRPOLYPOLYGON;
02284
02285 typedef struct {
02286     EMR    emr;
02287     RECTL  rclBounds;
02288     DWORD  iGraphicsMode;
02289     FLOAT  exScale;
02290     FLOAT  eyScale;
02291     LONG   cStrings;
02292     EMRTEXT aemrtext[1];
02293 } EMRPOLYTEXTOUTA, *PEMRPOLYTEXTOUTA,
02294 EMRPOLYTEXTOUTW, *PEMRPOLYTEXTOUTW;
02295
02296 typedef struct {
02297     EMR    emr;
02298     DWORD  ihPal;
02299     DWORD  cEntries;
02300 } EMRRESIZEPALETTE, *PEMRRESIZEPALETTE;
02301
02302 typedef struct {
02303     EMR    emr;
02304     LONG   iRelative;
02305 } EMRRESTOREDC, *PEMRRESTOREDC;
02306
02307 typedef struct {
02308     EMR    emr;
02309     RECTL  rclBox;
02310     SIZEL  szlCorner;
02311 } EMRROUNDRECT, *PEMRROUNDRECT;
02312
02313 typedef struct {
02314     EMR    emr;
02315     LONG   xNum;
02316     LONG   xDenom;
02317     LONG   yNum;
02318     LONG   yDenom;
02319 } EMRSCALEVIEWPORTEXT, *PEMRSCALEVIEWPORTEXT,
02320 EMRSCALEWINDOWEXT, *PEMRSCALEWINDOWEXT;
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 } EMRSETBRUSHORGE, *PEMRSETBRUSHORGE,
02355 EMRSETVIEWPORTORGE, *PEMRSETVIEWPORTORGE,
02356 EMRSETWINDOWORGE, *PEMRSETWINDOWORGE;
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 } EMRSETVIEWPORTEXT, *PEMRSETVIEWPORTEXT,
02409 EMRSETWINDOWEXT, *PEMRSETWINDOWEXT;
02410
02411 typedef struct {
02412     EMR    emr;
02413     XFORM  xform;
02414 } EMRSETWORLDTRANSFORM, *PEMRSETWORLDTRANSFORM;
02415
02416 typedef struct {
02417     EMR    emr;
02418     RECTL  rclBounds;
02419     LONG   xDest;
02420     LONG   yDest;
02421     LONG   cxDest;
02422     LONG   cyDest;
02423     DWORD  dwRop;
02424     LONG   xSrc;
```

```
02425     LONG     ySrc;
02426     XFORM     xformSrc;
02427     COLORREF  crBkColorSrc;
02428     DWORD     iUsageSrc;
02429     DWORD     offBmiSrc;
02430     DWORD     cbBmiSrc;
02431     DWORD     offBitsSrc;
02432     DWORD     cbBitsSrc;
02433     LONG      cxSrc;
02434     LONG      cySrc;
02435 } EMRSTRETCHBLT, *PEMRSTRETCHBLT;
02436
02437 typedef struct {
02438     EMR     emr;
02439     RECTL   rclBounds;
02440     LONG    xDest;
02441     LONG    yDest;
02442     LONG    xSrc;
02443     LONG    ySrc;
02444     LONG    cxSrc;
02445     LONG    cySrc;
02446     DWORD   offBmiSrc;
02447     DWORD   cbBmiSrc;
02448     DWORD   offBitsSrc;
02449     DWORD   cbBitsSrc;
02450     DWORD   iUsageSrc;
02451     DWORD   dwRop;
02452     LONG    cxDest;
02453     LONG    cyDest;
02454 } EMRSTRETCHDIBITS, *PEMRSTRETCHDIBITS;
02455
02456 typedef struct {
02457     EMR     emr;
02458     PIXELFORMATDESCRIPTOR pfd;
02459 } EMRPIXELFORMAT, *PEMRPIXELFORMAT;
02460
02461 typedef struct tagEMRGLSRECORD {
02462     EMR     emr;
02463     DWORD   cbData;
02464     BYTE    Data[1];
02465 } EMRGLSRECORD, *PEMRGLSRECORD;
02466
02467 typedef struct {
02468     EMR     emr;
02469     RECTL   rclBounds;
02470     DWORD   cbData;
02471     BYTE    Data[1];
02472 } EMRGLSBOUNDEDRECORD, *PEMRGLSBOUNDEDRECORD;
02473
02474 typedef INT CALLBACK (*ENHMFENUMPROC)(HDC, LPHANDLETABLE,
02475                                     LPENHMETARECORD, INT, LPVOID);
02476
02477 #define EMR_HEADER 1
02478 #define EMR_POLYBEZIER 2
02479 #define EMR_POLYGON 3
02480 #define EMR_POLYLINE 4
02481 #define EMR_POLYBEZIERTO 5
02482 #define EMR_POLYLINETO 6
02483 #define EMR_POLYPOLYLINE 7
02484 #define EMR_POLYPOLYGON 8
02485 #define EMR_SETWINDOWEXTEX 9
02486 #define EMR_SETWINDOWORGEX 10
02487 #define EMR_SETVIEWPORTEXTEX 11
02488 #define EMR_SETVIEWPORTORGEX 12
02489 #define EMR_SETBRUSHORGEX 13
02490 #define EMR_EOF 14
02491 #define EMR_SETPIXELV 15
02492 #define EMR_SETMAPPERFLAGS 16
02493 #define EMR_SETMAPMODE 17
02494 #define EMR_SETBKMODE 18
02495 #define EMR_SETPOLYFILLMODE 19
02496 #define EMR_SETROP2 20
02497 #define EMR_SETSTRETCHBLTMODE 21
02498 #define EMR_SETTEXTALIGN 22
02499 #define EMR_SETCOLORADJUSTMENT 23
02500 #define EMR_SETTEXTCOLOR 24
02501 #define EMR_SETBKCOLOR 25
02502 #define EMR_OFFSETCLIPRGN 26
02503 #define EMR_MOVETOEX 27
02504 #define EMR_SETMETARGN 28
02505 #define EMR_EXCLUDECLIPRECT 29
02506 #define EMR_INTERSECTCLIPRECT 30
02507 #define EMR_SCALEVIEWPORTEXTEX 31
02508 #define EMR_SCALEWINDOWEXTEX 32
02509 #define EMR_SAVEDC 33
02510 #define EMR_RESTOREDC 34
02511 #define EMR_SETWORLDTRANSFORM 35
```

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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_POLYBEZIER16TO16             88
02564 #define EMR_POLYLINETO16                 89
02565 #define EMR_POLYPOLYLINE16              90
02566 #define EMR_POLYPOLYGON16               91
02567 #define EMR_POLYDRAW16                   92
02568 #define EMR_CREATEMONOBRUSH              93
02569 #define EMR_CREATEDIBPATTERNBRUSHPT      94
02570 #define EMR_EXTCREATEPEN                  95
02571 #define EMR_POLYTEXTOUTA                 96
02572 #define EMR_POLYTEXTOUTW                 97
02573 #define EMR_SETICMMODE                   98
02574 #define EMR_CREATECOLORSPACE              99
02575 #define EMR_SETCOLORSPACE                100
02576 #define EMR_DELETECOLORSPACE             101
02577 #define EMR_GLSRECORD                    102
02578 #define EMR_GLSBOUNDEDRECORD             103
02579 #define EMR_PIXELFORMAT                  104
02580
02581 #define EMR_MIN 1
02582 #define EMR_MAX 104
02583
02584 #define ENHMETA_SIGNATURE 1179469088
02585 #define ENHMETA_STOCK_OBJECT 0x80000000
02586
02587 #define GDICPMMENT_INDENTIFIER 0x43494447
02588 #define GDICOMMENT_WINDOWS_METAFILE 0x80000000
02589 #define GDICOMMENT_BEGINGROUP 0x80000001
02590 #define GDICOMMENT_ENDGROUP 0x80000002
02591 #define GDICOMMENT_MULTIFORMATS 0x80000003
02592 #define EPS_SIGNATURE 0x46535045
02593
02594 #define CCHDEVICENAME 32
02595 #define CCHFORMNAME 32
02596
02597 typedef struct
02598 {

```



```
02599     BYTE    dmDeviceName[CCHDEVICENAME];
02600     WORD    dmSpecVersion;
02601     WORD    dmDriverVersion;
02602     WORD    dmSize;
02603     WORD    dmDriverExtra;
02604     DWORD   dmFields;
02605     union u10 {
02606     struct snort {
02607     SHORT    dmOrientation;
02608     SHORT    dmPaperSize;
02609     SHORT    dmPaperLength;
02610     SHORT    dmPaperWidth;
02611     } DUMMYSTRUCTNAME1;
02612     POINTL   dmPosition;
02613     } DUMMYUNIONNAME1;
02614     SHORT    dmScale;
02615     SHORT    dmCopies;
02616     SHORT    dmDefaultSource;
02617     SHORT    dmPrintQuality;
02618     SHORT    dmColor;
02619     SHORT    dmDuplex;
02620     SHORT    dmYResolution;
02621     SHORT    dmTTOption;
02622     SHORT    dmCollate;
02623     BYTE    dmFormName[CCHFORMNAME];
02624     WORD    dmLogPixels;
02625     DWORD   dmBitsPerPel;
02626     DWORD   dmPelsWidth;
02627     DWORD   dmPelsHeight;
02628     DWORD   dmDisplayFlags;
02629     DWORD   dmDisplayFrequency;
02630     DWORD   dmICMMethod;
02631     DWORD   dmICMIntent;
02632     DWORD   dmMediaType;
02633     DWORD   dmDitherType;
02634     DWORD   dmReserved1;
02635     DWORD   dmReserved2;
02636     DWORD   dmPanningWidth;
02637     DWORD   dmPanningHeight;
02638 } DEVMODEA, *PDEVMODEA, *LPDEVMODEA;
02639
02640 typedef struct
02641 {
02642     WCHAR    dmDeviceName[CCHDEVICENAME];
02643     WORD    dmSpecVersion;
02644     WORD    dmDriverVersion;
02645     WORD    dmSize;
02646     WORD    dmDriverExtra;
02647     DWORD   dmFields;
02648     union u20 {
02649     struct blorf {
02650     SHORT    dmOrientation;
02651     SHORT    dmPaperSize;
02652     SHORT    dmPaperLength;
02653     SHORT    dmPaperWidth;
02654     } DUMMYSTRUCTNAME1;
02655     POINTL   dmPosition;
02656     } DUMMYUNIONNAME1;
02657     SHORT    dmScale;
02658     SHORT    dmCopies;
02659     SHORT    dmDefaultSource;
02660     SHORT    dmPrintQuality;
02661     SHORT    dmColor;
02662     SHORT    dmDuplex;
02663     SHORT    dmYResolution;
02664     SHORT    dmTTOption;
02665     SHORT    dmCollate;
02666     WCHAR    dmFormName[CCHFORMNAME];
02667     WORD    dmLogPixels;
02668     DWORD   dmBitsPerPel;
02669     DWORD   dmPelsWidth;
02670     DWORD   dmPelsHeight;
02671     DWORD   dmDisplayFlags;
02672     DWORD   dmDisplayFrequency;
02673     DWORD   dmICMMethod;
02674     DWORD   dmICMIntent;
02675     DWORD   dmMediaType;
02676     DWORD   dmDitherType;
02677     DWORD   dmReserved1;
02678     DWORD   dmReserved2;
02679     DWORD   dmPanningWidth;
02680     DWORD   dmPanningHeight;
02681 } DEVMODEW, *PDEVMODEW, *LPDEVMODEW;
02682
02683 DECL_WINELIB_TYPE_AW(DEVMODE)
02684 DECL_WINELIB_TYPE_AW(PDEVMODE)
02685 DECL_WINELIB_TYPE_AW(LPDEVMODE)
```

```

02686
02687 #define DM_SPECVERSION    0x401
02688 #define DM_UPDATE          1
02689 #define DM_COPY            2
02690 #define DM_PROMPT          4
02691 #define DM_MODIFY          8
02692
02693 #define DM_IN_BUFFER        DM_MODIFY
02694 #define DM_IN_PROMPT        DM_PROMPT
02695 #define DM_OUT_BUFFER        DM_COPY
02696 #define DM_OUT_DEFAULT      DM_UPDATE
02697
02698 #define DM_ORIENTATION      0x00000001L
02699 #define DM_PAPERSIZE        0x00000002L
02700 #define DM_PAPERLENGTH     0x00000004L
02701 #define DM_PAPERWIDTH      0x00000008L
02702 #define DM_SCALE            0x00000010L
02703 #define DM_POSITION         0x00000020L
02704 #define DM_COPIES           0x00000100L
02705 #define DM_DEFAULTSOURCE    0x00000200L
02706 #define DM_PRINTQUALITY     0x00000400L
02707 #define DM_COLOR            0x00000800L
02708 #define DM_DUPLEX           0x00001000L
02709 #define DM_YRESOLUTION      0x00002000L
02710 #define DM_TTOPTION         0x00004000L
02711 #define DM_COLLATE          0x00008000L
02712 #define DM_FORMNAME         0x00010000L
02713 #define DM_LOGPIXELS        0x00020000L
02714 #define DM_BITSPERPEL       0x00040000L
02715 #define DM_PELSWIDTH        0x00080000L
02716 #define DM_PELSHEIGHT       0x00100000L
02717 #define DM_DISPLAYFLAGS     0x00200000L
02718 #define DM_DISPLAYFREQUENCY 0x00400000L
02719 #define DM_ICMMETHOD       0x00800000L
02720 #define DM_ICMINTENT         0x01000000L
02721 #define DM_MEDIATYPE         0x02000000L
02722 #define DM_DITHERTYPE       0x04000000L
02723 #define DM_PANNINGWIDTH      0x08000000L
02724 #define DM_PANNINGHEIGHT    0x10000000L
02725
02726 #define DMORIENT_PORTRAIT    1
02727 #define DMORIENT_LANDSCAPE   2
02728
02729 #define DMPAPER_FIRST        DMPAPER_LETTER
02730 #define DMPAPER_LETTER      1
02731 #define DMPAPER_LETTERSMALL 2
02732 #define DMPAPER_TABLOID     3
02733 #define DMPAPER_LEDGER       4
02734 #define DMPAPER_LEGAL       5
02735 #define DMPAPER_STATEMENT   6
02736 #define DMPAPER_EXECUTIVE   7
02737 #define DMPAPER_A3           8
02738 #define DMPAPER_A4           9
02739 #define DMPAPER_A4SMALL     10
02740 #define DMPAPER_A5           11
02741 #define DMPAPER_B4           12
02742 #define DMPAPER_B5           13
02743 #define DMPAPER_FOLIO        14
02744 #define DMPAPER_QUARTO       15
02745 #define DMPAPER_10X14        16
02746 #define DMPAPER_11X17        17
02747 #define DMPAPER_NOTE         18
02748 #define DMPAPER_ENV_9        19
02749 #define DMPAPER_ENV_10       20
02750 #define DMPAPER_ENV_11       21
02751 #define DMPAPER_ENV_12       22
02752 #define DMPAPER_ENV_14       23
02753 #define DMPAPER_CSHEET       24
02754 #define DMPAPER_DSHEET       25
02755 #define DMPAPER_ESHEET       26
02756 #define DMPAPER_ENV_DL       27
02757 #define DMPAPER_ENV_C5       28
02758 #define DMPAPER_ENV_C3       29
02759 #define DMPAPER_ENV_C4       30
02760 #define DMPAPER_ENV_C6       31
02761 #define DMPAPER_ENV_C65      32
02762 #define DMPAPER_ENV_B4       33
02763 #define DMPAPER_ENV_B5       34
02764 #define DMPAPER_ENV_B6       35
02765 #define DMPAPER_ENV_ITALY    36
02766 #define DMPAPER_ENV_MONARCH  37
02767 #define DMPAPER_ENV_PERSONAL 38
02768 #define DMPAPER_FANFOLD_US   39
02769 #define DMPAPER_FANFOLD_STD_GERMAN 40
02770 #define DMPAPER_FANFOLD_LGL_GERMAN 41
02771 #define DMPAPER_ISO_B4       42
02772 #define DMPAPER_JAPANESE_POSTCARD 43

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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

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```

02860 #define DMBIN_AUTO          7
02861 #define DMBIN_TRACTOR        8
02862 #define DMBIN_SMALLFMT       9
02863 #define DMBIN_LARGEFORMAT    10
02864 #define DMBIN_LARGECAPACITY  11
02865 #define DMBIN_CASSETTE       14
02866 #define DMBIN_FORMSOURCE     15
02867 #define DMBIN_LAST            DMBIN_FORMSOURCE
02868 #define DMBIN_USER            256
02869
02870 #define DMRES_DRAFT           (-1)
02871 #define DMRES_LOW             (-2)
02872 #define DMRES_MEDIUM          (-3)
02873 #define DMRES_HIGH            (-4)
02874
02875 #define DMCOLOR_MONOCHROME    1
02876 #define DMCOLOR_COLOR        2
02877
02878 #define DMDUP_SIMPLEX         1
02879 #define DMDUP_VERTICAL        2
02880 #define DMDUP_HORIZONTAL      3
02881
02882 #define DMTT_BITMAP           1
02883 #define DMTT_DOWNLOAD         2
02884 #define DMTT_SUBDEV           3
02885 #define DMTT_DOWNLOAD_OUTLINE 4
02886
02887 #define DMCOLLATE_FALSE       0
02888 #define DMCOLLATE_TRUE        1
02889
02890 #define DMICMMETHOD_NONE     1
02891 #define DMICMMETHOD_SYSTEM   2
02892 #define DMICMMETHOD_DRIVER   3
02893 #define DMICMMETHOD_DEVICE   4
02894 #define DMICMMETHOD_USER     256
02895
02896 #define DMICM_SATURATE        1
02897 #define DMICM_CONTRAST        2
02898 #define DMICM_COLORMETRIC     3
02899 #define DMICM_USER            256
02900
02901 #define DMMEDIA_STANDARD      1
02902 #define DMMEDIA_TRANSPARENCY  2
02903 #define DMMEDIA_GLOSSY        3
02904 #define DMMEDIA_USER          256
02905
02906 #define DMDITHER_NONE         1
02907 #define DMDITHER_COARSE       2
02908 #define DMDITHER_FINE         3
02909 #define DMDITHER_LINEART      4
02910 #define DMDITHER_GRAYSCALE    5
02911 #define DMDITHER_USER         256
02912
02913 typedef struct
02914 {
02915     INT      cbSize;
02916     LPCSTR   lpszDocName;
02917     LPCSTR   lpszOutput;
02918     LPCSTR   lpszDatatype;
02919     DWORD    fwType;
02920 } DOCINFOA, *LPDOCINFOA;
02921
02922 typedef struct
02923 {
02924     INT      cbSize;
02925     LPCWSTR  lpszDocName;
02926     LPCWSTR  lpszOutput;
02927     LPCWSTR  lpszDatatype;
02928     DWORD    fwType;
02929 } DOCINFOW, *LPDOCINFOW;
02930
02931 DECL_WINELIB_TYPE_AW(DOCINFO)
02932 DECL_WINELIB_TYPE_AW(LPDOCINFO)
02933
02934 #define DI_APPBANDING          0x0001
02935
02936 /* Flags for PolyDraw and GetPath */
02937 #define PT_CLOSEFIGURE         0x0001
02938 #define PT_LINETO               0x0002
02939 #define PT_BEZIERTO             0x0004
02940 #define PT_MOVETO               0x0006
02941
02942 #define RDH_RECTANGLES         1
02943
02944 typedef struct _RGNDATAHEADER {
02945     DWORD    dwSize;
02946     DWORD    iType;

```

```

02947     DWORD    nCount;
02948     DWORD    nRgnSize;
02949     RECT      rcBound;
02950 } RGNDATAHEADER,*PRGNDATAHEADER;
02951
02952 typedef struct _RGNDATA {
02953     RGNDATAHEADER rdh;
02954     char          Buffer[1];
02955 } RGNDATA,*PRGNDATA,*LPRGNDATA;
02956
02957 typedef BOOL CALLBACK (*ABORTPROC)(HDC, INT);
02958
02959 typedef struct {
02960     DWORD    cb;
02961     CHAR      DeviceName[32];
02962     CHAR      DeviceString[128];
02963     DWORD     StateFlags;
02964     CHAR      DeviceID[128];
02965     CHAR      DeviceKey[128];
02966 } DISPLAY_DEVICEA,*PDISPLAY_DEVICEA,*LPDISPLAY_DEVICEA;
02967
02968 typedef struct {
02969     DWORD    cb;
02970     WCHAR     DeviceName[32];
02971     WCHAR     DeviceString[128];
02972     DWORD     StateFlags;
02973     WCHAR     DeviceID[128];
02974     WCHAR     DeviceKey[128];
02975 } DISPLAY_DEVICEW,*PDISPLAY_DEVICEW,*LPDISPLAY_DEVICEW;
02976 DECL_WINELIB_TYPE_AW(DISPLAY_DEVICE)
02977 DECL_WINELIB_TYPE_AW(PDISPLAY_DEVICE)
02978 DECL_WINELIB_TYPE_AW(LPDISPLAY_DEVICE)
02979
02980 /* DISPLAY_DEVICE.StateFlags (?) */
02981 #define DISPLAY_DEVICE_ATTACHED_TO_DESKTOP 0x00000001
02982 #define DISPLAY_DEVICE_MULTI_DRIVER        0x00000002
02983 #define DISPLAY_DEVICE_PRIMARY_DEVICE      0x00000004
02984 #define DISPLAY_DEVICE_MIRRORING_DRIVER    0x00000008
02985 #define DISPLAY_DEVICE_VGA_COMPATIBLE      0x00000010
02986
02987 #define GDI_ERROR                          (0xFFFFFFFFL)
02988 #define HGDI_ERROR                         ((HANDLE)0xFFFFFFFFL)
02989
02990 INT      WINAPI AbortDoc(HDC);
02991 BOOL     WINAPI AbortPath(HDC);
02992 INT      WINAPI AddFontResourceA(LPCSTR);
02993 INT      WINAPI AddFontResourceW(LPCWSTR);
02994 #define AddFontResource WINELIB_NAME_AW(AddFontResource)
02995 BOOL     WINAPI AngleArc(HDC, INT, INT, DWORD, FLOAT, FLOAT);
02996 BOOL     WINAPI AnimatePalette(HPALETTE,UINT,UINT,const PALETTEENTRY*);
02997 BOOL     WINAPI Arc(HDC,INT,INT,INT,INT,INT,INT,INT,INT);
02998 BOOL     WINAPI ArcTo(HDC, INT, INT, INT, INT, INT, INT, INT, INT);
02999 BOOL     WINAPI BeginPath(HDC);
03000 BOOL     WINAPI BitBlt(HDC,INT,INT,INT,INT,HDC,INT,INT,DWORD);
03001 INT      WINAPI ChoosePixelFormat(HDC,const LPPIXELFORMATDESCRIPTOR);
03002 BOOL     WINAPI Chord(HDC,INT,INT,INT,INT,INT,INT,INT,INT);
03003 HENHMETAFILE WINAPI CloseEnhMetaFile(HDC);
03004 BOOL     WINAPI CloseFigure(HDC);
03005 HMETAFILE WINAPI CloseMetaFile(HDC);
03006 INT      WINAPI CombineRgn(HRGN,HRGN,HRGN,INT);
03007 BOOL     WINAPI CombineTransform(LPXFORM,const XFORM *,const XFORM *);
03008 HENHMETAFILE WINAPI CopyEnhMetaFileA(HENHMETAFILE,LPCSTR);
03009 HENHMETAFILE WINAPI CopyEnhMetaFileW(HENHMETAFILE,LPCWSTR);
03010 #define CopyEnhMetaFile WINELIB_NAME_AW(CopyEnhMetaFile)
03011 HMETAFILE WINAPI CopyMetaFileA(HMETAFILE,LPCSTR);
03012 HMETAFILE WINAPI CopyMetaFileW(HMETAFILE,LPCWSTR);
03013 #define CopyMetaFile WINELIB_NAME_AW(CopyMetaFile)
03014 HBITMAP  WINAPI CreateBitmap(INT,INT,UINT,UINT,LPCVOID);
03015 HBITMAP  WINAPI CreateBitmapIndirect(const BITMAP*);
03016 HBRUSH   WINAPI CreateBrushIndirect(const LOGBRUSH*);
03017 HCOLORSPACE WINAPI CreateColorSpaceA(LPLOGCOLORSPACEA);
03018 HCOLORSPACE WINAPI CreateColorSpaceW(LPLOGCOLORSPACEW);
03019 #define CreateColorSpace WINELIB_NAME_AW(CreateColorSpace)
03020 HBITMAP  WINAPI CreateCompatibleBitmap(HDC,INT,INT);
03021 HDC       WINAPI CreateCompatibleDC(HDC);
03022 HDC       WINAPI CreateDCA(LPCSTR,LPCSTR,LPCSTR,const DEVMODEA*);
03023 HDC       WINAPI CreateDCW(LPCWSTR,LPCWSTR,LPCWSTR,const DEVMODEW*);
03024 #define CreateDC WINELIB_NAME_AW(CreateDC)
03025 HBITMAP  WINAPI CreateDIBitmap(HDC,const BITMAPINFOHEADER*,DWORD,
03026                                LPCVOID,const BITMAPINFO*,UINT);
03027 HBRUSH   WINAPI CreateDIBPatternBrush(HGLOBAL,UINT);
03028 HBRUSH   WINAPI CreateDIBPatternBrushPt(const void*,UINT);
03029 HBITMAP  WINAPI CreateDIBSection(HDC,BITMAPINFO *,UINT,
03030                                LPVOID *,HANDLE,DWORD offset);
03031 HBITMAP  WINAPI CreateDiscardableBitmap(HDC,INT,INT);
03032 HRGN     WINAPI CreateEllipticRgn(INT,INT,INT,INT);
03033 HRGN     WINAPI CreateEllipticRgnIndirect(const RECT *);

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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,LPOVOID,const RECT*);
03079 INT      WINAPI EnumFontFamiliesA(HDC,LPCSTR,FONTENUMPROCA,LPARAM);
03080 INT      WINAPI EnumFontFamiliesW(HDC,LPCWSTR,FONTENUMPROCW,LPARAM);
03081 #define      EnumFontFamilies WINELIB_NAME_AW(EnumFontFamilies)
03082 INT      WINAPI EnumFontFamiliesExA(HDC,LPLOGFONTA,FONTENUMPROCEXA,LPARAM,DWORD);
03083 INT      WINAPI EnumFontFamiliesExW(HDC,LPLOGFONTW,FONTENUMPROCEXW,LPARAM,DWORD);
03084 #define      EnumFontFamiliesEx WINELIB_NAME_AW(EnumFontFamiliesEx)
03085 INT      WINAPI EnumFontsA(HDC,LPCSTR,FONTENUMPROCA,LPARAM);
03086 INT      WINAPI EnumFontsW(HDC,LPCWSTR,FONTENUMPROCW,LPARAM);
03087 #define      EnumFonts WINELIB_NAME_AW(EnumFonts)
03088 BOOL      WINAPI EnumMetaFile(HDC,HMETAFILE,MFENUMPROC,LPARAM);
03089 INT      WINAPI EnumObjects(HDC,INT,GOBJENUMPROC,LPARAM);
03090 BOOL      WINAPI EqualRgn(HRGN,HRGN);
03091 INT      WINAPI Escape(HDC,INT,INT,LPCSTR,LPOVOID);
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,LPOINT);
03106 BOOL      WINAPI FlattenPath(HDC);
03107 BOOL      WINAPI FloodFill(HDC,INT,INT,COLORREF);
03108 BOOL      WINAPI FrameRgn(HDC,HRGN,HBRUSH,INT,INT);
03109 BOOL      WINAPI GdiComment(HDC,UINT,const BYTE *);
03110 BOOL      WINAPI GdiFlush(void);
03111 INT      WINAPI GetArcDirection(HDC);
03112 BOOL      WINAPI GetAspectRatioFilterEx(HDC,LPSIZE);
03113 LONG      WINAPI GetBitmapBits(HBITMAP,LONG,LPOVOID);
03114 BOOL      WINAPI GetBitmapDimensionEx(HBITMAP,LPSIZE);
03115 BOOL      WINAPI GetBrushOrgEx(HDC,LPOINT);
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);

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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);
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, 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, LPRGNDDATA);
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, 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, LPVOID);

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03208 BOOL      WINAPI GetTextExtentExPointW(HDC, LPCWSTR, INT, INT,
03209                                             LPINT, LPINT, LPSIZE);
03210 BOOL      WINAPI GetTextExtentPointA(HDC, LPCSTR, INT, LPSIZE);
03211 BOOL      WINAPI GetTextExtentPointW(HDC, LPCWSTR, INT, LPSIZE);
03212 #define      GetTextExtentPoint WINELIB_NAME_AW(GetTextExtentPoint)
03213 BOOL      WINAPI GetTextExtentPoint32A(HDC, LPCSTR, INT, LPSIZE);
03214 BOOL      WINAPI GetTextExtentPoint32W(HDC, LPCWSTR, INT, LPSIZE);
03215 #define      GetTextExtentPoint32 WINELIB_NAME_AW(GetTextExtentPoint32)
03216 #define      GetTextExtentExPoint WINELIB_NAME_AW(GetTextExtentExPoint)
03217 INT      WINAPI GetTextFaceA(HDC, INT, LPSTR);
03218 INT      WINAPI GetTextFaceW(HDC, INT, LPWSTR);
03219 #define      GetTextFace WINELIB_NAME_AW(GetTextFace)
03220 BOOL      WINAPI GetTextMetricsA(HDC, LPTEXTMETRICA);
03221 BOOL      WINAPI GetTextMetricsW(HDC, LPTEXTMETRICW);
03222 #define      GetTextMetrics WINELIB_NAME_AW(GetTextMetrics)
03223 BOOL      WINAPI GetViewportExtEx(HDC, LPSIZE);
03224 BOOL      WINAPI GetViewportOrgEx(HDC, LPPOINT);
03225 BOOL      WINAPI GetWindowExtEx(HDC, LPSIZE);
03226 BOOL      WINAPI GetWindowOrgEx(HDC, LPPOINT);
03227 BOOL      WINAPI GetWorldTransform(HDC, LPXFORM);
03228 INT      WINAPI IntersectClipRect(HDC, INT, INT, INT, INT);
03229 BOOL      WINAPI InvertRgn(HDC, HRGN);
03230 BOOL      WINAPI LineDDA(INT, INT, INT, INT, LINEDDAPROC, LPARAM);
03231 BOOL      WINAPI LineTo(HDC, INT, INT);
03232 BOOL      WINAPI LpToDP(HDC, LPPOINT, INT);
03233 BOOL      WINAPI MaskBlt(HDC, INT, INT, INT, INT, HDC, INT, INT, HBITMAP, INT, INT, DWORD);
03234 BOOL      WINAPI ModifyWorldTransform(HDC, const XFORM *, DWORD);
03235 BOOL      WINAPI MoveToEx(HDC, INT, INT, LPPOINT);
03236 /* FIXME This is defined in kernel32.spec !*/
03237 INT      WINAPI MulDiv(INT, INT, INT);
03238 INT      WINAPI OffsetClipRgn(HDC, INT, INT);
03239 INT      WINAPI OffsetRgn(HRGN, INT, INT);
03240 BOOL      WINAPI OffsetViewportOrgEx(HDC, INT, INT, LPPOINT);
03241 BOOL      WINAPI OffsetWindowOrgEx(HDC, INT, INT, LPPOINT);
03242 BOOL      WINAPI PaintRgn(HDC, HRGN);
03243 BOOL      WINAPI PatBlt(HDC, INT, INT, INT, INT, DWORD);
03244 HRGN      WINAPI PathToRegion(HDC);
03245 BOOL      WINAPI Pie(HDC, INT, INT, INT, INT, INT, INT, INT);
03246 BOOL      WINAPI PlayEnhMetaFile(HDC, HENHMETAFILE, const RECT*);
03247 BOOL      WINAPI PlayEnhMetaFileRecord(HDC, LPHANDLETABLE, const ENHMETARECORD*, UINT);
03248 BOOL      WINAPI PlayMetaFile(HDC, HMETAFILE);
03249 BOOL      WINAPI PlayMetaFileRecord(HDC, LPHANDLETABLE, LPMETARECORD, UINT);
03250 BOOL      WINAPI PlgBlt(HDC, const POINT*, HDC, INT, INT, INT, INT, HBITMAP, INT, INT);
03251 BOOL      WINAPI PolyBezier(HDC, const POINT*, DWORD);
03252 BOOL      WINAPI PolyBezierTo(HDC, const POINT*, DWORD);
03253 BOOL      WINAPI PolyDraw(HDC, const POINT*, const BYTE*, DWORD);
03254 BOOL      WINAPI PolyPolygon(HDC, const POINT*, const INT*, UINT);
03255 BOOL      WINAPI PolyPolyline(HDC, const POINT*, const DWORD*, DWORD);
03256 BOOL      WINAPI Polygon(HDC, const POINT*, INT);
03257 BOOL      WINAPI Polyline(HDC, const POINT*, INT);
03258 BOOL      WINAPI PolylineTo(HDC, const POINT*, DWORD);
03259 BOOL      WINAPI PtInRegion(HRGN, INT, INT);
03260 BOOL      WINAPI PtVisible(HDC, INT, INT);
03261 UINT      WINAPI RealizePalette(HDC);
03262 BOOL      WINAPI Rectangle(HDC, INT, INT, INT, INT);
03263 BOOL      WINAPI RectInRegion(HRGN, const RECT *);
03264 BOOL      WINAPI RectVisible(HDC, const RECT*);
03265 BOOL      WINAPI RemoveFontResourceA(LPCSTR);
03266 BOOL      WINAPI RemoveFontResourceW(LPCWSTR);
03267 #define      RemoveFontResource WINELIB_NAME_AW(RemoveFontResource)
03268 HDC      WINAPI ResetDCA(HDC, const DEVMODEA *);
03269 HDC      WINAPI ResetDCW(HDC, const DEVMODEW *);
03270 #define      ResetDC WINELIB_NAME_AW(ResetDC)
03271 BOOL      WINAPI ResizePalette(HPALETTE, UINT);
03272 BOOL      WINAPI RestoreDC(HDC, INT);
03273 BOOL      WINAPI RoundRect(HDC, INT, INT, INT, INT, INT, INT);
03274 INT      WINAPI SaveDC(HDC);
03275 BOOL      WINAPI ScaleViewportExtEx(HDC, INT, INT, INT, INT, LPSIZE);
03276 BOOL      WINAPI ScaleWindowExtEx(HDC, INT, INT, INT, INT, LPSIZE);
03277 BOOL      WINAPI SelectClipPath(HDC, INT);
03278 INT      WINAPI SelectClipRgn(HDC, HRGN);
03279 HGDIOBJ      WINAPI SelectObject(HDC, HGDIOBJ);
03280 HPALETTE      WINAPI SelectPalette(HDC, HPALETTE, BOOL);
03281 INT      WINAPI SetAbortProc(HDC, ABORTPROC);
03282 INT      WINAPI SetArcDirection(HDC, INT);
03283 LONG      WINAPI SetBitmapBits(HBITMAP, LONG, LPCVOID);
03284 BOOL      WINAPI SetBitmapDimensionEx(HBITMAP, INT, INT, LPSIZE);
03285 COLORREF      WINAPI SetBkColor(HDC, COLORREF);
03286 INT      WINAPI SetBkMode(HDC, INT);
03287 UINT      WINAPI SetBoundsRect(HDC, const RECT*, UINT);
03288 BOOL      WINAPI SetBrushOrgEx(HDC, INT, INT, LPPOINT);
03289 BOOL      WINAPI SetColorAdjustment(HDC, const COLORADJUSTMENT*);
03290 HCOLORSPACE      WINAPI SetColorSpace(HDC, HCOLORSPACE);
03291 BOOL      WINAPI SetDeviceGammaRamp(HDC, LPVOID);
03292 UINT      WINAPI SetDIBColorTable(HDC, UINT, UINT, RGBQUAD*);
03293 INT      WINAPI SetDIBits(HDC, HBITMAP, UINT, UINT, LPCVOID, const BITMAPINFO*, UINT);
03294 INT      WINAPI SetDIBitsToDevice(HDC, INT, INT, DWORD, DWORD, INT,

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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,LPPPOINT);
03321 BOOL         WINAPI SetWindowExtEx(HDC,INT,INT,LPSIZE);
03322 BOOL         WINAPI SetWindowOrgEx(HDC,INT,INT,LPPPOINT);
03323 HENHMETAFILE WINAPI SetWinMetaFileBits(UINT,CONST BYTE*,HDC,CONST METAFILEPICT *);
03324 BOOL         WINAPI SetWorldTransform(HDC,const XFORM*);
03325 INT          WINAPI StartDocA(HDC,const DOCINFOA*);
03326 INT          WINAPI StartDocW(HDC,const DOCINFOW*);
03327 #define       StartDoc WINELIB_NAME_AW(StartDoc)
03328 INT          WINAPI StartPage(HDC);
03329 INT          WINAPI EndPage(HDC);
03330 BOOL         WINAPI StretchBlt(HDC,INT,INT,INT,INT,HDC,INT,
03331                               INT,INT,INT,DWORD);
03332 INT          WINAPI StretchDIBits(HDC,INT,INT,INT,INT,INT,INT,
03333                                   INT,INT,const VOID*,const BITMAPINFO*,UINT,DWORD);
03334 BOOL         WINAPI StrokeAndFillPath(HDC);
03335 BOOL         WINAPI StrokePath(HDC);
03336 BOOL         WINAPI SwapBuffers(HDC);
03337 BOOL         WINAPI TextOutA(HDC,INT,INT,LPCSTR,INT);
03338 BOOL         WINAPI TextOutW(HDC,INT,INT,LPCWSTR,INT);
03339 #define       TextOut WINELIB_NAME_AW(TextOut)
03340 BOOL         WINAPI TranslateCharsetInfo(LPDWORD,LPCHARSETINFO,DWORD);
03341 BOOL         WINAPI UnrealizeObject(HGDIOBJ);
03342 BOOL         WINAPI UpdateColors(HDC);
03343 BOOL         WINAPI WidenPath(HDC);
03344 BOOL         WINAPI PolyTextOutA(HDC,PPOLYTEXTA,INT);
03345 BOOL         WINAPI PolyTextOutW(HDC,PPOLYTEXTW,INT);
03346 #define       PolyTextOut WINELIB_NAME_AW(PolyTextOut)
03347
03348 #ifdef __cplusplus
03349 }
03350 #endif
03351
03352 #endif /* !NOGDI */
03353 #endif /* _WINGDI_ */

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5.12 winnt.h

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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

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```

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(__sparc__)
00053  # define WORDS_BIGENDIAN
00054  # define BITFIELDS_BIGENDIAN
00055  # undef ALLOW_UNALIGNED_ACCESS
00056  #elif defined(__PPC__)
00057  # define WORDS_BIGENDIAN
00058  # define BITFIELDS_BIGENDIAN
00059  # undef ALLOW_UNALIGNED_ACCESS
00060  #elif defined(__s390__)
00061  # define WORDS_BIGENDIAN
00062  # define BITFIELDS_BIGENDIAN
00063  # undef ALLOW_UNALIGNED_ACCESS
00064  #elif defined(__e2k__)
00065  # undef WORDS_BIGENDIAN
00066  # undef BITFIELDS_BIGENDIAN
00067  # undef ALLOW_UNALIGNED_ACCESS
00068  #elif defined(__MIPSEB__)
00069  # define WORDS_BIGENDIAN
00070  # define BITFIELDS_BIGENDIAN
00071  # undef ALLOW_UNALIGNED_ACCESS
00072  #elif !defined(RC_INVOKED)
00073  # error Unknown CPU architecture!
00074 #endif
00075
00076
00077 #ifndef DECLSPEC_ALIGN
00078 # if defined(_MSC_VER) && (_MSC_VER >= 1300) && !defined(MIDL_PASS)
00079 #  define DECLSPEC_ALIGN(x) __declspec(align(x))
00080 # elif defined(__GNUC__)
00081 #  define DECLSPEC_ALIGN(x) __attribute__((aligned(x)))
00082 # else
00083 #  define DECLSPEC_ALIGN(x)
00084 # endif
00085 #endif
00086
00087
00088 /* Calling conventions definitions */
00089
00090 #ifdef __i386__
00091 # ifndef __X86__
00092 #  define __X86__
00093 # endif
00094 # if defined(__GNUC__) && ((__GNUC__ > 2) || ((__GNUC__ == 2) && (__GNUC_MINOR__ >= 7)))
00095 #  define __stdcall __attribute__((stdcall))
00096 #  define __cdecl __attribute__((cdecl))
00097 # else
00098 #  error You need gcc >= 2.7 to build Wine on a 386
00099 # endif /* __GNUC__ */
00100 #else /* __i386__ */
00101 # define __stdcall
00102 # define __cdecl
00103 #endif /* __i386__ */
00104
00105 #ifndef __WINE__
00106 #define pascal __stdcall
00107 #define _pascal __stdcall
00108 #ifndef __stdcall
00109 #define __stdcall __stdcall

```

```

00110 #endif
00111 #ifndef _fastcall
00112 #define _fastcall __stdcall
00113 #endif
00114 #ifndef __fastcall
00115 #define __fastcall __stdcall
00116 #endif
00117 #define __export __stdcall
00118 #define cdecl __cdecl
00119 #ifndef _cdecl
00120 #define _cdecl __cdecl
00121 #endif
00122
00123 #define near
00124 #define far
00125 #define _near
00126 #define _far
00127 #define NEAR
00128 #define FAR
00129
00130 #ifndef _declspec
00131 #define _declspec(x)
00132 #endif
00133 #ifndef __declspec
00134 #define __declspec(x)
00135 #endif
00136 #endif /* __WINE__ */
00137
00138 #define CALLBACK __stdcall
00139 #if 0
00140 #define WINAPI __stdcall
00141 #else
00142 #define WINAPI __attribute__((visibility("default")))
00143 #endif
00144 #define APIPRIVATE __stdcall
00145 #define PASCAL __stdcall
00146 #define CDECL __cdecl
00147 #define _CDECL __cdecl
00148 #define WINAPIV __cdecl
00149 #define APIENTRY WINAPI
00150 #define CONST const
00151
00152 /* Macro for structure packing and more. */
00153
00154 #ifdef __GNUC__
00155 #define WINE_PACKED __attribute__((packed))
00156 #define WINE_UNUSED __attribute__((unused))
00157 #define WINE_NORETURN __attribute__((noreturn))
00158 #else
00159 #define WINE_PACKED /* nothing */
00160 #define WINE_UNUSED /* nothing */
00161 #define WINE_NORETURN /* nothing */
00162 #endif
00163
00164 /* Anonymous union/struct handling */
00165
00166 #ifdef __WINE__
00167 # define NONAMELESSSTRUCT
00168 # define NONAMELESSUNION
00169 #else
00170 #if !defined(__cplusplus)
00171 /* for c we can keep the anonymous version (to avoid compiler warnings) */
00172 #define NONAMELESSSTRUCT
00173 #define NONAMELESSUNION
00174 #else
00175 /* Anonymous struct support starts with gcc/g++ 2.96 */
00176 # if !defined(NONAMELESSSTRUCT) && defined(__GNUC__) && ((__GNUC__ < 2) || ((__GNUC__ == 2) &&
    (__GNUC_MINOR__ < 96)))
00177 /* && !defined(__cplusplus) */
00178 # define NONAMELESSSTRUCT
00179 # endif
00180 /* Anonymous unions support starts with gcc 2.96/g++ 2.95 */
00181 # if !defined(NONAMELESSUNION) && defined(__GNUC__) && ((__GNUC__ < 2) || ((__GNUC__ == 2) &&
    (__GNUC_MINOR__ < 95) || ((__GNUC_MINOR__ == 95) && !defined(__cplusplus))))
00182 # define NONAMELESSUNION
00183 # endif
00184 #endif
00185 #endif
00186
00187 #ifndef NONAMELESSSTRUCT
00188 #define DUMMYSTRUCTNAME
00189 #define DUMMYSTRUCTNAME1
00190 #define DUMMYSTRUCTNAME2
00191 #define DUMMYSTRUCTNAME3
00192 #define DUMMYSTRUCTNAME4
00193 #define DUMMYSTRUCTNAME5
00194 #else /* !defined(NONAMELESSSTRUCT) */

```

```

00195 #define DUMMYSTRUCTNAME    s
00196 #define DUMMYSTRUCTNAME1    s1
00197 #define DUMMYSTRUCTNAME2    s2
00198 #define DUMMYSTRUCTNAME3    s3
00199 #define DUMMYSTRUCTNAME4    s4
00200 #define DUMMYSTRUCTNAME5    s5
00201 #endif /* !defined(NONAMELESSSTRUCT) */
00202
00203 #ifndef NONAMELESSUNION
00204 #define DUMMYUNIONNAME
00205 #define DUMMYUNIONNAME1
00206 #define DUMMYUNIONNAME2
00207 #define DUMMYUNIONNAME3
00208 #define DUMMYUNIONNAME4
00209 #define DUMMYUNIONNAME5
00210 #define DUMMYUNIONNAME6
00211 #define DUMMYUNIONNAME7
00212 #define DUMMYUNIONNAME8
00213 #else /* !defined(NONAMELESSUNION) */
00214 #define DUMMYUNIONNAME    u
00215 #define DUMMYUNIONNAME1    u1
00216 #define DUMMYUNIONNAME2    u2
00217 #define DUMMYUNIONNAME3    u3
00218 #define DUMMYUNIONNAME4    u4
00219 #define DUMMYUNIONNAME5    u5
00220 #define DUMMYUNIONNAME6    u6
00221 #define DUMMYUNIONNAME7    u7
00222 #define DUMMYUNIONNAME8    u8
00223 #endif /* !defined(NONAMELESSUNION) */
00224
00225
00226 /**** Parts of windef.h that are needed here *****/
00227
00228 /* Misc. constants. */
00229
00230 #undef NULL
00231 #ifdef __cplusplus
00232 #define NULL    0
00233 #else
00234 #define NULL    ((void*)0)
00235 #endif
00236
00237 #ifdef FALSE
00238 #undef FALSE
00239 #endif
00240 #define FALSE    0
00241
00242 #ifdef TRUE
00243 #undef TRUE
00244 #endif
00245 #define TRUE    1
00246
00247 #ifndef IN
00248 #define IN
00249 #endif
00250
00251 #ifndef OUT
00252 #define OUT
00253 #endif
00254
00255 #ifndef OPTIONAL
00256 #define OPTIONAL
00257 #endif
00258
00259 /* Standard data types */
00260 typedef const void            *PCVOID,    *LPCVOID;
00261 typedef int                  BOOL,        *PBOOL,    *LPBOOL;
00262 typedef unsigned char        BYTE,        *PBYTE,    *LPBYTE;
00263 typedef unsigned char        UCHAR,        *PUCHAR;
00264 typedef unsigned short        USHORT,        *PUSHORT,    *LPUSHORT;
00265 typedef unsigned short        WORD,        *PWORD,    *LPWORD;
00266 typedef int                  INT,        *PINT,    *LPINT;
00267 typedef unsigned int          UINT,        *PUINT,    *LPUINT;
00268 /* Not sure this is correct. Probably should depend on the compiler, too. */
00269 #if defined( __LP64__ ) || defined( __alpha__ )
00270 typedef unsigned int          DWORD,        *PDWORD,    *LPDWORD;
00271 typedef unsigned int          ULONG,        *PULONG,    *LPULONG;
00272 #else
00273 typedef unsigned long         DWORD,        *PDWORD,    *LPDWORD;
00274 typedef unsigned long         ULONG,        *PULONG,    *LPULONG;
00275 #endif
00276 typedef float                FLOAT,        *PFLOAT,    *LPFLOAT;
00277 typedef double               DOUBLE,        *PDOUBLE,    *LPDOUBLE;
00278 typedef double               DATE;
00279
00280
00281 /**** winnt.h proper *****/

```

```

00282
00283 /* Microsoft's macros for declaring functions */
00284
00285 #ifdef __cplusplus
00286 # define EXTERN_C      extern "C"
00287 #else
00288 # define EXTERN_C      extern
00289 #endif
00290
00291 #ifndef __WINE__
00292 #define STDMETHODCALLTYPE      __stdcall
00293 #define STDMETHODVCALLTYPE     __cdecl
00294 #define STDAPICALLTYPE         __stdcall
00295 #define STDAPIVCALLTYPE        __cdecl
00296
00297 #define STDAPI                 EXTERN_C HRESULT STDMETHODCALLTYPE
00298 #define STDAPI_(type)          EXTERN_C type STDMETHODCALLTYPE
00299 #define STDMETHODCALLTYPEIMP   HRESULT STDMETHODCALLTYPE
00300 #define STDMETHODCALLTYPEIMP_(type) type STDMETHODCALLTYPE
00301 #define STDAPIV                 EXTERN_C HRESULT STDAPIVCALLTYPE
00302 #define STDAPIV_(type)          EXTERN_C type STDAPIVCALLTYPE
00303 #define STDMETHODCALLTYPEIMPV   HRESULT STDMETHODCALLTYPE
00304 #define STDMETHODCALLTYPEIMPV_(type) type STDMETHODCALLTYPE
00305 #endif
00306
00307 /* Define the basic types */
00308 #ifndef VOID
00309 #define VOID void
00310 #endif
00311 #define VOID *PVOID, *LPVOID;
00312 #define BYTE BOOLEAN, *PBOOLEAN;
00313 #define char CHAR, *PCHAR;
00314 #define short SHORT, *PSHORT;
00315 #if defined(__LP64__) || defined(__alpha__)
00316 #define int LONG, *PLONG, *LPLONG;
00317 #else
00318 #define long LONG, *PLONG, *LPLONG;
00319 #endif
00320
00321 /* Some systems might have wchar_t, but we really need 16 bit characters */
00322 #ifndef WINE_WCHAR_DEFINED
00323 #ifdef WINE_UNICODE_NATIVE
00324 #define wchar_t WCHAR, *PWCHAR;
00325 #else
00326 #define unsigned short WCHAR, *PWCHAR;
00327 #endif
00328 #define WINE_WCHAR_DEFINED
00329 #endif
00330
00331 /* 'Extended/Wide' numerical types */
00332 #ifndef _ULONGLONG_
00333 #define _ULONGLONG_
00334 #define __int64 LONGLONG, *PLONGLONG;
00335 #define __uint64 ULONGLONG, *PULONGLONG;
00336 #endif
00337
00338 #ifndef _DWORDLONG_
00339 #define _DWORDLONG_
00340 #define ULONGLONG DWORDLONG, *PDWORDLONG;
00341 #endif
00342
00343 /* ANSI string types */
00344 #define CHAR *PCH, *LPCH;
00345 #define const CHAR *PCCH, *LPCCH;
00346 #define CHAR *PSTR, *LPSTR;
00347 #define const CHAR *PCSTR, *LPCSTR;
00348
00349 /* Unicode string types */
00350 #define WCHAR *PWCH, *LPWCH;
00351 #define const WCHAR *PCWCH, *LPCWCH;
00352 #define WCHAR *PWSTR, *LPWSTR;
00353 #define const WCHAR *PCWSTR, *LPCWSTR;
00354
00355 /* Neutral character and string types */
00356 /* These are only defined for Winelib, i.e. _not_ defined for
00357 * the emulator. The reason is they depend on the UNICODE
00358 * macro which only exists in the user's code.
00359 */
00360 #ifndef __WINE__
00361 # ifdef WINE_UNICODE_REWRITE
00362
00363 /* Use this if your compiler does not provide a 16bit wchar_t type.
00364 * Note that you will need to specify -fwritable-strings or an option
00365 * to this effect.
00366 * In C++ both WINE_UNICODE_TEXT('c') and WINE_UNICODE_TEXT("str") are
00367 * supported, but only the string form can be supported in C.
00368 */

```

```

00369 EXTERN_C unsigned short* wine_rewrite_s4tos2(const wchar_t* str4);
00370 # ifdef __cplusplus
00371 inline WCHAR* wine_unicode_text(const wchar_t* str4)
00372 {
00373     return (WCHAR*)wine_rewrite_s4tos2(str4);
00374 }
00375 inline WCHAR wine_unicode_text(wchar_t chr4)
00376 {
00377     return (WCHAR)chr4;
00378 }
00379 # define WINE_UNICODE_TEXT(x) wine_unicode_text(L##x)
00380 # else /* __cplusplus */
00381 # define WINE_UNICODE_TEXT(x) ((WCHAR*)wine_rewrite_s4tos2(L##x))
00382 # endif /* __cplusplus */
00383
00384 # else /* WINE_UNICODE_REWRITE */
00385
00386 /* Define WINE_UNICODE_NATIVE if:
00387  * - your compiler provides a 16bit wchar_t type, e.g. gcc >= 2.96 with
00388  * -fshort-wchar option
00389  * - or if you decide to use the native 32bit Unix wchar_t type. Be aware
00390  * though that the Wine APIs only support 16bit WCHAR characters for
00391  * binary compatibility reasons.
00392  * - or define nothing at all if you don't use Unicode, and blissfully
00393  * ignore the issue :-)
00394  */
00395 # define WINE_UNICODE_TEXT(string) L##string
00396
00397 # endif /* WINE_UNICODE_REWRITE */
00398
00399 # ifdef UNICODE
00400 typedef WCHAR TCHAR, *PTCHAR;
00401 typedef LPWSTR PTSTR, *LPCTSTR;
00402 typedef LPCWSTR PCTSTR, *LPCTSTR;
00403 # define __TEXT(string) WINE_UNICODE_TEXT(string)
00404 # else /* UNICODE */
00405 typedef CHAR TCHAR, *PTCHAR;
00406 typedef LPSTR PTSTR, *LPCTSTR;
00407 typedef LPCSTR PCTSTR, *LPCTSTR;
00408 # define __TEXT(string) string
00409 # endif /* UNICODE */
00410 # define TEXT(quote) __TEXT(quote)
00411 #endif /* __WINE__ */
00412
00413 /* Misc common WIN32 types */
00414 typedef LONG HRESULT;
00415 typedef DWORD LCID, *PLCID;
00416 typedef WORD LANGID;
00417 typedef DWORD EXECUTION_STATE;
00418
00419 /* Handle type */
00420
00421 /* FIXME: Wine does not compile with strict on, therefore strict
00422  * handles are presently only usable on machines where sizeof(UINT) ==
00423  * sizeof(void*). HANDLES are supposed to be void* but a large amount
00424  * of WINE code operates on HANDLES as if they are UINTs. So to WINE
00425  * they exist as UINTs but to the Winelib user who turns on strict,
00426  * they exist as void*. If there is a size difference between UINT and
00427  * void* then things get ugly.
00428  *
00429  * Here is the plan to convert Wine to STRICT:
00430  *
00431  * Types will be converted one at a time by volunteers who will compile
00432  * Wine with STRICT turned on. Handles that have not been converted yet
00433  * will be declared with DECLARE_OLD_HANDLE. Converted handles are
00434  * declared with DECLARE_HANDLE.
00435  * See the bug report 90 for more details:
00436  * http://wine.codeweavers.com/bugzilla/show\_bug.cgi?id=90
00437  */
00438 /*
00439  * when compiling Wine we always treat HANDLE as an UINT. Then when
00440  * we're ready we'll remove the '!defined(__WINE__)' (the equivalent
00441  * of converting it from DECLARE_OLD_HANDLE to DECLARE_HANDLE).
00442  */
00443 #if defined(STRICT) && !defined(__WINE__)
00444 typedef VOID* HANDLE;
00445 #define DECLARE_OLD_HANDLE(a) \
00446     typedef struct a##__ { int unused; } *a; \
00447     typedef a *P##a, *LP##a
00448
00449 #else
00450 typedef UINT HANDLE;
00451 #define DECLARE_OLD_HANDLE(a) \
00452     typedef HANDLE a; \
00453     typedef a *P##a, *LP##a
00454 #endif
00455 typedef HANDLE *PHANDLE, *LPHANDLE;

```

```

00456
00457 #ifndef STRICT
00458 #define DECLARE_HANDLE(a) \
00459     typedef struct a##_ { int unused; } *a; \
00460     typedef a *P##a, *LP##a
00461 #else /*STRICT*/
00462 #define DECLARE_HANDLE(a) \
00463     typedef HANDLE a; \
00464     typedef a *P##a, *LP##a
00465 #endif /*STRICT*/
00466
00467 /* Defines */
00468
00469 /* Argument 1 passed to the DllEntryProc. */
00470 #define DLL_PROCESS_DETACH 0 /* detach process (unload library) */
00471 #define DLL_PROCESS_ATTACH 1 /* attach process (load library) */
00472 #define DLL_THREAD_ATTACH 2 /* attach new thread */
00473 #define DLL_THREAD_DETACH 3 /* detach thread */
00474
00475
00476 /* u.x.wProcessorArchitecture (NT) */
00477 #define PROCESSOR_ARCHITECTURE_INTEL 0
00478 #define PROCESSOR_ARCHITECTURE_MIPS 1
00479 #define PROCESSOR_ARCHITECTURE_ALPHA 2
00480 #define PROCESSOR_ARCHITECTURE_PPC 3
00481 #define PROCESSOR_ARCHITECTURE_SHX 4
00482 #define PROCESSOR_ARCHITECTURE_ARM 5
00483 #define PROCESSOR_ARCHITECTURE_UNKNOWN 0xFFFF
00484
00485 /* dwProcessorType */
00486 #define PROCESSOR_INTEL_386 386
00487 #define PROCESSOR_INTEL_486 486
00488 #define PROCESSOR_INTEL_PENTIUM 586
00489 #define PROCESSOR_INTEL_860 860
00490 #define PROCESSOR_MIPS_R2000 2000
00491 #define PROCESSOR_MIPS_R3000 3000
00492 #define PROCESSOR_MIPS_R4000 4000
00493 #define PROCESSOR_ALPHA_21064 21064
00494 #define PROCESSOR_PPC_601 601
00495 #define PROCESSOR_PPC_603 603
00496 #define PROCESSOR_PPC_604 604
00497 #define PROCESSOR_PPC_620 620
00498 #define PROCESSOR_HITACHI_SH3 10003
00499 #define PROCESSOR_HITACHI_SH3E 10004
00500 #define PROCESSOR_HITACHI_SH4 10005
00501 #define PROCESSOR_MOTOROLA_821 821
00502 #define PROCESSOR_SHx_SH3 103
00503 #define PROCESSOR_SHx_SH4 104
00504 #define PROCESSOR_STRONGARM 2577
00505 #define PROCESSOR_ARM720 1824 /* 0x720 */
00506 #define PROCESSOR_ARM820 2080 /* 0x820 */
00507 #define PROCESSOR_ARM920 2336 /* 0x920 */
00508 #define PROCESSOR_ARM_7TDMI 70001
00509
00510 typedef struct _MEMORY_BASIC_INFORMATION
00511 {
00512     LPVOID BaseAddress;
00513     LPVOID AllocationBase;
00514     DWORD AllocationProtect;
00515     DWORD RegionSize;
00516     DWORD State;
00517     DWORD Protect;
00518     DWORD Type;
00519 } MEMORY_BASIC_INFORMATION, *LPMEMORY_BASIC_INFORMATION, *PMEMORY_BASIC_INFORMATION;
00520
00521 #define PAGE_NOACCESS 0x01
00522 #define PAGE_READONLY 0x02
00523 #define PAGE_READWRITE 0x04
00524 #define PAGE_WRITECOPY 0x08
00525 #define PAGE_EXECUTE 0x10
00526 #define PAGE_EXECUTE_READ 0x20
00527 #define PAGE_EXECUTE_READWRITE 0x40
00528 #define PAGE_EXECUTE_WRITECOPY 0x80
00529 #define PAGE_GUARD 0x100
00530 #define PAGE_NOCACHE 0x200
00531
00532 #define MEM_COMMIT 0x00001000
00533 #define MEM_RESERVE 0x00002000
00534 #define MEM_DECOMMIT 0x00004000
00535 #define MEM_RELEASE 0x00008000
00536 #define MEM_FREE 0x00010000
00537 #define MEM_PRIVATE 0x00020000
00538 #define MEM_MAPPED 0x00040000
00539 #define MEM_RESET 0x00080000
00540 #define MEM_TOP_DOWN 0x00100000
00541 #ifndef __WINE__
00542 #define MEM_SYSTEM 0x80000000

```

```

00543 #endif
00544
00545 #define SEC_FILE 0x00800000
00546 #define SEC_IMAGE 0x01000000
00547 #define SEC_RESERVE 0x04000000
00548 #define SEC_COMMIT 0x08000000
00549 #define SEC_NOCACHE 0x10000000
00550 #define MEM_IMAGE SEC_IMAGE
00551
00552
00553 #define MINCHAR 0x80
00554 #define MAXCHAR 0x7f
00555 #define MINSHORT 0x8000
00556 #define MAXSHORT 0x7fff
00557 #define MINLONG 0x80000000
00558 #define MAXLONG 0x7fffffff
00559 #define MAXBYTE 0xff
00560 #define MAXWORD 0xffff
00561 #define MAXDWORD 0xffffffff
00562
00563 #define FIELD_OFFSET(type, field) \
00564     ((LONG)(INT)&((type *)0)->field))
00565
00566 #define CONTAINING_RECORD(address, type, field) \
00567     ((type *)((PCHAR)(address) - (PCHAR)&((type *)0)->field))
00568
00569 /* Types */
00570
00571 typedef struct _LIST_ENTRY {
00572     struct _LIST_ENTRY *Flink;
00573     struct _LIST_ENTRY *Blink;
00574 } LIST_ENTRY, *PLIST_ENTRY;
00575
00576 typedef struct _SINGLE_LIST_ENTRY {
00577     struct _SINGLE_LIST_ENTRY *Next;
00578 } SINGLE_LIST_ENTRY, *PSINGLE_LIST_ENTRY;
00579
00580 /* Heap flags */
00581
00582 #define HEAP_NO_SERIALIZE 0x00000001
00583 #define HEAP_GROWABLE 0x00000002
00584 #define HEAP_GENERATE_EXCEPTIONS 0x00000004
00585 #define HEAP_ZERO_MEMORY 0x00000008
00586 #define HEAP_REALLOC_IN_PLACE_ONLY 0x00000010
00587 #define HEAP_TAIL_CHECKING_ENABLED 0x00000020
00588 #define HEAP_FREE_CHECKING_ENABLED 0x00000040
00589 #define HEAP_DISABLE_COALESCE_ON_FREE 0x00000080
00590 #define HEAP_CREATE_ALIGN_16 0x00010000
00591 #define HEAP_CREATE_ENABLE_TRACING 0x00020000
00592
00593 /* This flag allows it to create heaps shared by all processes under win95,
00594     FIXME: correct name */
00595 #define HEAP_SHARED 0x04000000
00596
00597 /* Processor feature flags. */
00598 #define PF_FLOATING_POINT_PRECISION_ERRATA 0
00599 #define PF_FLOATING_POINT_EMULATED 1
00600 #define PF_COMPARE_EXCHANGE_DOUBLE 2
00601 #define PF_MMX_INSTRUCTIONS_AVAILABLE 3
00602 #define PF_PPC_MOVEMEM_64BIT_OK 4
00603 #define PF_ALPHA_BYTE_INSTRUCTIONS 5
00604 #define PF_XMMI_INSTRUCTIONS_AVAILABLE 6
00605 #define PF_AMD3D_INSTRUCTIONS_AVAILABLE 7
00606 #define PF_RDTSC_INSTRUCTION_AVAILABLE 8
00607
00608
00609 /* Execution state flags */
00610 #define ES_SYSTEM_REQUIRED 0x00000001
00611 #define ES_DISPLAY_REQUIRED 0x00000002
00612 #define ES_USER_PRESENT 0x00000004
00613 #define ES_CONTINUOUS 0x80000000
00614
00615 /* The Win32 register context */
00616
00617 /* CONTEXT is the CPU-dependent context; it should be used
00618 /* wherever a platform-specific context is needed (e.g. exception
00619 /* handling, Win32 register functions). */
00620
00621 /* CONTEXT86 is the i386-specific context; it should be used
00622 /* wherever only a 386 context makes sense (e.g. DOS interrupts,
00623 /* Win16 register functions), so that this code can be compiled
00624 /* on all platforms. */
00625
00626 #define SIZE_OF_80387_REGISTERS 80
00627
00628 typedef struct _FLOATING_SAVE_AREA
00629 {

```



```
00630     DWORD    ControlWord;
00631     DWORD    StatusWord;
00632     DWORD    TagWord;
00633     DWORD    ErrorOffset;
00634     DWORD    ErrorSelector;
00635     DWORD    DataOffset;
00636     DWORD    DataSelector;
00637     BYTE     RegisterArea[SIZE_OF_80387_REGISTERS];
00638     DWORD    Cr0NpxState;
00639 } FLOATING_SAVE_AREA, *PFLOATING_SAVE_AREA;
00640
00641 #define MAXIMUM_SUPPORTED_EXTENSION    512
00642
00643 typedef struct _CONTEXT86
00644 {
00645     DWORD    ContextFlags;
00646
00647     /* These are selected by CONTEXT_DEBUG_REGISTERS */
00648     DWORD    Dr0;
00649     DWORD    Dr1;
00650     DWORD    Dr2;
00651     DWORD    Dr3;
00652     DWORD    Dr6;
00653     DWORD    Dr7;
00654
00655     /* These are selected by CONTEXT_FLOATING_POINT */
00656     FLOATING_SAVE_AREA FloatSave;
00657
00658     /* These are selected by CONTEXT_SEGMENTS */
00659     DWORD    SegGs;
00660     DWORD    SegFs;
00661     DWORD    SegEs;
00662     DWORD    SegDs;
00663
00664     /* These are selected by CONTEXT_INTEGER */
00665     DWORD    Edi;
00666     DWORD    Esi;
00667     DWORD    Ebx;
00668     DWORD    Edx;
00669     DWORD    Ecx;
00670     DWORD    Eax;
00671
00672     /* These are selected by CONTEXT_CONTROL */
00673     DWORD    Ebp;
00674     DWORD    Eip;
00675     DWORD    SegCs;
00676     DWORD    EFlags;
00677     DWORD    Esp;
00678     DWORD    SegSs;
00679
00680     BYTE     ExtendedRegisters[MAXIMUM_SUPPORTED_EXTENSION];
00681 } CONTEXT86;
00682
00683 #define CONTEXT_X86            0x00010000
00684 #define CONTEXT_i386          CONTEXT_X86
00685 #define CONTEXT_i486          CONTEXT_X86
00686
00687 #define CONTEXT86_CONTROL      (CONTEXT_i386 | 0x0001) /* SS:SP, CS:IP, FLAGS, BP */
00688 #define CONTEXT86_INTEGER      (CONTEXT_i386 | 0x0002) /* AX, BX, CX, DX, SI, DI */
00689 #define CONTEXT86_SEGMENTS     (CONTEXT_i386 | 0x0004) /* DS, ES, FS, GS */
00690 #define CONTEXT86_FLOATING_POINT (CONTEXT_i386 | 0x0008L) /* 387 state */
00691 #define CONTEXT86_DEBUG_REGISTERS (CONTEXT_i386 | 0x0010L) /* DB 0-3,6,7 */
00692 #define CONTEXT86_FULL         (CONTEXT86_CONTROL | CONTEXT86_INTEGER | CONTEXT86_SEGMENTS)
00693
00694 /* i386 context definitions */
00695 #ifdef __i386__
00696
00697 #define CONTEXT_CONTROL        CONTEXT86_CONTROL
00698 #define CONTEXT_INTEGER        CONTEXT86_INTEGER
00699 #define CONTEXT_SEGMENTS       CONTEXT86_SEGMENTS
00700 #define CONTEXT_FLOATING_POINT CONTEXT86_FLOATING_POINT
00701 #define CONTEXT_DEBUG_REGISTERS CONTEXT86_DEBUG_REGISTERS
00702 #define CONTEXT_FULL           CONTEXT86_FULL
00703
00704 typedef CONTEXT86 CONTEXT;
00705
00706 #endif /* __i386__ */
00707
00708 /* x86-64 context definitions */
00709 #if defined(__x86_64__)
00710
00711 #define CONTEXT_AMD64          0x00100000
00712
00713 #define CONTEXT_CONTROL        (CONTEXT_AMD64 | 0x0001)
00714 #define CONTEXT_INTEGER        (CONTEXT_AMD64 | 0x0002)
00715 #define CONTEXT_SEGMENTS       (CONTEXT_AMD64 | 0x0004)
00716 #define CONTEXT_FLOATING_POINT (CONTEXT_AMD64 | 0x0008L)
```

```

00717 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_AMD64 | 0x0010L)
00718 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER | CONTEXT_FLOATING_POINT)
00719 #define CONTEXT_ALL (CONTEXT_CONTROL | CONTEXT_INTEGER | CONTEXT_SEGMENTS | CONTEXT_FLOATING_POINT |
CONTEXT_DEBUG_REGISTERS)
00720
00721 #define EXCEPTION_READ_FAULT 0
00722 #define EXCEPTION_WRITE_FAULT 1
00723 #define EXCEPTION_EXECUTE_FAULT 8
00724
00725 typedef struct DECLSPEC_ALIGN(16) _M128A {
00726     ULONGLONG Low;
00727     ULONGLONG High;
00728 } M128A, *PM128A;
00729
00730 typedef struct _XMM_SAVE_AREA32 {
00731     WORD ControlWord; /* 000 */
00732     WORD StatusWord; /* 002 */
00733     BYTE TagWord; /* 004 */
00734     BYTE Reserved1; /* 005 */
00735     WORD ErrorOpcode; /* 006 */
00736     DWORD ErrorOffset; /* 008 */
00737     WORD ErrorSelector; /* 00c */
00738     WORD Reserved2; /* 00e */
00739     DWORD DataOffset; /* 010 */
00740     WORD DataSelector; /* 014 */
00741     WORD Reserved3; /* 016 */
00742     DWORD MxCsr; /* 018 */
00743     DWORD MxCsr_Mask; /* 01c */
00744     M128A FloatRegisters[8]; /* 020 */
00745     M128A XmmRegisters[16]; /* 0a0 */
00746     BYTE Reserved4[96]; /* 1a0 */
00747 } XMM_SAVE_AREA32, *PXMM_SAVE_AREA32;
00748
00749 typedef struct DECLSPEC_ALIGN(16) _CONTEXT {
00750     DWORD64 P1Home; /* 000 */
00751     DWORD64 P2Home; /* 008 */
00752     DWORD64 P3Home; /* 010 */
00753     DWORD64 P4Home; /* 018 */
00754     DWORD64 P5Home; /* 020 */
00755     DWORD64 P6Home; /* 028 */
00756
00757     /* Control flags */
00758     DWORD ContextFlags; /* 030 */
00759     DWORD MxCsr; /* 034 */
00760
00761     /* Segment */
00762     WORD SegCs; /* 038 */
00763     WORD SegDs; /* 03a */
00764     WORD SegEs; /* 03c */
00765     WORD SegFs; /* 03e */
00766     WORD SegGs; /* 040 */
00767     WORD SegSs; /* 042 */
00768     DWORD EFlags; /* 044 */
00769
00770     /* Debug */
00771     DWORD64 Dr0; /* 048 */
00772     DWORD64 Dr1; /* 050 */
00773     DWORD64 Dr2; /* 058 */
00774     DWORD64 Dr3; /* 060 */
00775     DWORD64 Dr6; /* 068 */
00776     DWORD64 Dr7; /* 070 */
00777
00778     /* Integer */
00779     DWORD64 Rax; /* 078 */
00780     DWORD64 Rcx; /* 080 */
00781     DWORD64 Rdx; /* 088 */
00782     DWORD64 Rbx; /* 090 */
00783     DWORD64 Rsp; /* 098 */
00784     DWORD64 Rbp; /* 0a0 */
00785     DWORD64 Rsi; /* 0a8 */
00786     DWORD64 Rdi; /* 0b0 */
00787     DWORD64 R8; /* 0b8 */
00788     DWORD64 R9; /* 0c0 */
00789     DWORD64 R10; /* 0c8 */
00790     DWORD64 R11; /* 0d0 */
00791     DWORD64 R12; /* 0d8 */
00792     DWORD64 R13; /* 0e0 */
00793     DWORD64 R14; /* 0e8 */
00794     DWORD64 R15; /* 0f0 */
00795
00796     /* Counter */
00797     DWORD64 Rip; /* 0f8 */
00798
00799     /* Floating point */
00800     union {
00801         XMM_SAVE_AREA32 FltSave; /* 100 */
00802         struct {

```

```
00803         M128A Header[2];          /* 100 */
00804         M128A Legacy[8];          /* 120 */
00805         M128A Xmm0;               /* 1a0 */
00806         M128A Xmm1;               /* 1b0 */
00807         M128A Xmm2;               /* 1c0 */
00808         M128A Xmm3;               /* 1d0 */
00809         M128A Xmm4;               /* 1e0 */
00810         M128A Xmm5;               /* 1f0 */
00811         M128A Xmm6;               /* 200 */
00812         M128A Xmm7;               /* 210 */
00813         M128A Xmm8;               /* 220 */
00814         M128A Xmm9;               /* 230 */
00815         M128A Xmm10;              /* 240 */
00816         M128A Xmm11;              /* 250 */
00817         M128A Xmm12;              /* 260 */
00818         M128A Xmm13;              /* 270 */
00819         M128A Xmm14;              /* 280 */
00820         M128A Xmm15;              /* 290 */
00821     } DUMMYSTRUCTNAME;
00822 } DUMMYUNIONNAME;
00823
00824 /* Vector */
00825 M128A VectorRegister[26];         /* 300 */
00826 DWORD64 VectorControl;            /* 4a0 */
00827
00828 /* Debug control */
00829 DWORD64 DebugControl;              /* 4a8 */
00830 DWORD64 LastBranchToRip;           /* 4b0 */
00831 DWORD64 LastBranchFromRip;         /* 4b8 */
00832 DWORD64 LastExceptionToRip;        /* 4c0 */
00833 DWORD64 LastExceptionFromRip;      /* 4c8 */
00834 } CONTEXT;
00835
00836 typedef struct _RUNTIME_FUNCTION
00837 {
00838     DWORD BeginAddress;
00839     DWORD EndAddress;
00840     DWORD UnwindData;
00841 } RUNTIME_FUNCTION, *PRUNTIME_FUNCTION;
00842
00843 #define UNWIND_HISTORY_TABLE_SIZE 12
00844
00845 typedef struct _UNWIND_HISTORY_TABLE_ENTRY
00846 {
00847     ULONG64 ImageBase;
00848     PRUNTIME_FUNCTION FunctionEntry;
00849 } UNWIND_HISTORY_TABLE_ENTRY, *PUNWIND_HISTORY_TABLE_ENTRY;
00850
00851 #define UNWIND_HISTORY_TABLE_NONE 0
00852 #define UNWIND_HISTORY_TABLE_GLOBAL 1
00853 #define UNWIND_HISTORY_TABLE_LOCAL 2
00854
00855 typedef struct _UNWIND_HISTORY_TABLE
00856 {
00857     ULONG Count;
00858     UCHAR Search;
00859     ULONG64 LowAddress;
00860     ULONG64 HighAddress;
00861     UNWIND_HISTORY_TABLE_ENTRY Entry[UNWIND_HISTORY_TABLE_SIZE];
00862 } UNWIND_HISTORY_TABLE, *PUNWIND_HISTORY_TABLE;
00863
00864 typedef struct _KNONVOLATILE_CONTEXT_POINTERS
00865 {
00866     union
00867     {
00868         PM128A FloatingContext[16];
00869         struct
00870         {
00871             PM128A Xmm0;
00872             PM128A Xmm1;
00873             PM128A Xmm2;
00874             PM128A Xmm3;
00875             PM128A Xmm4;
00876             PM128A Xmm5;
00877             PM128A Xmm6;
00878             PM128A Xmm7;
00879             PM128A Xmm8;
00880             PM128A Xmm9;
00881             PM128A Xmm10;
00882             PM128A Xmm11;
00883             PM128A Xmm12;
00884             PM128A Xmm13;
00885             PM128A Xmm14;
00886             PM128A Xmm15;
00887         } DUMMYSTRUCTNAME1;
00888     } DUMMYUNIONNAME1;
00889 }
```

```

00890     union
00891     {
00892         PULONG64 IntegerContext[16];
00893         struct
00894         {
00895             PULONG64 Rax;
00896             PULONG64 Rcx;
00897             PULONG64 Rdx;
00898             PULONG64 Rbx;
00899             PULONG64 Rsp;
00900             PULONG64 Rbp;
00901             PULONG64 Rsi;
00902             PULONG64 Rdi;
00903             PULONG64 R8;
00904             PULONG64 R9;
00905             PULONG64 R10;
00906             PULONG64 R11;
00907             PULONG64 R12;
00908             PULONG64 R13;
00909             PULONG64 R14;
00910             PULONG64 R15;
00911         } DUMMYSTRUCTNAME2;
00912     } DUMMYUNIONNAME2;
00913 } KNONVOLATILE_CONTEXT_POINTERS, *PKNONVOLATILE_CONTEXT_POINTERS;
00914
00915 BOOLEAN CDECL RtlAddFunctionTable (RUNTIME_FUNCTION*, DWORD, DWORD64);
00916 BOOLEAN CDECL RtlDeleteFunctionTable (RUNTIME_FUNCTION*);
00917 PRUNTIME_FUNCTION WINAPI RtlLookupFunctionEntry (DWORD64, DWORD64*, UNWIND_HISTORY_TABLE*);
00918 PVOID WINAPI
00919     RtlVirtualUnwind (ULONG, ULONG64, ULONG64, RUNTIME_FUNCTION*, CONTEXT*, PVOID*, ULONG64*, KNONVOLATILE_CONTEXT_POINTERS*);
00920 #define UNW_FLAG_NHANDLER 0
00921 #define UNW_FLAG_EHANDLER 1
00922 #define UNW_FLAG_UHANDLER 2
00923 #define UNW_FLAG_CHAININFO 4
00924
00925 #endif /* __x86_64__ */
00926
00927 /* Alpha context definitions */
00928 #if defined(__alpha__)
00929 #define CONTEXT_ALPHA 0x00020000
00930
00931 #define CONTEXT_CONTROL (CONTEXT_ALPHA | 0x00000001L)
00932 #define CONTEXT_FLOATING_POINT (CONTEXT_ALPHA | 0x00000002L)
00933 #define CONTEXT_INTEGER (CONTEXT_ALPHA | 0x00000004L)
00934 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
00935
00936 typedef struct _CONTEXT
00937 {
00938     /* selected by CONTEXT_FLOATING_POINT */
00939     ULONGLONG FltF0;
00940     ULONGLONG FltF1;
00941     ULONGLONG FltF2;
00942     ULONGLONG FltF3;
00943     ULONGLONG FltF4;
00944     ULONGLONG FltF5;
00945     ULONGLONG FltF6;
00946     ULONGLONG FltF7;
00947     ULONGLONG FltF8;
00948     ULONGLONG FltF9;
00949     ULONGLONG FltF10;
00950     ULONGLONG FltF11;
00951     ULONGLONG FltF12;
00952     ULONGLONG FltF13;
00953     ULONGLONG FltF14;
00954     ULONGLONG FltF15;
00955     ULONGLONG FltF16;
00956     ULONGLONG FltF17;
00957     ULONGLONG FltF18;
00958     ULONGLONG FltF19;
00959     ULONGLONG FltF20;
00960     ULONGLONG FltF21;
00961     ULONGLONG FltF22;
00962     ULONGLONG FltF23;
00963     ULONGLONG FltF24;
00964     ULONGLONG FltF25;
00965     ULONGLONG FltF26;
00966     ULONGLONG FltF27;
00967     ULONGLONG FltF28;
00968     ULONGLONG FltF29;
00969     ULONGLONG FltF30;
00970     ULONGLONG FltF31;
00971
00972     /* selected by CONTEXT_INTEGER */
00973     ULONGLONG IntV0;
00974     ULONGLONG IntT0;

```

```
00976     ULONGLONG IntT1;
00977     ULONGLONG IntT2;
00978     ULONGLONG IntT3;
00979     ULONGLONG IntT4;
00980     ULONGLONG IntT5;
00981     ULONGLONG IntT6;
00982     ULONGLONG IntT7;
00983     ULONGLONG IntS0;
00984     ULONGLONG IntS1;
00985     ULONGLONG IntS2;
00986     ULONGLONG IntS3;
00987     ULONGLONG IntS4;
00988     ULONGLONG IntS5;
00989     ULONGLONG IntFp;
00990     ULONGLONG IntA0;
00991     ULONGLONG IntA1;
00992     ULONGLONG IntA2;
00993     ULONGLONG IntA3;
00994     ULONGLONG IntA4;
00995     ULONGLONG IntA5;
00996     ULONGLONG IntT8;
00997     ULONGLONG IntT9;
00998     ULONGLONG IntT10;
00999     ULONGLONG IntT11;
01000     ULONGLONG IntRa;
01001     ULONGLONG IntT12;
01002     ULONGLONG IntAt;
01003     ULONGLONG IntGp;
01004     ULONGLONG IntSp;
01005     ULONGLONG IntZero;
01006
01007     /* selected by CONTEXT_FLOATING_POINT */
01008     ULONGLONG FpCr;
01009     ULONGLONG SoftFpCr;
01010
01011     /* selected by CONTEXT_CONTROL */
01012     ULONGLONG Fir;
01013     DWORD Psr;
01014     DWORD ContextFlags;
01015     DWORD Fill[4];
01016 } CONTEXT;
01017
01018 #define _QUAD_PSR_OFFSET    HighSoftFpCr
01019 #define _QUAD_FLAGS_OFFSET  HighFir
01020
01021 #endif /* _ALPHA_ */
01022
01023 /* Mips context definitions */
01024 #if defined(_MIPS_) || defined(__MIPS__) || defined(__mips__)
01025
01026 #define CONTEXT_R4000    0x00010000
01027
01028 #define CONTEXT_CONTROL    (CONTEXT_R4000 | 0x00000001)
01029 #define CONTEXT_FLOATING_POINT    (CONTEXT_R4000 | 0x00000002)
01030 #define CONTEXT_INTEGER    (CONTEXT_R4000 | 0x00000004)
01031
01032 #define CONTEXT_FULL    (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01033
01034 typedef struct _CONTEXT
01035 {
01036     DWORD Argument[4];
01037     /* These are selected by CONTEXT_FLOATING_POINT */
01038     DWORD FltF0;
01039     DWORD FltF1;
01040     DWORD FltF2;
01041     DWORD FltF3;
01042     DWORD FltF4;
01043     DWORD FltF5;
01044     DWORD FltF6;
01045     DWORD FltF7;
01046     DWORD FltF8;
01047     DWORD FltF9;
01048     DWORD FltF10;
01049     DWORD FltF11;
01050     DWORD FltF12;
01051     DWORD FltF13;
01052     DWORD FltF14;
01053     DWORD FltF15;
01054     DWORD FltF16;
01055     DWORD FltF17;
01056     DWORD FltF18;
01057     DWORD FltF19;
01058     DWORD FltF20;
01059     DWORD FltF21;
01060     DWORD FltF22;
01061     DWORD FltF23;
01062     DWORD FltF24;
```

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01063     DWORD FltF25;
01064     DWORD FltF26;
01065     DWORD FltF27;
01066     DWORD FltF28;
01067     DWORD FltF29;
01068     DWORD FltF30;
01069     DWORD FltF31;
01070
01071     /* These are selected by CONTEXT_INTEGER */
01072     DWORD IntZero;
01073     DWORD IntAt;
01074     DWORD IntV0;
01075     DWORD IntV1;
01076     DWORD IntA0;
01077     DWORD IntA1;
01078     DWORD IntA2;
01079     DWORD IntA3;
01080     DWORD IntT0;
01081     DWORD IntT1;
01082     DWORD IntT2;
01083     DWORD IntT3;
01084     DWORD IntT4;
01085     DWORD IntT5;
01086     DWORD IntT6;
01087     DWORD IntT7;
01088     DWORD IntS0;
01089     DWORD IntS1;
01090     DWORD IntS2;
01091     DWORD IntS3;
01092     DWORD IntS4;
01093     DWORD IntS5;
01094     DWORD IntS6;
01095     DWORD IntS7;
01096     DWORD IntT8;
01097     DWORD IntT9;
01098     DWORD IntK0;
01099     DWORD IntK1;
01100     DWORD IntGp;
01101     DWORD IntSp;
01102     DWORD IntS8;
01103     DWORD IntRa;
01104     DWORD IntLo;
01105     DWORD IntHi;
01106
01107     /* These are selected by CONTEXT_FLOATING_POINT */
01108     DWORD Fsr;
01109
01110     /* These are selected by CONTEXT_CONTROL */
01111     DWORD Fir;
01112     DWORD Psr;
01113
01114     DWORD ContextFlags;
01115     DWORD Fill[2];
01116 } CONTEXT;
01117
01118 #endif /* _MIPS_ */
01119
01120 /* PowerPC context definitions */
01121 #ifdef __PPC__
01122
01123 #define CONTEXT_CONTROL          0x0001
01124 #define CONTEXT_FLOATING_POINT  0x0002
01125 #define CONTEXT_INTEGER         0x0004
01126 #define CONTEXT_DEBUG_REGISTERS 0x0008
01127 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01128
01129 typedef struct
01130 {
01131     /* These are selected by CONTEXT_FLOATING_POINT */
01132     double Fpr0;
01133     double Fpr1;
01134     double Fpr2;
01135     double Fpr3;
01136     double Fpr4;
01137     double Fpr5;
01138     double Fpr6;
01139     double Fpr7;
01140     double Fpr8;
01141     double Fpr9;
01142     double Fpr10;
01143     double Fpr11;
01144     double Fpr12;
01145     double Fpr13;
01146     double Fpr14;
01147     double Fpr15;
01148     double Fpr16;
01149     double Fpr17;

```

```
01150     double Fpr18;
01151     double Fpr19;
01152     double Fpr20;
01153     double Fpr21;
01154     double Fpr22;
01155     double Fpr23;
01156     double Fpr24;
01157     double Fpr25;
01158     double Fpr26;
01159     double Fpr27;
01160     double Fpr28;
01161     double Fpr29;
01162     double Fpr30;
01163     double Fpr31;
01164     double Fpscr;
01165
01166     /* These are selected by CONTEXT_INTEGER */
01167     DWORD Gpr0;
01168     DWORD Gpr1;
01169     DWORD Gpr2;
01170     DWORD Gpr3;
01171     DWORD Gpr4;
01172     DWORD Gpr5;
01173     DWORD Gpr6;
01174     DWORD Gpr7;
01175     DWORD Gpr8;
01176     DWORD Gpr9;
01177     DWORD Gpr10;
01178     DWORD Gpr11;
01179     DWORD Gpr12;
01180     DWORD Gpr13;
01181     DWORD Gpr14;
01182     DWORD Gpr15;
01183     DWORD Gpr16;
01184     DWORD Gpr17;
01185     DWORD Gpr18;
01186     DWORD Gpr19;
01187     DWORD Gpr20;
01188     DWORD Gpr21;
01189     DWORD Gpr22;
01190     DWORD Gpr23;
01191     DWORD Gpr24;
01192     DWORD Gpr25;
01193     DWORD Gpr26;
01194     DWORD Gpr27;
01195     DWORD Gpr28;
01196     DWORD Gpr29;
01197     DWORD Gpr30;
01198     DWORD Gpr31;
01199
01200     DWORD Cr;
01201     DWORD Xer;
01202
01203     /* These are selected by CONTEXT_CONTROL */
01204     DWORD Msr;
01205     DWORD Iar;
01206     DWORD Lr;
01207     DWORD Ctr;
01208
01209     DWORD ContextFlags;
01210     DWORD Fill[3];
01211
01212     /* These are selected by CONTEXT_DEBUG_REGISTERS */
01213     DWORD Dr0;
01214     DWORD Dr1;
01215     DWORD Dr2;
01216     DWORD Dr3;
01217     DWORD Dr4;
01218     DWORD Dr5;
01219     DWORD Dr6;
01220     DWORD Dr7;
01221 } CONTEXT;
01222
01223 typedef struct _STACK_FRAME_HEADER
01224 {
01225     DWORD BackChain;
01226     DWORD GlueSaved1;
01227     DWORD GlueSaved2;
01228     DWORD Reserved1;
01229     DWORD Spare1;
01230     DWORD Spare2;
01231
01232     DWORD Parameter0;
01233     DWORD Parameter1;
01234     DWORD Parameter2;
01235     DWORD Parameter3;
01236     DWORD Parameter4;
```

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01237     DWORD Parameter5;
01238     DWORD Parameter6;
01239     DWORD Parameter7;
01240 } STACK_FRAME_HEADER, *PSTACK_FRAME_HEADER;
01241
01242 #endif /* __PPC__ */
01243
01244 #ifdef __sparc__
01245
01246 /*
01247  * FIXME:
01248  *
01249  * There is no official CONTEXT structure defined for the SPARC
01250  * architecture, so I just made one up.
01251  *
01252  * This structure is valid only for 32-bit SPARC architectures,
01253  * not for 64-bit SPARC.
01254  *
01255  * Note that this structure contains only the 'top-level' registers;
01256  * the rest of the register window chain is not visible.
01257  *
01258  * The layout follows the Solaris 'prgregset_t' structure.
01259  *
01260  */
01261
01262 #define CONTEXT_SPARC          0x10000000
01263
01264 #define CONTEXT_CONTROL        (CONTEXT_SPARC | 0x00000001)
01265 #define CONTEXT_FLOATING_POINT (CONTEXT_SPARC | 0x00000002)
01266 #define CONTEXT_INTEGER        (CONTEXT_SPARC | 0x00000004)
01267
01268 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01269
01270 typedef struct _CONTEXT
01271 {
01272     DWORD ContextFlags;
01273
01274     /* These are selected by CONTEXT_INTEGER */
01275     DWORD g0;
01276     DWORD g1;
01277     DWORD g2;
01278     DWORD g3;
01279     DWORD g4;
01280     DWORD g5;
01281     DWORD g6;
01282     DWORD g7;
01283     DWORD o0;
01284     DWORD o1;
01285     DWORD o2;
01286     DWORD o3;
01287     DWORD o4;
01288     DWORD o5;
01289     DWORD o6;
01290     DWORD o7;
01291     DWORD l0;
01292     DWORD l1;
01293     DWORD l2;
01294     DWORD l3;
01295     DWORD l4;
01296     DWORD l5;
01297     DWORD l6;
01298     DWORD l7;
01299     DWORD i0;
01300     DWORD i1;
01301     DWORD i2;
01302     DWORD i3;
01303     DWORD i4;
01304     DWORD i5;
01305     DWORD i6;
01306     DWORD i7;
01307
01308     /* These are selected by CONTEXT_CONTROL */
01309     DWORD psr;
01310     DWORD pc;
01311     DWORD npc;
01312     DWORD y;
01313     DWORD wim;
01314     DWORD tbr;
01315
01316     /* FIXME: floating point registers missing */
01317
01318 } CONTEXT;
01319
01320 #endif /* __sparc__ */
01321
01322 #ifdef __s390__
01323

```



```

01324 /*
01325  * FIXME:
01326  *
01327  * There is no official CONTEXT structure defined for the S390
01328  * architecture, so I just made one up.
01329  *
01330  * Note that this structure contains only the 'top-level' registers;
01331  * the rest of the register window chain is not visible.
01332  *
01333  * The layout is based on the sparc one.
01334  *
01335  */
01336
01337 #define CONTEXT_S390C                0x20000000
01338
01339 #define CONTEXT_CONTROL              (CONTEXT_S390 | 0x00000001)
01340 #define CONTEXT_FLOATING_POINT      (CONTEXT_S390 | 0x00000002)
01341 #define CONTEXT_INTEGER              (CONTEXT_S390 | 0x00000004)
01342
01343 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_FLOATING_POINT | CONTEXT_INTEGER)
01344
01345 typedef struct _CONTEXT
01346 {
01347     DWORD ContextFlags;
01348
01349     /* These are selected by CONTEXT_INTEGER */
01350     DWORD r0;
01351     DWORD r1;
01352     DWORD r2;
01353     DWORD r3;
01354     DWORD r4;
01355     DWORD r5;
01356     DWORD r6;
01357     DWORD r7;
01358     DWORD r8;
01359     DWORD r9;
01360     DWORD r10;
01361     DWORD r11;
01362     DWORD r12;
01363     DWORD r13;
01364     DWORD r14;
01365     DWORD r15;
01366
01367     /* FIXME: this section is fictional (copied from sparc) */
01368     DWORD psr;
01369     DWORD pc;
01370     DWORD npc;
01371     DWORD y;
01372     DWORD wim;
01373     DWORD tbr;
01374
01375     /* FIXME: floating point registers missing */
01376 } CONTEXT;
01377
01378 #endif /* __s390__ */
01379
01380 #ifdef __arm__
01381
01382 /* These definitions are taken directly from wine
01383  * http://source.winehq.org/git/wine.git/blob\_plain/HEAD:/include/winnt.h */
01384
01385 /* The following flags control the contents of the CONTEXT structure. */
01386
01387 #define CONTEXT_ARM                0x02000000
01388 #define CONTEXT_CONTROL            (CONTEXT_ARM | 0x00000001)
01389 #define CONTEXT_INTEGER            (CONTEXT_ARM | 0x00000002)
01390 #define CONTEXT_FLOATING_POINT    (CONTEXT_ARM | 0x00000004)
01391 #define CONTEXT_DEBUG_REGISTERS   (CONTEXT_ARM | 0x00000008)
01392
01393 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01394
01395 #define EXCEPTION_READ_FAULT      0
01396 #define EXCEPTION_WRITE_FAULT     1
01397 #define EXCEPTION_EXECUTE_FAULT   8
01398
01399 typedef struct _CONTEXT {
01400     /* The flags values within this flag control the contents of
01401      * a CONTEXT record.
01402      *
01403      * If the context record is used as an input parameter, then
01404      * for each portion of the context record controlled by a flag
01405      * whose value is set, it is assumed that that portion of the
01406      * context record contains valid context. If the context record
01407      * is being used to modify a thread's context, then only that
01408      * portion of the threads context will be modified.
01409      */
01410

```

```

01411  * If the context record is used as an IN OUT parameter to capture
01412  * the context of a thread, then only those portions of the thread's
01413  * context corresponding to set flags will be returned.
01414  *
01415  * The context record is never used as an OUT only parameter. */
01416
01417 ULONG ContextFlags;
01418
01419 /* This section is specified/returned if the ContextFlags word contains
01420  * the flag CONTEXT_INTEGER. */
01421 ULONG R0;
01422 ULONG R1;
01423 ULONG R2;
01424 ULONG R3;
01425 ULONG R4;
01426 ULONG R5;
01427 ULONG R6;
01428 ULONG R7;
01429 ULONG R8;
01430 ULONG R9;
01431 ULONG R10;
01432 ULONG Fp;
01433 ULONG Ip;
01434
01435 /* These are selected by CONTEXT_CONTROL */
01436 ULONG Sp;
01437 ULONG Lr;
01438 ULONG Pc;
01439 ULONG Cpsr;
01440 } CONTEXT;
01441
01442 #endif /* __arm__ */
01443
01444 #ifdef __aarch64__
01445 /*
01446  * FIXME:
01447  *
01448  * There is not yet an official CONTEXT structure defined for the AArch64
01449  * architecture, so I just made one up.
01450  *
01451  */
01452
01453 /* These definitions are taken directly from wine
01454  * http://source.winehq.org/git/wine.git/blob\_plain/HEAD:/include/winnt.h */
01455
01456 #define CONTEXT_ARM64 0x2000000
01457 #define CONTEXT_CONTROL (CONTEXT_ARM64 | 0x00000001)
01458 #define CONTEXT_INTEGER (CONTEXT_ARM64 | 0x00000002)
01459 #define CONTEXT_FLOATING_POINT (CONTEXT_ARM64 | 0x00000004)
01460 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_ARM64 | 0x00000008)
01461
01462 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01463
01464 #define EXCEPTION_READ_FAULT 0
01465 #define EXCEPTION_WRITE_FAULT 1
01466 #define EXCEPTION_EXECUTE_FAULT 8
01467
01468 typedef struct _CONTEXT {
01469     ULONG ContextFlags;
01470
01471     /* This section is specified/returned if the ContextFlags word contains
01472      * the flag CONTEXT_INTEGER. */
01473     ULONGLONG X0;
01474     ULONGLONG X1;
01475     ULONGLONG X2;
01476     ULONGLONG X3;
01477     ULONGLONG X4;
01478     ULONGLONG X5;
01479     ULONGLONG X6;
01480     ULONGLONG X7;
01481     ULONGLONG X8;
01482     ULONGLONG X9;
01483     ULONGLONG X10;
01484     ULONGLONG X11;
01485     ULONGLONG X12;
01486     ULONGLONG X13;
01487     ULONGLONG X14;
01488     ULONGLONG X15;
01489     ULONGLONG X16;
01490     ULONGLONG X17;
01491     ULONGLONG X18;
01492     ULONGLONG X19;
01493     ULONGLONG X20;
01494     ULONGLONG X21;
01495     ULONGLONG X22;
01496     ULONGLONG X23;
01497     ULONGLONG X24;

```

```

01498     ULONGLONG X25;
01499     ULONGLONG X26;
01500     ULONGLONG X27;
01501     ULONGLONG X28;
01502     ULONGLONG X29;
01503     ULONGLONG X30;
01504
01505     /* These are selected by CONTEXT_CONTROL */
01506     ULONGLONG Sp;
01507     ULONGLONG Pc;
01508     ULONGLONG PState;
01509
01510     /* These are selected by CONTEXT_FLOATING_POINT */
01511     /* FIXME */
01512 } CONTEXT;
01513
01514 #endif /* __aarch64__ */
01515
01516 #ifdef __e2k__
01517 /*
01518  * FIXME:
01519  *
01520  * There is not yet an official CONTEXT structure defined for the
01521  * Elbrus 2000 architecture (64-bit LE), so I just made one up.
01522  *
01523  */
01524
01525 #define CONTEXT_E2K          0x4000000
01526 #define CONTEXT_CONTROL      (CONTEXT_E2K | 0x00000001)
01527 #define CONTEXT_INTEGER      (CONTEXT_E2K | 0x00000002)
01528 #define CONTEXT_FLOATING_POINT (CONTEXT_E2K | 0x00000004)
01529 #define CONTEXT_DEBUG_REGISTERS (CONTEXT_E2K | 0x00000008)
01530
01531 #define CONTEXT_FULL (CONTEXT_CONTROL | CONTEXT_INTEGER)
01532
01533 #define EXCEPTION_READ_FAULT 0
01534 #define EXCEPTION_WRITE_FAULT 1
01535 #define EXCEPTION_EXECUTE_FAULT 8
01536
01537 typedef struct _CONTEXT {
01538     ULONG ContextFlags;
01539
01540     /* This section is specified/returned if the ContextFlags word contains
01541        the flag CONTEXT_INTEGER. */
01542     ULONGLONG X0;
01543     ULONGLONG X1;
01544     ULONGLONG X2;
01545     ULONGLONG X3;
01546     ULONGLONG X4;
01547     ULONGLONG X5;
01548     ULONGLONG X6;
01549     ULONGLONG X7;
01550     ULONGLONG X8;
01551     ULONGLONG X9;
01552     ULONGLONG X10;
01553     ULONGLONG X11;
01554     ULONGLONG X12;
01555     ULONGLONG X13;
01556     ULONGLONG X14;
01557     ULONGLONG X15;
01558     ULONGLONG X16;
01559     ULONGLONG X17;
01560     ULONGLONG X18;
01561     ULONGLONG X19;
01562     ULONGLONG X20;
01563     ULONGLONG X21;
01564     ULONGLONG X22;
01565     ULONGLONG X23;
01566     ULONGLONG X24;
01567     ULONGLONG X25;
01568     ULONGLONG X26;
01569     ULONGLONG X27;
01570     ULONGLONG X28;
01571     ULONGLONG X29;
01572     ULONGLONG X30;
01573
01574     /* These are selected by CONTEXT_CONTROL */
01575     ULONGLONG Sp;
01576     ULONGLONG Pc;
01577     ULONGLONG PState;
01578
01579     /* These are selected by CONTEXT_FLOATING_POINT */
01580     /* FIXME */
01581 } CONTEXT;
01582
01583 #endif /* __e2k__ */
01584

```

```

01585 #if !defined(CONTEXT_FULL) && !defined(RC_INVOKED)
01586 #error You need to define a CONTEXT for your CPU
01587 #endif
01588
01589 typedef CONTEXT *PCONTEXT;
01590
01591 #ifdef __WINE__
01592
01593 /* Macros for easier access to i386 context registers */
01594
01595 #define AX_reg(context)      (*(WORD*)&(context)->Eax)
01596 #define BX_reg(context)      (*(WORD*)&(context)->Ebx)
01597 #define CX_reg(context)      (*(WORD*)&(context)->Ecx)
01598 #define DX_reg(context)      (*(WORD*)&(context)->Edx)
01599 #define SI_reg(context)      (*(WORD*)&(context)->Esi)
01600 #define DI_reg(context)      (*(WORD*)&(context)->Edi)
01601 #define BP_reg(context)      (*(WORD*)&(context)->Ebp)
01602
01603 #define AL_reg(context)      (*(BYTE*)&(context)->Eax)
01604 #define AH_reg(context)      (*(BYTE*)&(context)->Eax + 1))
01605 #define BL_reg(context)      (*(BYTE*)&(context)->Ebx)
01606 #define BH_reg(context)      (*(BYTE*)&(context)->Ebx + 1))
01607 #define CL_reg(context)      (*(BYTE*)&(context)->Ecx)
01608 #define CH_reg(context)      (*(BYTE*)&(context)->Ecx + 1))
01609 #define DL_reg(context)      (*(BYTE*)&(context)->Edx)
01610 #define DH_reg(context)      (*(BYTE*)&(context)->Edx + 1))
01611
01612 #define SET_CFLAG(context)   ((context)->EFlags |= 0x0001)
01613 #define RESET_CFLAG(context) ((context)->EFlags &= ~0x0001)
01614 #define SET_ZFLAG(context)   ((context)->EFlags |= 0x0040)
01615 #define RESET_ZFLAG(context) ((context)->EFlags &= ~0x0040)
01616 #define ISV86(context)      ((context)->EFlags & 0x00020000)
01617
01618
01619 /* Macros to retrieve the current context */
01620
01621 #ifdef NEED_UNDERSCORE_PREFIX
01622 # define __ASM_NAME(name) "_" name
01623 #else
01624 # define __ASM_NAME(name) name
01625 #endif
01626
01627 #ifdef NEED_TYPE_IN_DEF
01628 # define __ASM_FUNC(name) ".def " __ASM_NAME(name) "; .scl 2; .type 32; .endef"
01629 #else
01630 # define __ASM_FUNC(name) ".type " __ASM_NAME(name) ",@function"
01631 #endif
01632
01633 #ifdef __GNUC__
01634 # define __ASM_GLOBAL_FUNC(name,code) \
01635     __asm__( ".align 4\n\t" \
01636             ".globl " __ASM_NAME(#name) "\n\t" \
01637             __ASM_FUNC(#name) "\n\t" \
01638             __ASM_NAME(#name) ":\n\t" \
01639             code );
01640 #else /* __GNUC__ */
01641 # define __ASM_GLOBAL_FUNC(name,code) \
01642     void __asm_dummy_##name(void) { \
01643         asm( ".align 4\n\t" \
01644             ".globl " __ASM_NAME(#name) "\n\t" \
01645             __ASM_FUNC(#name) "\n\t" \
01646             __ASM_NAME(#name) ":\n\t" \
01647             code ); \
01648     }
01649 #endif /* __GNUC__ */
01650
01651 #ifdef __i386__
01652
01653 #define _DEFINE_REGS_ENTRYPOINT( name, fn, args ) \
01654     __ASM_GLOBAL_FUNC( name, \
01655         "call " __ASM_NAME("__wine_call_from_32_regs") "\n\t" \
01656         ".long " __ASM_NAME(#fn) "\n\t" \
01657         ".byte " #args ", " #args )
01658 #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01659     extern void WINAPI name(void); \
01660     _DEFINE_REGS_ENTRYPOINT( name, fn, 0 )
01661 #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01662     extern void WINAPI name( t1 a1 ); \
01663     _DEFINE_REGS_ENTRYPOINT( name, fn, 4 )
01664 #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01665     extern void WINAPI name( t1 a1, t2 a2 ); \
01666     _DEFINE_REGS_ENTRYPOINT( name, fn, 8 )
01667 #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01668     extern void WINAPI name( t1 a1, t2 a2, t3 a3 ); \
01669     _DEFINE_REGS_ENTRYPOINT( name, fn, 12 )
01670 #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01671     extern void WINAPI name( t1 a1, t2 a2, t3 a3, t4 a4 ); \

```

```

01672  _DEFINE_REGS_ENTRYPOINT( name, fn, 16 )
01673
01674  #endif /* __i386__ */
01675
01676  #ifdef __sparc__
01677  /* FIXME: use getcontext() to retrieve full context */
01678  #define _GET_CONTEXT \
01679      CONTEXT context; \
01680      do { memset(&context, 0, sizeof(CONTEXT)); \
01681          context.ContextFlags = CONTEXT_CONTROL; \
01682          context.pc = (DWORD)__builtin_return_address(0); \
01683      } while (0)
01684
01685  #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01686      void WINAPI name ( void ) \
01687      { _GET_CONTEXT; fn( &context ); }
01688  #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01689      void WINAPI name ( t1 a1 ) \
01690      { _GET_CONTEXT; fn( a1, &context ); }
01691  #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01692      void WINAPI name ( t1 a1, t2 a2 ) \
01693      { _GET_CONTEXT; fn( a1, a2, &context ); }
01694  #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01695      void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01696      { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01697  #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01698      void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01699      { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
01700
01701  #endif /* __sparc__ */
01702
01703  #ifdef __s390__
01704  /* FIXME: use getcontext() to retrieve full context */
01705  #define _GET_CONTEXT \
01706      CONTEXT context; \
01707      do { memset(&context, 0, sizeof(CONTEXT)); \
01708          context.ContextFlags = CONTEXT_CONTROL; \
01709          context.pc = (DWORD)__builtin_return_address(0); \
01710      } while (0)
01711
01712  #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01713      void WINAPI name ( void ) \
01714      { _GET_CONTEXT; fn( &context ); }
01715  #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01716      void WINAPI name ( t1 a1 ) \
01717      { _GET_CONTEXT; fn( a1, &context ); }
01718  #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01719      void WINAPI name ( t1 a1, t2 a2 ) \
01720      { _GET_CONTEXT; fn( a1, a2, &context ); }
01721  #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01722      void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01723      { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01724  #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01725      void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01726      { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
01727
01728  #endif /* __s390__ */
01729
01730  #ifdef __PPC__
01731
01732  /* FIXME: use getcontext() to retrieve full context */
01733  #define _GET_CONTEXT \
01734      CONTEXT context; \
01735      do { memset(&context, 0, sizeof(CONTEXT)); \
01736          context.ContextFlags = CONTEXT_CONTROL; \
01737      } while (0)
01738
01739  #define DEFINE_REGS_ENTRYPOINT_0( name, fn ) \
01740      void WINAPI name ( void ) \
01741      { _GET_CONTEXT; fn( &context ); }
01742  #define DEFINE_REGS_ENTRYPOINT_1( name, fn, t1 ) \
01743      void WINAPI name ( t1 a1 ) \
01744      { _GET_CONTEXT; fn( a1, &context ); }
01745  #define DEFINE_REGS_ENTRYPOINT_2( name, fn, t1, t2 ) \
01746      void WINAPI name ( t1 a1, t2 a2 ) \
01747      { _GET_CONTEXT; fn( a1, a2, &context ); }
01748  #define DEFINE_REGS_ENTRYPOINT_3( name, fn, t1, t2, t3 ) \
01749      void WINAPI name ( t1 a1, t2 a2, t3 a3 ) \
01750      { _GET_CONTEXT; fn( a1, a2, a3, &context ); }
01751  #define DEFINE_REGS_ENTRYPOINT_4( name, fn, t1, t2, t3, t4 ) \
01752      void WINAPI name ( t1 a1, t2 a2, t3 a3, t4 a4 ) \
01753      { _GET_CONTEXT; fn( a1, a2, a3, a4, &context ); }
01754
01755  #endif /* __PPC__ */
01756
01757
01758  #ifndef DEFINE_REGS_ENTRYPOINT_0

```

```

01759 #error You need to define DEFINE_REGS_ENTRYPOINT macros for your CPU
01760 #endif
01761
01762 /* Constructor functions */
01763
01764 #ifdef __GNUC__
01765 # define DECL_GLOBAL_CONSTRUCTOR(func) \
01766     static void func(void) __attribute__((constructor)); \
01767     static void func(void)
01768 #else /* __GNUC__ */
01769 # ifdef __i386__
01770 #  define DECL_GLOBAL_CONSTRUCTOR(func) \
01771     static void __dummy_init_##func(void) { \
01772         asm(".section .init,\"ax\"\\n\\t\" \
01773             \"call \" #func \"\\n\\t\" \
01774             \".previous\"; } \
01775     static void func(void)
01776 # else /* __i386__ */
01777 #  error You must define the DECL_GLOBAL_CONSTRUCTOR macro for your platform
01778 # endif
01779 #endif /* __GNUC__ */
01780
01781 /* Segment register access */
01782
01783 #ifdef __i386__
01784 # ifdef __GNUC__
01785 #  define __DEFINE_GET_SEG(seg) \
01786     extern inline unsigned short __get_##seg(void) \
01787     { unsigned short res; __asm__("movw %%#seg", %w0 : "=r"(res)); return res; }
01788 #  define __DEFINE_SET_SEG(seg) \
01789     extern inline void __set_##seg(int val) { __asm__("movw %w0,%%#seg : : \"r\" (val)); }
01790 # else /* __GNUC__ */
01791 #  define __DEFINE_GET_SEG(seg) extern unsigned short __get_##seg(void);
01792 #  define __DEFINE_SET_SEG(seg) extern void __set_##seg(unsigned int);
01793 # endif /* __GNUC__ */
01794 #else /* __i386__ */
01795 # define __DEFINE_GET_SEG(seg) inline static unsigned short __get_##seg(void) { return 0; }
01796 # define __DEFINE_SET_SEG(seg) /* nothing */
01797 #endif /* __i386__ */
01798
01799 __DEFINE_GET_SEG(cs)
01800 __DEFINE_GET_SEG(ds)
01801 __DEFINE_GET_SEG(es)
01802 __DEFINE_GET_SEG(fs)
01803 __DEFINE_GET_SEG(gs)
01804 __DEFINE_GET_SEG(ss)
01805 __DEFINE_SET_SEG(fs)
01806 __DEFINE_SET_SEG(gs)
01807 #undef __DEFINE_GET_SEG
01808 #undef __DEFINE_SET_SEG
01809
01810 #endif /* __WINE__ */
01811
01812
01813 /*
01814 * Language IDs
01815 */
01816
01817 #define MAKELCID(l, s) (MAKELONG(l, s))
01818
01819 #define MAKELANGID(p, s) (((WORD)(s))<10 | (WORD)(p))
01820 #define PRIMARYLANGID(l) ((WORD)(l) & 0x3ff)
01821 #define SUBLANGID(l) ((WORD)(l) >> 10)
01822
01823 #define LANGIDFROMLCID(lcid) ((WORD)(lcid))
01824 #define SORTIDFROMLCID(lcid) ((WORD)(((DWORD)(lcid)) >> 16) & 0x0f)
01825
01826 #define LANG_SYSTEM_DEFAULT (MAKELANGID(LANG_NEUTRAL, SUBLANG_SYS_DEFAULT))
01827 #define LANG_USER_DEFAULT (MAKELANGID(LANG_NEUTRAL, SUBLANG_DEFAULT))
01828 #define LOCALE_SYSTEM_DEFAULT (MAKELCID(LANG_SYSTEM_DEFAULT, SORT_DEFAULT))
01829 #define LOCALE_USER_DEFAULT (MAKELCID(LANG_USER_DEFAULT, SORT_DEFAULT))
01830 #define LOCALE_NEUTRAL (MAKELCID(MAKELANGID(LANG_NEUTRAL, SUBLANG_NEUTRAL), SORT_DEFAULT))
01831
01832 /* FIXME: are the symbolic names correct for LIDs: 0x17, 0x20, 0x28,
01833 * 0x2a, 0x2b, 0x2c, 0x2f, 0x30, 0x31, 0x32, 0x33, 0x34, 0x35,
01834 * 0x37, 0x39, 0x3a, 0x3b, 0x3c, 0x3e, 0x3f, 0x41, 0x43, 0x44,
01835 * 0x45, 0x46, 0x47, 0x48, 0x49, 0x4a, 0x4b, 0x4c, 0x4d, 0x4e,
01836 * 0x4f, 0x57
01837 */
01838
01839 #define LANG_NEUTRAL 0x00
01840 #define LANG_AFIKAANS 0x36
01841 #define LANG_ALBANIAN 0x1c
01842 #define LANG_ARABIC 0x01
01843 #define LANG_ARMENIAN 0x2b
01844 #define LANG_ASSAMESE 0x4d
01845 #define LANG_AZERI 0x2c

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```

01846 #define LANG_BASQUE                                0x2d
01847 #define LANG_BENGALI                                0x45
01848 #define LANG_BULGARIAN                              0x02
01849 #define LANG_BYELORUSSIAN                            0x23
01850 #define LANG_CATALAN                                0x03
01851 #define LANG_CHINESE                                 0x04
01852 #define LANG_SERBO_CROATIAN                          0x1a
01853 #define LANG_CROATIAN                                LANG_SERBO_CROATIAN
01854 #define LANG_SERBIAN                                LANG_SERBO_CROATIAN
01855 #define LANG_CZECH                                    0x05
01856 #define LANG_DANISH                                  0x06
01857 #define LANG_DUTCH                                   0x13
01858 #define LANG_ENGLISH                                 0x09
01859 #define LANG_ESTONIAN                                0x25
01860 #define LANG_FAEROESE                                0x38
01861 #define LANG_FARSI                                    0x29
01862 #define LANG_FINNISH                                 0x0b
01863 #define LANG_FRENCH                                  0x0c
01864 #define LANG_GAELIC                                  0x3c
01865 #define LANG_GEORGIAN                                0x37
01866 #define LANG_GERMAN                                  0x07
01867 #define LANG_GREEK                                    0x08
01868 #define LANG_GUJARATI                                0x47
01869 #define LANG_HEBREW                                   0x0D
01870 #define LANG_HINDI                                   0x39
01871 #define LANG_HUNGARIAN                              0x0e
01872 #define LANG_ICELANDIC                              0x0f
01873 #define LANG_INDONESIAN                             0x21
01874 #define LANG_ITALIAN                                 0x10
01875 #define LANG_JAPANESE                               0x11
01876 #define LANG_KANNADA                                0x4b
01877 #define LANG_KAZAKH                                  0x3f
01878 #define LANG_KONKANI                                0x57
01879 #define LANG_KOREAN                                  0x12
01880 #define LANG_LATVIAN                                 0x26
01881 #define LANG_LITHUANIAN                             0x27
01882 #define LANG_MACEDONIAN                             0x2f
01883 #define LANG_MALAY                                   0x3e
01884 #define LANG_MALAYALAM                              0x4c
01885 #define LANG_MALTESE                                0x3a
01886 #define LANG_MAORI                                   0x28
01887 #define LANG_MARATHI                                 0x4e
01888 #define LANG_NORWEGIAN                              0x14
01889 #define LANG_ORIYA                                   0x48
01890 #define LANG_POLISH                                  0x15
01891 #define LANG_PORTUGUESE                             0x16
01892 #define LANG_PUNJABI                                 0x46
01893 #define LANG_RHAETO_ROMANCE                         0x17
01894 #define LANG_ROMANIAN                                0x18
01895 #define LANG_RUSSIAN                                 0x19
01896 #define LANG_SAAMI                                   0x3b
01897 #define LANG_SANSKRIT                                0x4f
01898 #define LANG_SLOVAK                                  0x1b
01899 #define LANG_SLOVENIAN                              0x24
01900 #define LANG_SORBIAN                                0x2e
01901 #define LANG_SPANISH                                 0x0a
01902 #define LANG_SUTU                                    0x30
01903 #define LANG_SWAHILI                                 0x41
01904 #define LANG_SWEDISH                                 0x1d
01905 #define LANG_TAMIL                                    0x49
01906 #define LANG_TATAR                                    0x44
01907 #define LANG_TELUGU                                  0x4a
01908 #define LANG_THAI                                    0x1e
01909 #define LANG_TSONGA                                  0x31
01910 #define LANG_TSWANA                                  0x32
01911 #define LANG_TURKISH                                 0x1f
01912 #define LANG_UKRAINIAN                              0x22
01913 #define LANG_URDU                                    0x20
01914 #define LANG_UZBEK                                    0x43
01915 #define LANG_VENDA                                    0x33
01916 #define LANG_VIETNAMESE                             0x2a
01917 #define LANG_XHOSA                                    0x34
01918 #define LANG_ZULU                                    0x35
01919 /* non standard; keep the number high enough (but < 0xff) */
01920 #define LANG_ESPERANTO                                0x8f
01921 #define LANG_WALON                                    0x90
01922 #define LANG_CORNISH                                  0x91
01923 #define LANG_WELSH                                    0x92
01924 #define LANG_BRETON                                    0x93
01925
01926 /* Sublanguage definitions */
01927 #define SUBLANG_NEUTRAL                                0x00 /* language neutral */
01928 #define SUBLANG_DEFAULT                                0x01 /* user default */
01929 #define SUBLANG_SYS_DEFAULT                            0x02 /* system default */
01930
01931 #define SUBLANG_ARABIC                                0x01
01932 #define SUBLANG_ARABIC_SAUDI_ARABIA                   0x01

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01933 #define SUBLANG_ARABIC_IRAQ 0x02
01934 #define SUBLANG_ARABIC_EGYPT 0x03
01935 #define SUBLANG_ARABIC_LIBYA 0x04
01936 #define SUBLANG_ARABIC_ALGERIA 0x05
01937 #define SUBLANG_ARABIC_MOROCCO 0x06
01938 #define SUBLANG_ARABIC_TUNISIA 0x07
01939 #define SUBLANG_ARABIC_OMAN 0x08
01940 #define SUBLANG_ARABIC_YEMEN 0x09
01941 #define SUBLANG_ARABIC_SYRIA 0x0a
01942 #define SUBLANG_ARABIC_JORDAN 0x0b
01943 #define SUBLANG_ARABIC_LEBANON 0x0c
01944 #define SUBLANG_ARABIC_KUWAIT 0x0d
01945 #define SUBLANG_ARABIC_UAE 0x0e
01946 #define SUBLANG_ARABIC_BAHRAIN 0x0f
01947 #define SUBLANG_ARABIC_QATAR 0x10
01948 #define SUBLANG_CHINESE_TRADITIONAL 0x01
01949 #define SUBLANG_CHINESE_SIMPLIFIED 0x02
01950 #define SUBLANG_CHINESE_HONGKONG 0x03
01951 #define SUBLANG_CHINESE_SINGAPORE 0x04
01952 #define SUBLANG_CHINESE_MACAU 0x05
01953 #define SUBLANG_DUTCH 0x01
01954 #define SUBLANG_DUTCH_BELGIAN 0x02
01955 #define SUBLANG_DUTCH_SURINAM 0x03
01956 #define SUBLANG_ENGLISH_US 0x01
01957 #define SUBLANG_ENGLISH_UK 0x02
01958 #define SUBLANG_ENGLISH_AUS 0x03
01959 #define SUBLANG_ENGLISH_CAN 0x04
01960 #define SUBLANG_ENGLISH_NZ 0x05
01961 #define SUBLANG_ENGLISH_EIRE 0x06
01962 #define SUBLANG_ENGLISH_SAFRICA 0x07
01963 #define SUBLANG_ENGLISH_JAMAICA 0x08
01964 #define SUBLANG_ENGLISH_CARRIBEAN 0x09
01965 #define SUBLANG_ENGLISH_BELIZE 0x0a
01966 #define SUBLANG_ENGLISH_TRINIDAD 0x0b
01967 #define SUBLANG_ENGLISH_ZIMBABWE 0x0c
01968 #define SUBLANG_ENGLISH_PHILIPPINES 0x0d
01969 #define SUBLANG_FRENCH 0x01
01970 #define SUBLANG_FRENCH_BELGIAN 0x02
01971 #define SUBLANG_FRENCH_CANADIAN 0x03
01972 #define SUBLANG_FRENCH_SWISS 0x04
01973 #define SUBLANG_FRENCH_LUXEMBOURG 0x05
01974 #define SUBLANG_FRENCH_MONACO 0x06
01975 #define SUBLANG_GERMAN 0x01
01976 #define SUBLANG_GERMAN_SWISS 0x02
01977 #define SUBLANG_GERMAN_AUSTRIAN 0x03
01978 #define SUBLANG_GERMAN_LUXEMBOURG 0x04
01979 #define SUBLANG_GERMAN_LIECHTENSTEIN 0x05
01980 #define SUBLANG_ITALIAN 0x01
01981 #define SUBLANG_ITALIAN_SWISS 0x02
01982 #define SUBLANG_KOREAN 0x01
01983 #define SUBLANG_KOREAN_JOHAB 0x02
01984 #define SUBLANG_NORWEGIAN_BOKMAL 0x01
01985 #define SUBLANG_NORWEGIAN_NYNORSK 0x02
01986 #define SUBLANG_PORTUGUESE 0x02
01987 #define SUBLANG_PORTUGUESE_BRAZILIAN 0x01
01988 #define SUBLANG_SPANISH 0x01
01989 #define SUBLANG_SPANISH_MEXICAN 0x02
01990 #define SUBLANG_SPANISH_MODERN 0x03
01991 #define SUBLANG_SPANISH_GUATEMALA 0x04
01992 #define SUBLANG_SPANISH_COSTARICA 0x05
01993 #define SUBLANG_SPANISH_PANAMA 0x06
01994 #define SUBLANG_SPANISH_DOMINICAN 0x07
01995 #define SUBLANG_SPANISH_VENEZUELA 0x08
01996 #define SUBLANG_SPANISH_COLOMBIA 0x09
01997 #define SUBLANG_SPANISH_PERU 0x0a
01998 #define SUBLANG_SPANISH_ARGENTINA 0x0b
01999 #define SUBLANG_SPANISH_ECUADOR 0x0c
02000 #define SUBLANG_SPANISH_CHILE 0x0d
02001 #define SUBLANG_SPANISH_URUGUAY 0x0e
02002 #define SUBLANG_SPANISH_PARAGUAY 0x0f
02003 #define SUBLANG_SPANISH_BOLIVIA 0x10
02004 #define SUBLANG_SPANISH_EL_SALVADOR 0x11
02005 #define SUBLANG_SPANISH_HONDURAS 0x12
02006 #define SUBLANG_SPANISH_NICARAGUA 0x13
02007 #define SUBLANG_SPANISH_PUERTO_RICO 0x14
02008 /* FIXME: I don't know the symbolic names for those */
02009 #define SUBLANG_ROMANIAN 0x01
02010 #define SUBLANG_ROMANIAN_MOLDAVIA 0x02
02011 #define SUBLANG_RUSSIAN 0x01
02012 #define SUBLANG_RUSSIAN_MOLDAVIA 0x02
02013 #define SUBLANG_CROATIAN 0x01
02014 #define SUBLANG_SERBIAN 0x02
02015 #define SUBLANG_SERBIAN_LATIN 0x03
02016 #define SUBLANG_SWEDISH 0x01
02017 #define SUBLANG_SWEDISH_FINLAND 0x02
02018 #define SUBLANG_LITHUANIAN 0x01
02019 #define SUBLANG_LITHUANIAN_CLASSIC 0x02

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```
02020 #define SUBLANG_AZERI 0x01
02021 #define SUBLANG_AZERI_CYRILLIC 0x02
02022 #define SUBLANG_GAELIC 0x01
02023 #define SUBLANG_GAELIC_SCOTTISH 0x02
02024 #define SUBLANG_GAELIC_MANX 0x03
02025 #define SUBLANG_MALAY 0x01
02026 #define SUBLANG_MALAY_BRUNEI_DARUSSALAM 0x02
02027 #define SUBLANG_UZBEK 0x01
02028 #define SUBLANG_UZBEK_CYRILLIC 0x02
02029 #define SUBLANG_URDU_PAKISTAN 0x01
02030
02031
02032
02033 /*
02034  * Sort definitions
02035  */
02036
02037 #define SORT_DEFAULT 0x0
02038 #define SORT_JAPANESE_XJIS 0x0
02039 #define SORT_JAPANESE_UNICODE 0x1
02040 #define SORT_CHINESE_BIG5 0x0
02041 #define SORT_CHINESE_UNICODE 0x1
02042 #define SORT_KOREAN_KSC 0x0
02043 #define SORT_KOREAN_UNICODE 0x1
02044
02045
02046
02047 /*
02048  * Definitions for IsTextUnicode()
02049  */
02050
02051 #define IS_TEXT_UNICODE_ASCII16 0x0001
02052 #define IS_TEXT_UNICODE_STATISTICS 0x0002
02053 #define IS_TEXT_UNICODE_CONTROLS 0x0004
02054 #define IS_TEXT_UNICODE_SIGNATURE 0x0008
02055 #define IS_TEXT_UNICODE_UNICODE_MASK 0x000F
02056 #define IS_TEXT_UNICODE_REVERSE_ASCII16 0x0010
02057 #define IS_TEXT_UNICODE_REVERSE_STATISTICS 0x0020
02058 #define IS_TEXT_UNICODE_REVERSE_CONTROLS 0x0040
02059 #define IS_TEXT_UNICODE_REVERSE_SIGNATURE 0x0080
02060 #define IS_TEXT_UNICODE_REVERSE_MASK 0x00F0
02061 #define IS_TEXT_UNICODE_ILLEGAL_CHARS 0x0100
02062 #define IS_TEXT_UNICODE_ODD_LENGTH 0x0200
02063 #define IS_TEXT_UNICODE_DBCS_LEADBYTE 0x0400
02064 #define IS_TEXT_UNICODE_NOT_UNICODE_MASK 0x0F00
02065 #define IS_TEXT_UNICODE_NULL_BYTES 0x1000
02066 #define IS_TEXT_UNICODE_NOT_ASCII_MASK 0xF000
02067
02068
02069
02070 /*
02071  * Exception codes
02072  */
02073
02074 #define STATUS_SUCCESS 0x00000000
02075 #define STATUS_WAIT_0 0x00000000
02076 #define STATUS_ABANDONED_WAIT_0 0x00000080
02077 #define STATUS_ABANDONED_WAIT_63 0x000000BF
02078 #define STATUS_USER_APC 0x000000C0
02079 #define STATUS_ALERTED 0x00000101
02080 #define STATUS_TIMEOUT 0x00000102
02081 #define STATUS_PENDING 0x00000103
02082 #define STATUS_REPARSE 0x00000104
02083 #define STATUS_MORE_ENTRIES 0x00000105
02084 #define STATUS_NOT_ALL_ASSIGNED 0x00000106
02085 #define STATUS_SOME_NOT_MAPPED 0x00000107
02086 #define STATUS_OPLOCK_BREAK_IN_PROGRESS 0x00000108
02087 #define STATUS_VOLUME_MOUNTED 0x00000109
02088 #define STATUS_RXACT_COMMITTED 0x0000010A
02089 #define STATUS_NOTIFY_CLEANUP 0x0000010B
02090 #define STATUS_NOTIFY_ENUM_DIR 0x0000010C
02091 #define STATUS_NO_QUOTAS_FOR_ACCOUNT 0x0000010D
02092 #define STATUS_PRIMARY_TRANSPORT_CONNECT_FAILED 0x0000010E
02093 #define STATUS_PAGE_FAULT_TRANSITION 0x00000110
02094 #define STATUS_PAGE_FAULT_DEMAND_ZERO 0x00000111
02095 #define STATUS_PAGE_FAULT_COPY_ON_WRITE 0x00000112
02096 #define STATUS_PAGE_FAULT_GUARD_PAGE 0x00000113
02097 #define STATUS_PAGE_FAULT_PAGING_FILE 0x00000114
02098 #define STATUS_CACHE_PAGE_LOCKED 0x00000115
02099 #define STATUS_CRASH_DUMP 0x00000116
02100 #define STATUS_BUFFER_ALL_ZEROS 0x00000117
02101 #define STATUS_REPARSE_OBJECT 0x00000118
02102
02103 #define STATUS_THREAD_WAS_SUSPENDED 0x40000001
02104 #define STATUS_WORKING_SET_LIMIT_RANGE 0x40000002
02105 #define STATUS_IMAGE_NOT_AT_BASE 0x40000003
02106 #define STATUS_RXACT_STATE_CREATED 0x40000004
```

```
02107 #define STATUS_SEGMENT_NOTIFICATION 0x40000005
02108 #define STATUS_LOCAL_USER_SESSION_KEY 0x40000006
02109 #define STATUS_BAD_CURRENT_DIRECTORY 0x40000007
02110 #define STATUS_SERIAL_MORE_WRITES 0x40000008
02111 #define STATUS_REGISTRY_RECOVERED 0x40000009
02112 #define STATUS_FT_READ_RECOVERY_FROM_BACKUP 0x4000000A
02113 #define STATUS_FT_WRITE_RECOVERY 0x4000000B
02114 #define STATUS_SERIAL_COUNTER_TIMEOUT 0x4000000C
02115 #define STATUS_NULL_LM_PASSWORD 0x4000000D
02116 #define STATUS_IMAGE_MACHINE_TYPE_MISMATCH 0x4000000E
02117 #define STATUS_RECEIVE_PARTIAL 0x4000000F
02118 #define STATUS_RECEIVE_EXPEDITED 0x40000010
02119 #define STATUS_RECEIVE_PARTIAL_EXPEDITED 0x40000011
02120 #define STATUS_EVENT_DONE 0x40000012
02121 #define STATUS_EVENT_PENDING 0x40000013
02122 #define STATUS_CHECKING_FILE_SYSTEM 0x40000014
02123 #define STATUS_FATAL_APP_EXIT 0x40000015
02124 #define STATUS_PREDEFINED_HANDLE 0x40000016
02125 #define STATUS_WAS_UNLOCKED 0x40000017
02126 #define STATUS_SERVICE_NOTIFICATION 0x40000018
02127 #define STATUS_WAS_LOCKED 0x40000019
02128 #define STATUS_LOG_HARD_ERROR 0x4000001A
02129 #define STATUS_ALREADY_WIN32 0x4000001B
02130 #define STATUS_WX86_UNSIMULATE 0x4000001C
02131 #define STATUS_WX86_CONTINUE 0x4000001D
02132 #define STATUS_WX86_SINGLE_STEP 0x4000001E
02133 #define STATUS_WX86_BREAKPOINT 0x4000001F
02134 #define STATUS_WX86_EXCEPTION_CONTINUE 0x40000020
02135 #define STATUS_WX86_EXCEPTION_LASTCHANCE 0x40000021
02136 #define STATUS_WX86_EXCEPTION_CHAIN 0x40000022
02137 #define STATUS_IMAGE_MACHINE_TYPE_MISMATCH_EXE 0x40000023
02138 #define STATUS_NO_YIELD_PERFORMED 0x40000024
02139 #define STATUS_TIMER_RESUME_IGNORED 0x40000025
02140
02141 #define STATUS_GUARD_PAGE_VIOLATION 0x80000001
02142 #define STATUS_DATATYPE_MISALIGNMENT 0x80000002
02143 #define STATUS_BREAKPOINT 0x80000003
02144 #define STATUS_SINGLE_STEP 0x80000004
02145 #define STATUS_BUFFER_OVERFLOW 0x80000005
02146 #define STATUS_NO_MORE_FILES 0x80000006
02147 #define STATUS_WAKE_SYSTEM_DEBUGGER 0x80000007
02148
02149 #define STATUS_HANDLES_CLOSED 0x8000000A
02150 #define STATUS_NO_INHERITANCE 0x8000000B
02151 #define STATUS_GUID_SUBSTITUTION_MADE 0x8000000C
02152 #define STATUS_PARTIAL_COPY 0x8000000D
02153 #define STATUS_DEVICE_PAPER_EMPTY 0x8000000E
02154 #define STATUS_DEVICE_POWERED_OFF 0x8000000F
02155 #define STATUS_DEVICE_OFF_LINE 0x80000010
02156 #define STATUS_DEVICE_BUSY 0x80000011
02157 #define STATUS_NO_MORE_EAS 0x80000012
02158 #define STATUS_INVALID_EA_NAME 0x80000013
02159 #define STATUS_EA_LIST_INCONSISTENT 0x80000014
02160 #define STATUS_INVALID_EA_FLAG 0x80000015
02161 #define STATUS_VERIFY_REQUIRED 0x80000016
02162 #define STATUS_EXTRANEIOUS_INFORMATION 0x80000017
02163 #define STATUS_RXACT_COMMIT_NECESSARY 0x80000018
02164 #define STATUS_NO_MORE_ENTRIES 0x8000001A
02165 #define STATUS_FILEMARK_DETECTED 0x8000001B
02166 #define STATUS_MEDIA_CHANGED 0x8000001C
02167 #define STATUS_BUS_RESET 0x8000001D
02168 #define STATUS_END_OF_MEDIA 0x8000001E
02169 #define STATUS_BEGINNING_OF_MEDIA 0x8000001F
02170 #define STATUS_MEDIA_CHECK 0x80000020
02171 #define STATUS_SETMARK_DETECTED 0x80000021
02172 #define STATUS_NO_DATA_DETECTED 0x80000022
02173 #define STATUS_REDIRECTOR_HAS_OPEN_HANDLES 0x80000023
02174 #define STATUS_SERVER_HAS_OPEN_HANDLES 0x80000024
02175 #define STATUS_ALREADY_DISCONNECTED 0x80000025
02176 #define STATUS_LONGJUMP 0x80000026
02177
02178 #define STATUS_UNSUCCESSFUL 0xC0000001
02179 #define STATUS_NOT_IMPLEMENTED 0xC0000002
02180 #define STATUS_INVALID_INFO_CLASS 0xC0000003
02181 #define STATUS_INFO_LENGTH_MISMATCH 0xC0000004
02182 #define STATUS_ACCESS_VIOLATION 0xC0000005
02183 #define STATUS_IN_PAGE_ERROR 0xC0000006
02184 #define STATUS_PAGEFILE_QUOTA 0xC0000007
02185 #define STATUS_INVALID_HANDLE 0xC0000008
02186 #define STATUS_BAD_INITIAL_STACK 0xC0000009
02187 #define STATUS_BAD_INITIAL_PC 0xC000000A
02188 #define STATUS_INVALID_CID 0xC000000B
02189 #define STATUS_TIMER_NOT_CANCELED 0xC000000C
02190 #define STATUS_INVALID_PARAMETER 0xC000000D
02191 #define STATUS_NO_SUCH_DEVICE 0xC000000E
02192 #define STATUS_NO_SUCH_FILE 0xC000000F
02193 #define STATUS_INVALID_DEVICE_REQUEST 0xC0000010
```

```
02194 #define STATUS_END_OF_FILE 0xC0000011
02195 #define STATUS_WRONG_VOLUME 0xC0000012
02196 #define STATUS_NO_MEDIA_IN_DEVICE 0xC0000013
02197 #define STATUS_UNRECOGNIZED_MEDIA 0xC0000014
02198 #define STATUS_NONEXISTENT_SECTOR 0xC0000015
02199 #define STATUS_MORE_PROCESSING_REQUIRED 0xC0000016
02200 #define STATUS_NO_MEMORY 0xC0000017
02201 #define STATUS_CONFLICTING_ADDRESSES 0xC0000018
02202 #define STATUS_NOT_MAPPED_VIEW 0xC0000019
02203 #define STATUS_UNABLE_TO_FREE_VM 0xC000001A
02204 #define STATUS_UNABLE_TO_DELETE_SECTION 0xC000001B
02205 #define STATUS_INVALID_SYSTEM_SERVICE 0xC000001C
02206 #define STATUS_ILLEGAL_INSTRUCTION 0xC000001D
02207 #define STATUS_INVALID_LOCK_SEQUENCE 0xC000001E
02208 #define STATUS_INVALID_VIEW_SIZE 0xC000001F
02209 #define STATUS_INVALID_FILE_FOR_SECTION 0xC0000020
02210 #define STATUS_ALREADY_COMMITTED 0xC0000021
02211 #define STATUS_ACCESS_DENIED 0xC0000022
02212 #define STATUS_BUFFER_TOO_SMALL 0xC0000023
02213 #define STATUS_OBJECT_TYPE_MISMATCH 0xC0000024
02214 #define STATUS_NONCONTINUABLE_EXCEPTION 0xC0000025
02215 #define STATUS_INVALID_DISPOSITION 0xC0000026
02216 #define STATUS_UNWIND 0xC0000027
02217 #define STATUS_BAD_STACK 0xC0000028
02218 #define STATUS_INVALID_UNWIND_TARGET 0xC0000029
02219 #define STATUS_NOT_LOCKED 0xC000002A
02220 #define STATUS_PARITY_ERROR 0xC000002B
02221 #define STATUS_UNABLE_TO_DECOMMIT_VM 0xC000002C
02222 #define STATUS_NOT_COMMITTED 0xC000002D
02223 #define STATUS_INVALID_PORT_ATTRIBUTES 0xC000002E
02224 #define STATUS_PORT_MESSAGE_TOO_LONG 0xC000002F
02225 #define STATUS_INVALID_PARAMETER_MIX 0xC0000030
02226 #define STATUS_INVALID_QUOTA_LOWER 0xC0000031
02227 #define STATUS_DISK_CORRUPT_ERROR 0xC0000032
02228 #define STATUS_OBJECT_NAME_INVALID 0xC0000033
02229 #define STATUS_OBJECT_NAME_NOT_FOUND 0xC0000034
02230 #define STATUS_OBJECT_NAME_COLLISION 0xC0000035
02231 #define STATUS_PORT_DISCONNECTED 0xC0000037
02232 #define STATUS_DEVICE_ALREADY_ATTACHED 0xC0000038
02233 #define STATUS_OBJECT_PATH_INVALID 0xC0000039
02234 #define STATUS_OBJECT_PATH_NOT_FOUND 0xC000003A
02235 #define STATUS_PATH_SYNTAX_BAD 0xC000003B
02236 #define STATUS_DATA_OVERRUN 0xC000003C
02237 #define STATUS_DATA_LATE_ERROR 0xC000003D
02238 #define STATUS_DATA_ERROR 0xC000003E
02239 #define STATUS_CRC_ERROR 0xC000003F
02240 #define STATUS_SECTION_TOO_BIG 0xC0000040
02241 #define STATUS_PORT_CONNECTION_REFUSED 0xC0000041
02242 #define STATUS_INVALID_PORT_HANDLE 0xC0000042
02243 #define STATUS_SHARING_VIOLATION 0xC0000043
02244 #define STATUS_QUOTA_EXCEEDED 0xC0000044
02245 #define STATUS_INVALID_PAGE_PROTECTION 0xC0000045
02246 #define STATUS_MUTANT_NOT_OWNED 0xC0000046
02247 #define STATUS_SEMAPHORE_LIMIT_EXCEEDED 0xC0000047
02248 #define STATUS_PORT_ALREADY_SET 0xC0000048
02249 #define STATUS_SECTION_NOT_IMAGE 0xC0000049
02250 #define STATUS_SUSPEND_COUNT_EXCEEDED 0xC000004A
02251 #define STATUS_THREAD_IS_TERMINATING 0xC000004B
02252 #define STATUS_BAD_WORKING_SET_LIMIT 0xC000004C
02253 #define STATUS_INCOMPATIBLE_FILE_MAP 0xC000004D
02254 #define STATUS_SECTION_PROTECTION 0xC000004E
02255 #define STATUS_EAS_NOT_SUPPORTED 0xC000004F
02256 #define STATUS_EA_TOO_LARGE 0xC0000050
02257 #define STATUS_NONEXISTENT_EA_ENTRY 0xC0000051
02258 #define STATUS_NO_EAS_ON_FILE 0xC0000052
02259 #define STATUS_EA_CORRUPT_ERROR 0xC0000053
02260 #define STATUS_LOCK_NOT_GRANTED 0xC0000054 /* FIXME: not sure */
02261 #define STATUS_FILE_LOCK_CONFLICT 0xC0000055 /* FIXME: not sure */
02262 #define STATUS_DELETE_PENDING 0xC0000056
02263 #define STATUS_CTL_FILE_NOT_SUPPORTED 0xC0000057
02264 #define STATUS_UNKNOWN_REVISION 0xC0000058
02265 #define STATUS_REVISION_MISMATCH 0xC0000059
02266 #define STATUS_INVALID_OWNER 0xC000005A
02267 #define STATUS_INVALID_PRIMARY_GROUP 0xC000005B
02268 #define STATUS_NO_IMPERSONATION_TOKEN 0xC000005C
02269 #define STATUS_CANT_DISABLE_MANDATORY 0xC000005D
02270 #define STATUS_NO_LOGON_SERVERS 0xC000005E
02271 #define STATUS_NO_SUCH_LOGON_SESSION 0xC000005F
02272 #define STATUS_NO_SUCH_PRIVILEGE 0xC0000060
02273 #define STATUS_PRIVILEGE_NOT_HELD 0xC0000061
02274 #define STATUS_INVALID_ACCOUNT_NAME 0xC0000062
02275 #define STATUS_USER_EXISTS 0xC0000063
02276 #define STATUS_NO_SUCH_USER 0xC0000064
02277 #define STATUS_GROUP_EXISTS 0xC0000065
02278 #define STATUS_NO_SUCH_GROUP 0xC0000066
02279 #define STATUS_MEMBER_IN_GROUP 0xC0000067
02280 #define STATUS_MEMBER_NOT_IN_GROUP 0xC0000068
```

```
02281 #define STATUS_LAST_ADMIN 0xC0000069
02282 #define STATUS_WRONG_PASSWORD 0xC000006A
02283 #define STATUS_ILLEGAL_FORMED_PASSWORD 0xC000006B
02284 #define STATUS_PASSWORD_RESTRICTION 0xC000006C
02285 #define STATUS_LOGON_FAILURE 0xC000006D
02286 #define STATUS_ACCOUNT_RESTRICTION 0xC000006E
02287 #define STATUS_INVALID_LOGON_HOURS 0xC000006F
02288 #define STATUS_INVALID_WORKSTATION 0xC0000070
02289 #define STATUS_PASSWORD_EXPIRED 0xC0000071
02290 #define STATUS_ACCOUNT_DISABLED 0xC0000072
02291 #define STATUS_NONE_MAPPED 0xC0000073
02292 #define STATUS_TOO_MANY_LUIDS_REQUESTED 0xC0000074
02293 #define STATUS_LUIDS_EXHAUSTED 0xC0000075
02294 #define STATUS_INVALID_SUB_AUTHORITY 0xC0000076
02295 #define STATUS_INVALID_ACL 0xC0000077
02296 #define STATUS_INVALID_SID 0xC0000078
02297 #define STATUS_INVALID_SECURITY_DESCR 0xC0000079
02298 #define STATUS_PROCEDURE_NOT_FOUND 0xC000007A
02299 #define STATUS_INVALID_IMAGE_FORMAT 0xC000007B
02300 #define STATUS_NO_TOKEN 0xC000007C
02301 #define STATUS_BAD_INHERITANCE_ACL 0xC000007D
02302 #define STATUS_RANGE_NOT_LOCKED 0xC000007E
02303 #define STATUS_DISK_FULL 0xC000007F
02304 #define STATUS_SERVER_DISABLED 0xC0000080
02305 #define STATUS_SERVER_NOT_DISABLED 0xC0000081
02306 #define STATUS_TOO_MANY_GUIDS_REQUESTED 0xC0000082
02307 #define STATUS_GUIDS_EXHAUSTED 0xC0000083
02308 #define STATUS_INVALID_ID_AUTHORITY 0xC0000084
02309 #define STATUS_AGENTS_EXHAUSTED 0xC0000085
02310 #define STATUS_INVALID_VOLUME_LABEL 0xC0000086
02311 #define STATUS_SECTION_NOT_EXTENDED 0xC0000087
02312 #define STATUS_NOT_MAPPED_DATA 0xC0000088
02313 #define STATUS_RESOURCE_DATA_NOT_FOUND 0xC0000089
02314 #define STATUS_RESOURCE_TYPE_NOT_FOUND 0xC000008A
02315 #define STATUS_RESOURCE_NAME_NOT_FOUND 0xC000008B
02316 #define STATUS_ARRAY_BOUNDS_EXCEEDED 0xC000008C
02317 #define STATUS_FLOAT_DENORMAL_OPERAND 0xC000008D
02318 #define STATUS_FLOAT_DIVIDE_BY_ZERO 0xC000008E
02319 #define STATUS_FLOAT_INEXACT_RESULT 0xC000008F
02320 #define STATUS_FLOAT_INVALID_OPERATION 0xC0000090
02321 #define STATUS_FLOAT_OVERFLOW 0xC0000091
02322 #define STATUS_FLOAT_STACK_CHECK 0xC0000092
02323 #define STATUS_FLOAT_UNDERFLOW 0xC0000093
02324 #define STATUS_INTEGER_DIVIDE_BY_ZERO 0xC0000094
02325 #define STATUS_INTEGER_OVERFLOW 0xC0000095
02326 #define STATUS_PRIVILEGED_INSTRUCTION 0xC0000096
02327 #define STATUS_TOO_MANY_PAGING_FILES 0xC0000097
02328 #define STATUS_FILE_INVALID 0xC0000098
02329 #define STATUS_ALLOTTED_SPACE_EXCEEDED 0xC0000099
02330 #define STATUS_INSUFFICIENT_RESOURCES 0xC000009A
02331 #define STATUS_DFS_EXIT_PATH_FOUND 0xC000009B
02332 #define STATUS_DEVICE_DATA_ERROR 0xC000009C
02333 #define STATUS_DEVICE_NOT_CONNECTED 0xC000009D
02334 #define STATUS_DEVICE_POWER_FAILURE 0xC000009E
02335 #define STATUS_FREE_VM_NOT_AT_BASE 0xC000009F
02336 #define STATUS_MEMORY_NOT_ALLOCATED 0xC00000A0
02337 #define STATUS_WORKING_SET_QUOTA 0xC00000A1
02338 #define STATUS_MEDIA_WRITE_PROTECTED 0xC00000A2
02339 #define STATUS_DEVICE_NOT_READY 0xC00000A3
02340 #define STATUS_INVALID_GROUP_ATTRIBUTES 0xC00000A4
02341 #define STATUS_BAD_IMPERSONATION_LEVEL 0xC00000A5
02342 #define STATUS_CANT_OPEN_ANONYMOUS 0xC00000A6
02343 #define STATUS_BAD_VALIDATION_CLASS 0xC00000A7
02344 #define STATUS_BAD_TOKEN_TYPE 0xC00000A8
02345 #define STATUS_BAD_MASTER_BOOT_RECORD 0xC00000A9
02346 #define STATUS_INSTRUCTION_MISALIGNMENT 0xC00000AA
02347 #define STATUS_INSTANCE_NOT_AVAILABLE 0xC00000AB
02348 #define STATUS_PIPE_NOT_AVAILABLE 0xC00000AC
02349 #define STATUS_INVALID_PIPE_STATE 0xC00000AD
02350 #define STATUS_PIPE_BUSY 0xC00000AE
02351 #define STATUS_ILLEGAL_FUNCTION 0xC00000AF
02352 #define STATUS_PIPE_DISCONNECTED 0xC00000B0
02353 #define STATUS_PIPE_CLOSING 0xC00000B1
02354 #define STATUS_PIPE_CONNECTED 0xC00000B2
02355 #define STATUS_PIPE_LISTENING 0xC00000B3
02356 #define STATUS_INVALID_READ_MODE 0xC00000B4
02357 #define STATUS_IO_TIMEOUT 0xC00000B5
02358 #define STATUS_FILE_FORCED_CLOSED 0xC00000B6
02359 #define STATUS_PROFILING_NOT_STARTED 0xC00000B7
02360 #define STATUS_PROFILING_NOT_STOPPED 0xC00000B8
02361 #define STATUS_COULD_NOT_INTERPRET 0xC00000B9
02362 #define STATUS_FILE_IS_A_DIRECTORY 0xC00000BA
02363 #define STATUS_NOT_SUPPORTED 0xC00000BB
02364 #define STATUS_REMOTE_NOT_LISTENING 0xC00000BC
02365 #define STATUS_DUPLICATE_NAME 0xC00000BD
02366 #define STATUS_BAD_NETWORK_PATH 0xC00000BE
02367 #define STATUS_NETWORK_BUSY 0xC00000BF
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02368 #define STATUS_DEVICE_DOES_NOT_EXIST 0xC00000C0
02369 #define STATUS_TOO_MANY_COMMANDS 0xC00000C1
02370 #define STATUS_ADAPTER_HARDWARE_ERROR 0xC00000C2
02371 #define STATUS_INVALID_NETWORK_RESPONSE 0xC00000C3
02372 #define STATUS_UNEXPECTED_NETWORK_ERROR 0xC00000C4
02373 #define STATUS_BAD_REMOTE_ADAPTER 0xC00000C5
02374 #define STATUS_PRINT_QUEUE_FULL 0xC00000C6
02375 #define STATUS_NO_SPOOL_SPACE 0xC00000C7
02376 #define STATUS_PRINT_CANCELLED 0xC00000C8
02377 #define STATUS_NETWORK_NAME_DELETED 0xC00000C9
02378 #define STATUS_NETWORK_ACCESS_DENIED 0xC00000CA
02379 #define STATUS_BAD_DEVICE_TYPE 0xC00000CB
02380 #define STATUS_BAD_NETWORK_NAME 0xC00000CC
02381 #define STATUS_TOO_MANY_NAMES 0xC00000CD
02382 #define STATUS_TOO_MANY_SESSIONS 0xC00000CE
02383 #define STATUS_SHARING_PAUSED 0xC00000CF
02384 #define STATUS_REQUEST_NOT_ACCEPTED 0xC00000D0
02385 #define STATUS_REDIRECTOR_PAUSED 0xC00000D1
02386 #define STATUS_NET_WRITE_FAULT 0xC00000D2
02387 #define STATUS_PROFILING_AT_LIMIT 0xC00000D3
02388 #define STATUS_NOT_SAME_DEVICE 0xC00000D4
02389 #define STATUS_FILE_RENAMED 0xC00000D5
02390 #define STATUS_VIRTUAL_CIRCUIT_CLOSED 0xC00000D6
02391 #define STATUS_NO_SECURITY_ON_OBJECT 0xC00000D7
02392 #define STATUS_CANT_WAIT 0xC00000D8
02393 #define STATUS_PIPE_EMPTY 0xC00000D9
02394 #define STATUS_CANT_ACCESS_DOMAIN_INFO 0xC00000DA
02395 #define STATUS_CANT_TERMINATE_SELF 0xC00000DB
02396 #define STATUS_INVALID_SERVER_STATE 0xC00000DC
02397 #define STATUS_INVALID_DOMAIN_STATE 0xC00000DD
02398 #define STATUS_INVALID_DOMAIN_ROLE 0xC00000DE
02399 #define STATUS_NO_SUCH_DOMAIN 0xC00000DF
02400 #define STATUS_DOMAIN_EXISTS 0xC00000E0
02401 #define STATUS_DOMAIN_LIMIT_EXCEEDED 0xC00000E1
02402 #define STATUS_OPLOCK_NOT_GRANTED 0xC00000E2
02403 #define STATUS_INVALID_OPLOCK_PROTOCOL 0xC00000E3
02404 #define STATUS_INTERNAL_DB_CORRUPTION 0xC00000E4
02405 #define STATUS_INTERNAL_ERROR 0xC00000E5
02406 #define STATUS_GENERIC_NOT_MAPPED 0xC00000E6
02407 #define STATUS_BAD_DESCRIPTOR_FORMAT 0xC00000E7
02408 #define STATUS_INVALID_USER_BUFFER 0xC00000E8
02409 #define STATUS_UNEXPECTED_IO_ERROR 0xC00000E9
02410 #define STATUS_UNEXPECTED_MM_CREATE_ERR 0xC00000EA
02411 #define STATUS_UNEXPECTED_MM_MAP_ERROR 0xC00000EB
02412 #define STATUS_UNEXPECTED_MM_EXTEND_ERR 0xC00000EC
02413 #define STATUS_NOT_LOGON_PROCESS 0xC00000ED
02414 #define STATUS_LOGON_SESSION_EXISTS 0xC00000EE
02415 #define STATUS_INVALID_PARAMETER_1 0xC00000EF
02416 #define STATUS_INVALID_PARAMETER_2 0xC00000F0
02417 #define STATUS_INVALID_PARAMETER_3 0xC00000F1
02418 #define STATUS_INVALID_PARAMETER_4 0xC00000F2
02419 #define STATUS_INVALID_PARAMETER_5 0xC00000F3
02420 #define STATUS_INVALID_PARAMETER_6 0xC00000F4
02421 #define STATUS_INVALID_PARAMETER_7 0xC00000F5
02422 #define STATUS_INVALID_PARAMETER_8 0xC00000F6
02423 #define STATUS_INVALID_PARAMETER_9 0xC00000F7
02424 #define STATUS_INVALID_PARAMETER_10 0xC00000F8
02425 #define STATUS_INVALID_PARAMETER_11 0xC00000F9
02426 #define STATUS_INVALID_PARAMETER_12 0xC00000FA
02427 #define STATUS_REDIRECTOR_NOT_STARTED 0xC00000FB
02428 #define STATUS_REDIRECTOR_STARTED 0xC00000FC
02429 #define STATUS_STACK_OVERFLOW 0xC00000FD
02430 #define STATUS_BAD_FUNCTION_TABLE 0xC00000FF
02431 #define STATUS_VARIABLE_NOT_FOUND 0xC0000100
02432 #define STATUS_DIRECTORY_NOT_EMPTY 0xC0000101
02433 #define STATUS_FILE_CORRUPT_ERROR 0xC0000102
02434 #define STATUS_NOT_A_DIRECTORY 0xC0000103
02435 #define STATUS_BAD_LOGON_SESSION_STATE 0xC0000104
02436 #define STATUS_LOGON_SESSION_COLLISION 0xC0000105
02437 #define STATUS_NAME_TOO_LONG 0xC0000106
02438 #define STATUS_FILES_OPEN 0xC0000107
02439 #define STATUS_CONNECTION_IN_USE 0xC0000108
02440 #define STATUS_MESSAGE_NOT_FOUND 0xC0000109
02441 #define STATUS_PROCESS_IS_TERMINATING 0xC000010A
02442 #define STATUS_INVALID_LOGON_TYPE 0xC000010B
02443 #define STATUS_NO_GUID_TRANSLATION 0xC000010C
02444 #define STATUS_CANNOT_IMPERSONATE 0xC000010D
02445 #define STATUS_IMAGE_ALREADY_LOADED 0xC000010E
02446 #define STATUS_ABIOS_NOT_PRESENT 0xC000010F
02447 #define STATUS_ABIOS_LID_NOT_EXIST 0xC0000110
02448 #define STATUS_ABIOS_LID_ALREADY_OWNED 0xC0000111
02449 #define STATUS_ABIOS_NOT_LID_OWNER 0xC0000112
02450 #define STATUS_ABIOS_INVALID_COMMAND 0xC0000113
02451 #define STATUS_ABIOS_INVALID_LID 0xC0000114
02452 #define STATUS_ABIOS_SELECTOR_NOT_AVAILABLE 0xC0000115
02453 #define STATUS_ABIOS_INVALID_SELECTOR 0xC0000116
02454 #define STATUS_NO_LDT 0xC0000117
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02455 #define STATUS_INVALID_LDT_SIZE 0xC0000118
02456 #define STATUS_INVALID_LDT_OFFSET 0xC0000119
02457 #define STATUS_INVALID_LDT_DESCRIPTOR 0xC000011A
02458 #define STATUS_INVALID_IMAGE_NE_FORMAT 0xC000011B
02459 #define STATUS_RXACT_INVALID_STATE 0xC000011C
02460 #define STATUS_RXACT_COMMIT_FAILURE 0xC000011D
02461 #define STATUS_MAPPED_FILE_SIZE_ZERO 0xC000011E
02462 #define STATUS_TOO_MANY_OPENED_FILES 0xC000011F
02463 #define STATUS_CANCELLED 0xC0000120
02464 #define STATUS_CANNOT_DELETE 0xC0000121
02465 #define STATUS_INVALID_COMPUTER_NAME 0xC0000122
02466 #define STATUS_FILE_DELETED 0xC0000123
02467 #define STATUS_SPECIAL_ACCOUNT 0xC0000124
02468 #define STATUS_SPECIAL_GROUP 0xC0000125
02469 #define STATUS_SPECIAL_USER 0xC0000126
02470 #define STATUS_MEMBERS_PRIMARY_GROUP 0xC0000127
02471 #define STATUS_FILE_CLOSED 0xC0000128
02472 #define STATUS_TOO_MANY_THREADS 0xC0000129
02473 #define STATUS_THREAD_NOT_IN_PROCESS 0xC000012A
02474 #define STATUS_TOKEN_ALREADY_IN_USE 0xC000012B
02475 #define STATUS_PAGEFILE_QUOTA_EXCEEDED 0xC000012C
02476 #define STATUS_COMMITMENT_LIMIT 0xC000012D
02477 #define STATUS_INVALID_IMAGE_LE_FORMAT 0xC000012E
02478 #define STATUS_INVALID_IMAGE_NOT_MZ 0xC000012F
02479 #define STATUS_INVALID_IMAGE_PROTECT 0xC0000130
02480 #define STATUS_INVALID_IMAGE_WIN_16 0xC0000131
02481 #define STATUS_LOGON_SERVER_CONFLICT 0xC0000132
02482 #define STATUS_TIME_DIFFERENCE_AT_DC 0xC0000133
02483 #define STATUS_SYNCHRONIZATION_REQUIRED 0xC0000134
02484 #define STATUS_DLL_NOT_FOUND 0xC0000135
02485 #define STATUS_OPEN_FAILED 0xC0000136
02486 #define STATUS_IO_PRIVILEGE_FAILED 0xC0000137
02487 #define STATUS_ORDINAL_NOT_FOUND 0xC0000138
02488 #define STATUS_ENTRYPOINT_NOT_FOUND 0xC0000139
02489 #define STATUS_CONTROL_C_EXIT 0xC000013A
02490 #define STATUS_LOCAL_DISCONNECT 0xC000013B
02491 #define STATUS_REMOTE_DISCONNECT 0xC000013C
02492 #define STATUS_REMOTE_RESOURCES 0xC000013D
02493 #define STATUS_LINK_FAILED 0xC000013E
02494 #define STATUS_LINK_TIMEOUT 0xC000013F
02495 #define STATUS_INVALID_CONNECTION 0xC0000140
02496 #define STATUS_INVALID_ADDRESS 0xC0000141
02497 #define STATUS_DLL_INIT_FAILED 0xC0000142
02498 #define STATUS_MISSING_SYSTEMFILE 0xC0000143
02499 #define STATUS_UNHANDLED_EXCEPTION 0xC0000144
02500 #define STATUS_APP_INIT_FAILURE 0xC0000145
02501 #define STATUS_PAGEFILE_CREATE_FAILED 0xC0000146
02502 #define STATUS_NO_PAGEFILE 0xC0000147
02503 #define STATUS_INVALID_LEVEL 0xC0000148
02504 #define STATUS_WRONG_PASSWORD_CORE 0xC0000149
02505 #define STATUS_ILLEGAL_FLOAT_CONTEXT 0xC000014A
02506 #define STATUS_PIPE_BROKEN 0xC000014B
02507 #define STATUS_REGISTRY_CORRUPT 0xC000014C
02508 #define STATUS_REGISTRY_IO_FAILED 0xC000014D
02509 #define STATUS_NO_EVENT_PAIR 0xC000014E
02510 #define STATUS_UNRECOGNIZED_VOLUME 0xC000014F
02511 #define STATUS_SERIAL_NO_DEVICE_INITED 0xC0000150
02512 #define STATUS_NO_SUCH_ALIAS 0xC0000151
02513 #define STATUS_MEMBER_NOT_IN_ALIAS 0xC0000152
02514 #define STATUS_MEMBER_IN_ALIAS 0xC0000153
02515 #define STATUS_ALIAS_EXISTS 0xC0000154
02516 #define STATUS_LOGON_NOT_GRANTED 0xC0000155
02517 #define STATUS_TOO_MANY_SECRETS 0xC0000156
02518 #define STATUS_SECRET_TOO_LONG 0xC0000157
02519 #define STATUS_INTERNAL_DB_ERROR 0xC0000158
02520 #define STATUS_FULLSCREEN_MODE 0xC0000159
02521 #define STATUS_TOO_MANY_CONTEXT_IDS 0xC000015A
02522 #define STATUS_LOGON_TYPE_NOT_GRANTED 0xC000015B
02523 #define STATUS_NOT_REGISTRY_FILE 0xC000015C
02524 #define STATUS_NT_CROSS_ENCRYPTION_REQUIRED 0xC000015D
02525 #define STATUS_DOMAIN_CTRLR_CONFIG_ERROR 0xC000015E
02526 #define STATUS_FT_MISSING_MEMBER 0xC000015F
02527 #define STATUS_ILL_FORMED_SERVICE_ENTRY 0xC0000160
02528 #define STATUS_ILLEGAL_CHARACTER 0xC0000161
02529 #define STATUS_UNMAPPABLE_CHARACTER 0xC0000162
02530 #define STATUS_UNDEFINED_CHARACTER 0xC0000163
02531 #define STATUS_FLOPPY_VOLUME 0xC0000164
02532 #define STATUS_FLOPPY_ID_MARK_NOT_FOUND 0xC0000165
02533 #define STATUS_FLOPPY_WRONG_CYLINDER 0xC0000166
02534 #define STATUS_FLOPPY_UNKNOWN_ERROR 0xC0000167
02535 #define STATUS_FLOPPY_BAD_REGISTERS 0xC0000168
02536 #define STATUS_DISK_RECALIBRATE_FAILED 0xC0000169
02537 #define STATUS_DISK_OPERATION_FAILED 0xC000016A
02538 #define STATUS_DISK_RESET_FAILED 0xC000016B
02539 #define STATUS_SHARED_IRQ_BUSY 0xC000016C
02540 #define STATUS_FT_ORPHANING 0xC000016D
02541 #define STATUS_BIOS_FAILED_TO_CONNECT_INTERRUPT 0xC000016E
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02542
02543 #define STATUS_PARTITION_FAILURE 0xC0000172
02544 #define STATUS_INVALID_BLOCK_LENGTH 0xC0000173
02545 #define STATUS_DEVICE_NOT_PARTITIONED 0xC0000174
02546 #define STATUS_UNABLE_TO_LOCK_MEDIA 0xC0000175
02547 #define STATUS_UNABLE_TO_UNLOAD_MEDIA 0xC0000176
02548 #define STATUS_EOM_OVERFLOW 0xC0000177
02549 #define STATUS_NO_MEDIA 0xC0000178
02550 #define STATUS_NO_SUCH_MEMBER 0xC000017A
02551 #define STATUS_INVALID_MEMBER 0xC000017B
02552 #define STATUS_KEY_DELETED 0xC000017C
02553 #define STATUS_NO_LOG_SPACE 0xC000017D
02554 #define STATUS_TOO_MANY_SIDS 0xC000017E
02555 #define STATUS_LM_CROSS_ENCRYPTION_REQUIRED 0xC000017F
02556 #define STATUS_KEY_HAS_CHILDREN 0xC0000180
02557 #define STATUS_CHILD_MUST_BE_VOLATILE 0xC0000181
02558 #define STATUS_DEVICE_CONFIGURATION_ERROR 0xC0000182
02559 #define STATUS_DRIVER_INTERNAL_ERROR 0xC0000183
02560 #define STATUS_INVALID_DEVICE_STATE 0xC0000184
02561 #define STATUS_IO_DEVICE_ERROR 0xC0000185
02562 #define STATUS_DEVICE_PROTOCOL_ERROR 0xC0000186
02563 #define STATUS_BACKUP_CONTROLLER 0xC0000187
02564 #define STATUS_LOG_FILE_FULL 0xC0000188
02565 #define STATUS_TOO_LATE 0xC0000189
02566 #define STATUS_NO_TRUST_LSA_SECRET 0xC000018A
02567 #define STATUS_NO_TRUST_SAM_ACCOUNT 0xC000018B
02568 #define STATUS_TRUSTED_DOMAIN_FAILURE 0xC000018C
02569 #define STATUS_TRUSTED_RELATIONSHIP_FAILURE 0xC000018D
02570 #define STATUS_EVENTLOG_FILE_CORRUPT 0xC000018E
02571 #define STATUS_EVENTLOG_CANT_START 0xC000018F
02572 #define STATUS_TRUST_FAILURE 0xC0000190
02573 #define STATUS_MUTANT_LIMIT_EXCEEDED 0xC0000191
02574 #define STATUS_NETLOGON_NOT_STARTED 0xC0000192
02575 #define STATUS_ACCOUNT_EXPIRED 0xC0000193
02576 #define STATUS_POSSIBLE_DEADLOCK 0xC0000194
02577 #define STATUS_NETWORK_CREDENTIAL_CONFLICT 0xC0000195
02578 #define STATUS_REMOTE_SESSION_LIMIT 0xC0000196
02579 #define STATUS_EVENTLOG_FILE_CHANGED 0xC0000197
02580 #define STATUS_NOLOGON_INTERDOMAIN_TRUST_ACCOUNT 0xC0000198
02581 #define STATUS_NOLOGON_WORKSTATION_TRUST_ACCOUNT 0xC0000199
02582 #define STATUS_NOLOGON_SERVER_TRUST_ACCOUNT 0xC000019A
02583 #define STATUS_DOMAIN_TRUST_INCONSISTENT 0xC000019B
02584 #define STATUS_FS_DRIVER_REQUIRED 0xC000019C
02585
02586 #define STATUS_NO_USER_SESSION_KEY 0xC0000202
02587 #define STATUS_USER_SESSION_DELETED 0xC0000203
02588 #define STATUS_RESOURCE_LANG_NOT_FOUND 0xC0000204
02589 #define STATUS_INSUFF_SERVER_RESOURCES 0xC0000205
02590 #define STATUS_INVALID_BUFFER_SIZE 0xC0000206
02591 #define STATUS_INVALID_ADDRESS_COMPONENT 0xC0000207
02592 #define STATUS_INVALID_ADDRESS_WILDCARD 0xC0000208
02593 #define STATUS_TOO_MANY_ADDRESSES 0xC0000209
02594 #define STATUS_ADDRESS_ALREADY_EXISTS 0xC000020A
02595 #define STATUS_ADDRESS_CLOSED 0xC000020B
02596 #define STATUS_CONNECTION_DISCONNECTED 0xC000020C
02597 #define STATUS_CONNECTION_RESET 0xC000020D
02598 #define STATUS_TOO_MANY_NODES 0xC000020E
02599 #define STATUS_TRANSACTION_ABORTED 0xC000020F
02600 #define STATUS_TRANSACTION_TIMED_OUT 0xC0000210
02601 #define STATUS_TRANSACTION_NO_RELEASE 0xC0000211
02602 #define STATUS_TRANSACTION_NO_MATCH 0xC0000212
02603 #define STATUS_TRANSACTION_RESPONDED 0xC0000213
02604 #define STATUS_TRANSACTION_INVALID_ID 0xC0000214
02605 #define STATUS_TRANSACTION_INVALID_TYPE 0xC0000215
02606 #define STATUS_NOT_SERVER_SESSION 0xC0000216
02607 #define STATUS_NOT_CLIENT_SESSION 0xC0000217
02608 #define STATUS_CANNOT_LOAD_REGISTRY_FILE 0xC0000218
02609 #define STATUS_DEBUG_ATTACH_FAILED 0xC0000219
02610 #define STATUS_SYSTEM_PROCESS_TERMINATED 0xC000021A
02611 #define STATUS_DATA_NOT_ACCEPTED 0xC000021B
02612 #define STATUS_NO_BROWSER_SERVERS_FOUND 0xC000021C
02613 #define STATUS_VDM_HARD_ERROR 0xC000021D
02614 #define STATUS_DRIVER_CANCEL_TIMEOUT 0xC000021E
02615 #define STATUS_REPLY_MESSAGE_MISMATCH 0xC000021F
02616 #define STATUS_MAPPED_ALIGNMENT 0xC0000220
02617 #define STATUS_IMAGE_CHECKSUM_MISMATCH 0xC0000221
02618 #define STATUS_LOST_WRITEBEHIND_DATA 0xC0000222
02619 #define STATUS_CLIENT_SERVER_PARAMETERS_INVALID 0xC0000223
02620 #define STATUS_PASSWORD_MUST_CHANGE 0xC0000224
02621 #define STATUS_NOT_FOUND 0xC0000225
02622 #define STATUS_NOT_TINY_STREAM 0xC0000226
02623 #define STATUS_RECOVERY_FAILURE 0xC0000227
02624 #define STATUS_STACK_OVERFLOW_READ 0xC0000228
02625 #define STATUS_FAIL_CHECK 0xC0000229
02626 #define STATUS_DUPLICATE_OBJECTID 0xC000022A
02627 #define STATUS_OBJECTID_EXISTS 0xC000022B
02628 #define STATUS_CONVERT_TO_LARGE 0xC000022C
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02629 #define STATUS_RETRY 0xC000022D
02630 #define STATUS_FOUND_OUT_OF_SCOPE 0xC000022E
02631 #define STATUS_ALLOCATE_BUCKET 0xC000022F
02632 #define STATUS_PROPSET_NOT_FOUND 0xC0000230
02633 #define STATUS_MARSHALL_OVERFLOW 0xC0000231
02634 #define STATUS_INVALID_VARIANT 0xC0000232
02635 #define STATUS_DOMAIN_CONTROLLER_NOT_FOUND 0xC0000233
02636 #define STATUS_ACCOUNT_LOCKED_OUT 0xC0000234
02637 #define STATUS_HANDLE_NOT_CLOSABLE 0xC0000235
02638 #define STATUS_CONNECTION_REFUSED 0xC0000236
02639 #define STATUS_GRACEFUL_DISCONNECT 0xC0000237
02640 #define STATUS_ADDRESS_ALREADY_ASSOCIATED 0xC0000238
02641 #define STATUS_ADDRESS_NOT_ASSOCIATED 0xC0000239
02642 #define STATUS_CONNECTION_INVALID 0xC000023A
02643 #define STATUS_CONNECTION_ACTIVE 0xC000023B
02644 #define STATUS_NETWORK_UNREACHABLE 0xC000023C
02645 #define STATUS_HOST_UNREACHABLE 0xC000023D
02646 #define STATUS_PROTOCOL_UNREACHABLE 0xC000023E
02647 #define STATUS_PORT_UNREACHABLE 0xC000023F
02648 #define STATUS_REQUEST_ABORTED 0xC0000240
02649 #define STATUS_CONNECTION_ABORTED 0xC0000241
02650 #define STATUS_BAD_COMPRESSION_BUFFER 0xC0000242
02651 #define STATUS_USER_MAPPED_FILE 0xC0000243
02652 #define STATUS_AUDIT_FAILED 0xC0000244
02653 #define STATUS_TIMER_RESOLUTION_NOT_SET 0xC0000245
02654 #define STATUS_CONNECTION_COUNT_LIMIT 0xC0000246
02655 #define STATUS_LOGIN_TIME_RESTRICTION 0xC0000247
02656 #define STATUS_LOGIN_WKSTA_RESTRICTION 0xC0000248
02657 #define STATUS_IMAGE_MP_UP_MISMATCH 0xC0000249
02658 #define STATUS_INSUFFICIENT_LOGON_INFO 0xC0000250
02659 #define STATUS_BAD_DLL_ENTRYPOINT 0xC0000251
02660 #define STATUS_BAD_SERVICE_ENTRYPOINT 0xC0000252
02661 #define STATUS_LPC_REPLY_LOST 0xC0000253
02662 #define STATUS_IP_ADDRESS_CONFLICT1 0xC0000254
02663 #define STATUS_IP_ADDRESS_CONFLICT2 0xC0000255
02664 #define STATUS_REGISTRY_QUOTA_LIMIT 0xC0000256
02665 #define STATUS_PATH_NOT_COVERED 0xC0000257
02666 #define STATUS_NO_CALLBACK_ACTIVE 0xC0000258
02667 #define STATUS_LICENSE_QUOTA_EXCEEDED 0xC0000259
02668 #define STATUS_PWD_TOO_SHORT 0xC000025A
02669 #define STATUS_PWD_TOO_RECENT 0xC000025B
02670 #define STATUS_PWD_HISTORY_CONFLICT 0xC000025C
02671 #define STATUS_PLUGPLAY_NO_DEVICE 0xC000025E
02672 #define STATUS_UNSUPPORTED_COMPRESSION 0xC000025F
02673 #define STATUS_INVALID_HW_PROFILE 0xC0000260
02674 #define STATUS_INVALID_PLUGPLAY_DEVICE_PATH 0xC0000261
02675 #define STATUS_DRIVER_ORDINAL_NOT_FOUND 0xC0000262
02676 #define STATUS_DRIVER_ENTRYPOINT_NOT_FOUND 0xC0000263
02677 #define STATUS_RESOURCE_NOT_OWNED 0xC0000264
02678 #define STATUS_TOO_MANY_LINKS 0xC0000265
02679 #define STATUS_QUOTA_LIST_INCONSISTENT 0xC0000266
02680 #define STATUS_FILE_IS_OFFLINE 0xC0000267
02681 #define STATUS_EVALUATION_EXPIRATION 0xC0000268
02682 #define STATUS_ILLEGAL_DLL_RELOCATION 0xC0000269
02683 #define STATUS_LICENSE_VIOLATION 0xC000026A
02684 #define STATUS_DLL_INIT_FAILED_LOGOFF 0xC000026B
02685 #define STATUS_DRIVER_UNABLE_TO_LOAD 0xC000026C
02686 #define STATUS_DFS_UNAVAILABLE 0xC000026D
02687 #define STATUS_VOLUME_DISMOUNTED 0xC000026E
02688 #define STATUS_WX86_INTERNAL_ERROR 0xC000026F
02689 #define STATUS_WX86_FLOAT_STACK_CHECK 0xC0000270
02690 #define STATUS_WOW_ASSERTION 0xC0009898
02691 #define RPC_NT_INVALID_STRING_BINDING 0xC0020001
02692 #define RPC_NT_WRONG_KIND_OF_BINDING 0xC0020002
02693 #define RPC_NT_INVALID_BINDING 0xC0020003
02694 #define RPC_NT_PROTSEQ_NOT_SUPPORTED 0xC0020004
02695 #define RPC_NT_INVALID_RPC_PROTSEQ 0xC0020005
02696 #define RPC_NT_INVALID_STRING_UUID 0xC0020006
02697 #define RPC_NT_INVALID_ENDPOINT_FORMAT 0xC0020007
02698 #define RPC_NT_INVALID_NET_ADDR 0xC0020008
02699 #define RPC_NT_NO_ENDPOINT_FOUND 0xC0020009
02700 #define RPC_NT_INVALID_TIMEOUT 0xC002000A
02701 #define RPC_NT_OBJECT_NOT_FOUND 0xC002000B
02702 #define RPC_NT_ALREADY_REGISTERED 0xC002000C
02703 #define RPC_NT_TYPE_ALREADY_REGISTERED 0xC002000D
02704 #define RPC_NT_ALREADY_LISTENING 0xC002000E
02705 #define RPC_NT_NO_PROTSEQS_REGISTERED 0xC002000F
02706 #define RPC_NT_NOT_LISTENING 0xC0020010
02707 #define RPC_NT_UNKNOWN_MGR_TYPE 0xC0020011
02708 #define RPC_NT_UNKNOWN_IF 0xC0020012
02709 #define RPC_NT_NO_BINDINGS 0xC0020013
02710 #define RPC_NT_NO_PROTSEQS 0xC0020014
02711 #define RPC_NT_CANT_CREATE_ENDPOINT 0xC0020015
02712 #define RPC_NT_OUT_OF_RESOURCES 0xC0020016
02713 #define RPC_NT_SERVER_UNAVAILABLE 0xC0020017
02714 #define RPC_NT_SERVER_TOO_BUSY 0xC0020018
02715 #define RPC_NT_INVALID_NETWORK_OPTIONS 0xC0020019
```



```
02716 #define RPC_NT_NO_CALL_ACTIVE 0xC002001A
02717 #define RPC_NT_CALL_FAILED 0xC002001B
02718 #define RPC_NT_CALL_FAILED_DNE 0xC002001C
02719 #define RPC_NT_PROTOCOL_ERROR 0xC002001D
02720 #define RPC_NT_UNSUPPORTED_TRANS_SYN 0xC002001F
02721 #define RPC_NT_UNSUPPORTED_TYPE 0xC0020021
02722 #define RPC_NT_INVALID_TAG 0xC0020022
02723 #define RPC_NT_INVALID_BOUND 0xC0020023
02724 #define RPC_NT_NO_ENTRY_NAME 0xC0020024
02725 #define RPC_NT_INVALID_NAME_SYNTAX 0xC0020025
02726 #define RPC_NT_UNSUPPORTED_NAME_SYNTAX 0xC0020026
02727 #define RPC_NT_UUID_NO_ADDRESS 0xC0020028
02728 #define RPC_NT_DUPLICATE_ENDPOINT 0xC0020029
02729 #define RPC_NT_UNKNOWN_AUTHN_TYPE 0xC002002A
02730 #define RPC_NT_MAX_CALLS_TOO_SMALL 0xC002002B
02731 #define RPC_NT_STRING_TOO_LONG 0xC002002C
02732 #define RPC_NT_PROTSEQ_NOT_FOUND 0xC002002D
02733 #define RPC_NT_PROCNUM_OUT_OF_RANGE 0xC002002E
02734 #define RPC_NT_BINDING_HAS_NO_AUTH 0xC002002F
02735 #define RPC_NT_UNKNOWN_AUTHN_SERVICE 0xC0020030
02736 #define RPC_NT_UNKNOWN_AUTHN_LEVEL 0xC0020031
02737 #define RPC_NT_INVALID_AUTH_IDENTITY 0xC0020032
02738 #define RPC_NT_UNKNOWN_AUTHZ_SERVICE 0xC0020033
02739 #define EPT_NT_INVALID_ENTRY 0xC0020034
02740 #define EPT_NT_CANT_PERFORM_OP 0xC0020035
02741 #define EPT_NT_NOT_REGISTERED 0xC0020036
02742 #define RPC_NT_NOTHING_TO_EXPORT 0xC0020037
02743 #define RPC_NT_INCOMPLETE_NAME 0xC0020038
02744 #define RPC_NT_INVALID_VERS_OPTION 0xC0020039
02745 #define RPC_NT_NO_MORE_MEMBERS 0xC002003A
02746 #define RPC_NT_NOT_ALL_OBJS_UNEXPORTED 0xC002003B
02747 #define RPC_NT_INTERFACE_NOT_FOUND 0xC002003C
02748 #define RPC_NT_ENTRY_ALREADY_EXISTS 0xC002003D
02749 #define RPC_NT_ENTRY_NOT_FOUND 0xC002003E
02750 #define RPC_NT_NAME_SERVICE_UNAVAILABLE 0xC002003F
02751 #define RPC_NT_INVALID_NAF_ID 0xC0020040
02752 #define RPC_NT_CANNOT_SUPPORT 0xC0020041
02753 #define RPC_NT_NO_CONTEXT_AVAILABLE 0xC0020042
02754 #define RPC_NT_INTERNAL_ERROR 0xC0020043
02755 #define RPC_NT_ZERO_DIVIDE 0xC0020044
02756 #define RPC_NT_ADDRESS_ERROR 0xC0020045
02757 #define RPC_NT_FP_DIV_ZERO 0xC0020046
02758 #define RPC_NT_FP_UNDERFLOW 0xC0020047
02759 #define RPC_NT_FP_OVERFLOW 0xC0020048
02760 #define RPC_NT_NO_MORE_ENTRIES 0xC0030001
02761 #define RPC_NT_SS_CHAR_TRANS_OPEN_FAIL 0xC0030002
02762 #define RPC_NT_SS_CHAR_TRANS_SHORT_FILE 0xC0030003
02763 #define RPC_NT_SS_IN_NULL_CONTEXT 0xC0030004
02764 #define RPC_NT_SS_CONTEXT_MISMATCH 0xC0030005
02765 #define RPC_NT_SS_CONTEXT_DAMAGED 0xC0030006
02766 #define RPC_NT_SS_HANDLES_MISMATCH 0xC0030007
02767 #define RPC_NT_SS_CANNOT_GET_CALL_HANDLE 0xC0030008
02768 #define RPC_NT_NULL_REF_POINTER 0xC0030009
02769 #define RPC_NT_ENUM_VALUE_OUT_OF_RANGE 0xC003000A
02770 #define RPC_NT_BYTE_COUNT_TOO_SMALL 0xC003000B
02771 #define RPC_NT_BAD_STUB_DATA 0xC003000C
02772 #define RPC_NT_CALL_IN_PROGRESS 0xC0020049
02773 #define RPC_NT_NO_MORE_BINDINGS 0xC002004A
02774 #define RPC_NT_GROUP_MEMBER_NOT_FOUND 0xC002004B
02775 #define EPT_NT_CANT_CREATE 0xC002004C
02776 #define RPC_NT_INVALID_OBJECT 0xC002004D
02777 #define RPC_NT_NO_INTERFACES 0xC002004F
02778 #define RPC_NT_CALL_CANCELLED 0xC0020050
02779 #define RPC_NT_BINDING_INCOMPLETE 0xC0020051
02780 #define RPC_NT_COMM_FAILURE 0xC0020052
02781 #define RPC_NT_UNSUPPORTED_AUTHN_LEVEL 0xC0020053
02782 #define RPC_NT_NO_PRINC_NAME 0xC0020054
02783 #define RPC_NT_NOT_RPC_ERROR 0xC0020055
02784 #define RPC_NT_UUID_LOCAL_ONLY 0x40020056
02785 #define RPC_NT_SEC_PKG_ERROR 0xC0020057
02786 #define RPC_NT_NOT_CANCELLED 0xC0020058
02787 #define RPC_NT_INVALID_ES_ACTION 0xC0030059
02788 #define RPC_NT_WRONG_ES_VERSION 0xC003005A
02789 #define RPC_NT_WRONG_STUB_VERSION 0xC003005B
02790 #define RPC_NT_INVALID_PIPE_OBJECT 0xC003005C
02791 #define RPC_NT_INVALID_PIPE_OPERATION 0xC003005D
02792 #define RPC_NT_WRONG_PIPE_VERSION 0xC003005E
02793 #define RPC_NT_SEND_INCOMPLETE 0x400200AF
02794
02795 #define MAXIMUM_WAIT_OBJECTS 64
02796 #define MAXIMUM_SUSPEND_COUNT 127
02797
02798
02799 /*
02800 * Return values from the actual exception handlers
02801 */
02802
```

```

02803 #define ExceptionContinueExecution 0
02804 #define ExceptionContinueSearch 1
02805 #define ExceptionNestedException 2
02806 #define ExceptionCollidedUnwind 3
02807
02808 /*
02809  * Return values from filters in except() and from UnhandledExceptionFilter
02810  */
02811
02812 #define EXCEPTION_EXECUTE_HANDLER 1
02813 #define EXCEPTION_CONTINUE_SEARCH 0
02814 #define EXCEPTION_CONTINUE_EXECUTION -1
02815
02816 /*
02817  * From OS/2 2.0 exception handling
02818  * Win32 seems to use the same flags as ExceptionFlags in an EXCEPTION_RECORD
02819  */
02820
02821 #define EH_NONCONTINUABLE 0x01
02822 #define EH_UNWINDING 0x02
02823 #define EH_EXIT_UNWIND 0x04
02824 #define EH_STACK_INVALID 0x08
02825 #define EH_NESTED_CALL 0x10
02826
02827 #define EXCEPTION_CONTINUABLE 0
02828 #define EXCEPTION_NONCONTINUABLE EH_NONCONTINUABLE
02829
02830 /*
02831  * The exception record used by Win32 to give additional information
02832  * about exception to exception handlers.
02833  */
02834
02835 #define EXCEPTION_MAXIMUM_PARAMETERS 15
02836
02837 typedef struct __EXCEPTION_RECORD
02838 {
02839     DWORD ExceptionCode;
02840     DWORD ExceptionFlags;
02841     struct __EXCEPTION_RECORD *ExceptionRecord;
02842
02843     LPVOID ExceptionAddress;
02844     DWORD NumberParameters;
02845     DWORD ExceptionInformation[EXCEPTION_MAXIMUM_PARAMETERS];
02846 } EXCEPTION_RECORD, *PEXCEPTION_RECORD;
02847
02848 /*
02849  * The exception pointers structure passed to exception filters
02850  * in except() and the UnhandledExceptionFilter().
02851  */
02852
02853 typedef struct _EXCEPTION_POINTERS
02854 {
02855     PEXCEPTION_RECORD ExceptionRecord;
02856     PCONTEXT ContextRecord;
02857 } EXCEPTION_POINTERS, *PEXCEPTION_POINTERS;
02858
02859
02860 /*
02861  * The exception frame, used for registering exception handlers
02862  * Win32 cares only about this, but compilers generally emit
02863  * larger exception frames for their own use.
02864  */
02865
02866 struct __EXCEPTION_FRAME;
02867
02868 typedef DWORD (*PEXCEPTION_HANDLER)(PEXCEPTION_RECORD, struct __EXCEPTION_FRAME*,
02869                                     PCONTEXT, struct __EXCEPTION_FRAME **);
02870
02871 typedef struct __EXCEPTION_FRAME
02872 {
02873     struct __EXCEPTION_FRAME *Prev;
02874     PEXCEPTION_HANDLER Handler;
02875 } EXCEPTION_FRAME, *PEXCEPTION_FRAME;
02876
02877 /*
02878  * function pointer to a exception filter
02879  */
02880
02881 typedef LONG CALLBACK (*PTOP_LEVEL_EXCEPTION_FILTER)(PEXCEPTION_POINTERS ExceptionInfo);
02882 typedef PTOP_LEVEL_EXCEPTION_FILTER LPTOP_LEVEL_EXCEPTION_FILTER;
02883
02884 DWORD WINAPI UnhandledExceptionFilter( PEXCEPTION_POINTERS epointers );
02885 LPTOP_LEVEL_EXCEPTION_FILTER
02886 WINAPI SetUnhandledExceptionFilter( LPTOP_LEVEL_EXCEPTION_FILTER filter );
02887
02888 /* status values for ContinueDebugEvent */
02889 #define DBG_CONTINUE 0x00010002

```

```

02890 #define DBG_TERMINATE_THREAD          0x40010003
02891 #define DBG_TERMINATE_PROCESS         0x40010004
02892 #define DBG_CONTROL_C                 0x40010005
02893 #define DBG_CONTROL_BREAK             0x40010008
02894 #define DBG_EXCEPTION_NOT_HANDLED     0x80010001
02895
02896 typedef struct _NT_TIB
02897 {
02898     struct _EXCEPTION_REGISTRATION_RECORD *ExceptionList;
02899     PVOID StackBase;
02900     PVOID StackLimit;
02901     PVOID SubSystemTib;
02902     union {
02903         PVOID FiberData;
02904         DWORD Version;
02905     } DUMMYUNIONNAME;
02906     PVOID ArbitraryUserPointer;
02907     struct _NT_TIB *Self;
02908 } NT_TIB, *PNT_TIB;
02909
02910 struct _TEB;
02911
02912 #if defined(__i386__) && defined(__GNUC__) && !defined(__CHECKER__)
02913 extern inline struct _TEB WINAPI *NtCurrentTeb(void);
02914 extern inline struct _TEB WINAPI *NtCurrentTeb(void)
02915 {
02916     struct _TEB *teb;
02917     __asm__(".byte 0x64\n\tmovl (0x18),%0" : "=r" (teb));
02918     return teb;
02919 }
02920 #else
02921 extern struct _TEB WINAPI *NtCurrentTeb(void);
02922 #endif
02923
02924 /*
02925  * File formats definitions
02926  */
02927
02928 typedef struct _IMAGE_DOS_HEADER {
02929     WORD e_magic; /* 00: MZ Header signature */
02930     WORD e_cblp; /* 02: Bytes on last page of file */
02931     WORD e_cp; /* 04: Pages in file */
02932     WORD e_crlc; /* 06: Relocations */
02933     WORD e_cparhdr; /* 08: Size of header in paragraphs */
02934     WORD e_minalloc; /* 0a: Minimum extra paragraphs needed */
02935     WORD e_maxalloc; /* 0c: Maximum extra paragraphs needed */
02936     WORD e_ss; /* 0e: Initial (relative) SS value */
02937     WORD e_sp; /* 10: Initial SP value */
02938     WORD e_csum; /* 12: Checksum */
02939     WORD e_ip; /* 14: Initial IP value */
02940     WORD e_cs; /* 16: Initial (relative) CS value */
02941     WORD e_lfarlc; /* 18: File address of relocation table */
02942     WORD e_ovno; /* 1a: Overlay number */
02943     WORD e_res[4]; /* 1c: Reserved words */
02944     WORD e_oemid; /* 24: OEM identifier (for e_oeminfo) */
02945     WORD e_oeminfo; /* 26: OEM information; e_oemid specific */
02946     WORD e_res2[10]; /* 28: Reserved words */
02947     DWORD e_lfanew; /* 3c: Offset to extended header */
02948 } IMAGE_DOS_HEADER, *PIMAGE_DOS_HEADER;
02949
02950 #define IMAGE_DOS_SIGNATURE 0x5A4D /* MZ */
02951 #define IMAGE_OS2_SIGNATURE 0x454E /* NE */
02952 #define IMAGE_OS2_SIGNATURE_LE 0x454C /* LE */
02953 #define IMAGE_OS2_SIGNATURE_LX 0x584C /* LX */
02954 #define IMAGE_VXD_SIGNATURE 0x454C /* LE */
02955 #define IMAGE_NT_SIGNATURE 0x00004550 /* PE00 */
02956
02957 /*
02958  * This is the Windows executable (NE) header.
02959  * the name IMAGE_OS2_HEADER is misleading, but in the SDK this way.
02960  */
02961
02962 typedef struct
02963 {
02964     WORD ne_magic; /* 00 NE signature 'NE' */
02965     BYTE ne_ver; /* 02 Linker version number */
02966     BYTE ne_rev; /* 03 Linker revision number */
02967     WORD ne_enttab; /* 04 Offset to entry table relative to NE */
02968     WORD ne_cbenttab; /* 06 Length of entry table in bytes */
02969     LONG ne_crc; /* 08 Checksum */
02970     WORD ne_flags; /* 0c Flags about segments in this file */
02971     WORD ne_autodata; /* 0e Automatic data segment number */
02972     WORD ne_heap; /* 10 Initial size of local heap */
02973     WORD ne_stack; /* 12 Initial size of stack */
02974     DWORD ne_csip; /* 14 Initial CS:IP */
02975     DWORD ne_sssp; /* 18 Initial SS:SP */
02976     WORD ne_cseg; /* 1c # of entries in segment table */

```

```

02977     WORD    ne_cmod;                /* 1e # of entries in module reference tab. */
02978     WORD    ne_cbnrestab;           /* 20 Length of nonresident-name table */
02979     WORD    ne_segtab;              /* 22 Offset to segment table */
02980     WORD    ne_rsrctab;             /* 24 Offset to resource table */
02981     WORD    ne_restab;              /* 26 Offset to resident-name table */
02982     WORD    ne_modtab;              /* 28 Offset to module reference table */
02983     WORD    ne_imptab;              /* 2a Offset to imported name table */
02984     DWORD    ne_nrestab;            /* 2c Offset to nonresident-name table */
02985     WORD    ne_cmovent;             /* 30 # of movable entry points */
02986     WORD    ne_align;               /* 32 Logical sector alignment shift count */
02987     WORD    ne_cres;                /* 34 # of resource segments */
02988     BYTE     ne_exetyp;              /* 36 Flags indicating target OS */
02989     BYTE     ne_flagsothers;         /* 37 Additional information flags */
02990     WORD     fastload_offset;        /* 38 Offset to fast load area (should be ne_pretthunks)*/
02991     WORD     fastload_length;        /* 3a Length of fast load area (should be ne_psegrefbytes) */
02992     WORD     ne_swaparea;            /* 3c Reserved by Microsoft */
02993     WORD     ne_expver;              /* 3e Expected Windows version number */
02994 } IMAGE_OS2_HEADER, *PIMAGE_OS2_HEADER;
02995
02996 typedef struct _IMAGE_VXD_HEADER {
02997     WORD    e32_magic;
02998     BYTE    e32_border;
02999     BYTE    e32_worder;
03000     DWORD    e32_level;
03001     WORD    e32_cpu;
03002     WORD    e32_os;
03003     DWORD    e32_ver;
03004     DWORD    e32_mflags;
03005     DWORD    e32_mpages;
03006     DWORD    e32_startobj;
03007     DWORD    e32_eip;
03008     DWORD    e32_stackobj;
03009     DWORD    e32_esp;
03010     DWORD    e32_pagesize;
03011     DWORD    e32_lastpagesize;
03012     DWORD    e32_fixupsize;
03013     DWORD    e32_fixupsum;
03014     DWORD    e32_ldrsize;
03015     DWORD    e32_ldrsum;
03016     DWORD    e32_objtab;
03017     DWORD    e32_objcnt;
03018     DWORD    e32_objmap;
03019     DWORD    e32_itermap;
03020     DWORD    e32_rsrctab;
03021     DWORD    e32_rsrccnt;
03022     DWORD    e32_restab;
03023     DWORD    e32_enttab;
03024     DWORD    e32_dirtab;
03025     DWORD    e32_dircnt;
03026     DWORD    e32_fpagetab;
03027     DWORD    e32_frextab;
03028     DWORD    e32_impmod;
03029     DWORD    e32_impmodcnt;
03030     DWORD    e32_impproc;
03031     DWORD    e32_pagesum;
03032     DWORD    e32_datapage;
03033     DWORD    e32_preload;
03034     DWORD    e32_nrestab;
03035     DWORD    e32_cbnrestab;
03036     DWORD    e32_nressum;
03037     DWORD    e32_autodata;
03038     DWORD    e32_debuginfo;
03039     DWORD    e32_debuglen;
03040     DWORD    e32_instpreload;
03041     DWORD    e32_instdemand;
03042     DWORD    e32_heapsize;
03043     BYTE     e32_res3[12];
03044     DWORD    e32_winresoff;
03045     DWORD    e32_winreslen;
03046     WORD     e32_devid;
03047     WORD     e32_ddkver;
03048 } IMAGE_VXD_HEADER, *PIMAGE_VXD_HEADER;
03049
03050
03051 /* These defines describe the meanings of the bits in the Characteristics
03052    field */
03053
03054 #define IMAGE_FILE_RELOCS_STRIPPED    0x0001 /* No relocation info */
03055 #define IMAGE_FILE_EXECUTABLE_IMAGE  0x0002
03056 #define IMAGE_FILE_LINE_NUMS_STRIPPED 0x0004
03057 #define IMAGE_FILE_LOCAL_SYMS_STRIPPED 0x0008
03058 #define IMAGE_FILE_16BIT_MACHINE      0x0040
03059 #define IMAGE_FILE_BYTES_REVERSED_LO  0x0080
03060 #define IMAGE_FILE_32BIT_MACHINE      0x0100
03061 #define IMAGE_FILE_DEBUG_STRIPPED     0x0200
03062 #define IMAGE_FILE_SYSTEM              0x1000
03063 #define IMAGE_FILE_DLL                 0x2000

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```
03064 #define IMAGE_FILE_BYTES_REVERSED_HI    0x8000
03065
03066 /* These are the settings of the Machine field. */
03067 #define IMAGE_FILE_MACHINE_UNKNOWN    0
03068 #define IMAGE_FILE_MACHINE_I860      0x14d
03069 #define IMAGE_FILE_MACHINE_I386      0x14c
03070 #define IMAGE_FILE_MACHINE_R3000     0x162
03071 #define IMAGE_FILE_MACHINE_R4000     0x166
03072 #define IMAGE_FILE_MACHINE_R10000    0x168
03073 #define IMAGE_FILE_MACHINE_ALPHA     0x184
03074 #define IMAGE_FILE_MACHINE_POWERPC   0x1f0
03075
03076 #define IMAGE_SIZEOF_FILE_HEADER     20
03077
03078 /* Possible Magic values */
03079 #define IMAGE_NT_OPTIONAL_HDR_MAGIC    0x10b
03080 #define IMAGE_ROM_OPTIONAL_HDR_MAGIC  0x107
03081
03082 /* These are indexes into the DataDirectory array */
03083 #define IMAGE_FILE_EXPORT_DIRECTORY    0
03084 #define IMAGE_FILE_IMPORT_DIRECTORY    1
03085 #define IMAGE_FILE_RESOURCE_DIRECTORY  2
03086 #define IMAGE_FILE_EXCEPTION_DIRECTORY 3
03087 #define IMAGE_FILE_SECURITY_DIRECTORY  4
03088 #define IMAGE_FILE_BASE_RELOCATION_TABLE 5
03089 #define IMAGE_FILE_DEBUG_DIRECTORY     6
03090 #define IMAGE_FILE_DESCRIPTION_STRING   7
03091 #define IMAGE_FILE_MACHINE_VALUE       8 /* Mips */
03092 #define IMAGE_FILE_THREAD_LOCAL_STORAGE 9
03093 #define IMAGE_FILE_CALLBACK_DIRECTORY   10
03094
03095 /* Directory Entries, indices into the DataDirectory array */
03096
03097 #define IMAGE_DIRECTORY_ENTRY_EXPORT    0
03098 #define IMAGE_DIRECTORY_ENTRY_IMPORT    1
03099 #define IMAGE_DIRECTORY_ENTRY_RESOURCE  2
03100 #define IMAGE_DIRECTORY_ENTRY_EXCEPTION 3
03101 #define IMAGE_DIRECTORY_ENTRY_SECURITY  4
03102 #define IMAGE_DIRECTORY_ENTRY_BASERELOC 5
03103 #define IMAGE_DIRECTORY_ENTRY_DEBUG     6
03104 #define IMAGE_DIRECTORY_ENTRY_COPYRIGHT 7
03105 #define IMAGE_DIRECTORY_ENTRY_GLOBALPTR  8 /* (MIPS GP) */
03106 #define IMAGE_DIRECTORY_ENTRY_TLS        9
03107 #define IMAGE_DIRECTORY_ENTRY_LOAD_CONFIG 10
03108 #define IMAGE_DIRECTORY_ENTRY_BOUND_IMPORT 11
03109 #define IMAGE_DIRECTORY_ENTRY_IAT        12 /* Import Address Table */
03110 #define IMAGE_DIRECTORY_ENTRY_DELAY_IMPORT 13
03111 #define IMAGE_DIRECTORY_ENTRY_COM_DESCRIPTOR 14
03112
03113 /* Subsystem Values */
03114
03115 #define IMAGE_SUBSYSTEM_UNKNOWN    0
03116 #define IMAGE_SUBSYSTEM_NATIVE     1
03117 #define IMAGE_SUBSYSTEM_WINDOWS_GUI 2 /* Windows GUI subsystem */
03118 #define IMAGE_SUBSYSTEM_WINDOWS_CUI 3 /* Windows character subsystem*/
03119 #define IMAGE_SUBSYSTEM_OS2_CUI     5
03120 #define IMAGE_SUBSYSTEM_POSIX_CUI    7
03121
03122 typedef struct _IMAGE_FILE_HEADER {
03123     WORD Machine;
03124     WORD NumberOfSections;
03125     DWORD TimeDateStamp;
03126     DWORD PointerToSymbolTable;
03127     DWORD NumberOfSymbols;
03128     WORD SizeOfOptionalHeader;
03129     WORD Characteristics;
03130 } IMAGE_FILE_HEADER, *PIMAGE_FILE_HEADER;
03131
03132 typedef struct _IMAGE_DATA_DIRECTORY {
03133     DWORD VirtualAddress;
03134     DWORD Size;
03135 } IMAGE_DATA_DIRECTORY, *PIMAGE_DATA_DIRECTORY;
03136
03137 #define IMAGE_NUMBEROF_DIRECTORY_ENTRIES 16
03138
03139 typedef struct _IMAGE_OPTIONAL_HEADER {
03140
03141     /* Standard fields */
03142
03143     WORD Magic; /* 0x10b or 0x107 */ /* 0x00 */
03144     BYTE MajorLinkerVersion;
03145     BYTE MinorLinkerVersion;
03146     DWORD SizeOfCode;
03147     DWORD SizeOfInitializedData;
03148     DWORD SizeOfUninitializedData;
03149     DWORD AddressOfEntryPoint; /* 0x10 */
03150     DWORD BaseOfCode;
```

```

03151     DWORD BaseOfData;
03152
03153     /* NT additional fields */
03154
03155     DWORD ImageBase;
03156     DWORD SectionAlignment;          /* 0x20 */
03157     DWORD FileAlignment;
03158     WORD MajorOperatingSystemVersion;
03159     WORD MinorOperatingSystemVersion;
03160     WORD MajorImageVersion;
03161     WORD MinorImageVersion;
03162     WORD MajorSubsystemVersion;      /* 0x30 */
03163     WORD MinorSubsystemVersion;
03164     DWORD Win32VersionValue;
03165     DWORD SizeOfImage;
03166     DWORD SizeOfHeaders;
03167     DWORD CheckSum;                  /* 0x40 */
03168     WORD Subsystem;
03169     WORD DllCharacteristics;
03170     DWORD SizeOfStackReserve;
03171     DWORD SizeOfStackCommit;
03172     DWORD SizeOfHeapReserve;        /* 0x50 */
03173     DWORD SizeOfHeapCommit;
03174     DWORD LoaderFlags;
03175     DWORD NumberOfRvaAndSizes;
03176     IMAGE_DATA_DIRECTORY DataDirectory[IMAGE_NUMBEROF_DIRECTORY_ENTRIES]; /* 0x60 */
03177 } IMAGE_OPTIONAL_HEADER, *PIMAGE_OPTIONAL_HEADER;
03178
03179 typedef struct _IMAGE_NT_HEADERS {
03180     DWORD Signature; /* "PE" \0\0 */
03181     IMAGE_FILE_HEADER FileHeader;
03182     IMAGE_OPTIONAL_HEADER OptionalHeader;
03183 } IMAGE_NT_HEADERS, *PIMAGE_NT_HEADERS;
03184
03185 #define IMAGE_SIZEOF_SHORT_NAME 8
03186
03187 typedef struct _IMAGE_SECTION_HEADER {
03188     BYTE Name[IMAGE_SIZEOF_SHORT_NAME];
03189     union {
03190         DWORD PhysicalAddress;
03191         DWORD VirtualSize;
03192     } Misc;
03193     DWORD VirtualAddress;
03194     DWORD SizeOfRawData;
03195     DWORD PointerToRawData;
03196     DWORD PointerToRelocations;
03197     DWORD PointerToLinenumbers;
03198     WORD NumberOfRelocations;
03199     WORD NumberOfLinenumbers;
03200     DWORD Characteristics;
03201 } IMAGE_SECTION_HEADER, *PIMAGE_SECTION_HEADER;
03202
03203 #define IMAGE_SIZEOF_SECTION_HEADER 40
03204
03205 #define IMAGE_FIRST_SECTION(nthead) \
03206     ((PIMAGE_SECTION_HEADER)((LPBYTE)&((PIMAGE_NT_HEADERS)(nthead))->OptionalHeader + \
03207     ((PIMAGE_NT_HEADERS)(nthead))->FileHeader.SizeOfOptionalHeader))
03208
03209 /* These defines are for the Characteristics bitfield. */
03210 /* #define IMAGE_SCN_TYPE_REG 0x00000000 - Reserved */
03211 /* #define IMAGE_SCN_TYPE_DSECT 0x00000001 - Reserved */
03212 /* #define IMAGE_SCN_TYPE_NOLOAD 0x00000002 - Reserved */
03213 /* #define IMAGE_SCN_TYPE_GROUP 0x00000004 - Reserved */
03214 /* #define IMAGE_SCN_TYPE_NO_PAD 0x00000008 - Reserved */
03215 /* #define IMAGE_SCN_TYPE_COPY 0x00000010 - Reserved */
03216
03217 #define IMAGE_SCN_CNT_CODE 0x00000020
03218 #define IMAGE_SCN_CNT_INITIALIZED_DATA 0x00000040
03219 #define IMAGE_SCN_CNT_UNINITIALIZED_DATA 0x00000080
03220
03221 #define IMAGE_SCN_LNK_OTHER 0x00000100
03222 #define IMAGE_SCN_LNK_INFO 0x00000200
03223 /* #define IMAGE_SCN_TYPE_OVER 0x00000400 - Reserved */
03224 #define IMAGE_SCN_LNK_REMOVE 0x00000800
03225 #define IMAGE_SCN_LNK_COMDAT 0x00001000
03226
03227 /* 0x00002000 - Reserved */
03228 /* #define IMAGE_SCN_MEM_PROTECTED 0x00004000 - Obsolete */
03229 #define IMAGE_SCN_MEM_FARDATA 0x00008000
03230
03231 /* #define IMAGE_SCN_MEM_SYSHEAP 0x00010000 - Obsolete */
03232 #define IMAGE_SCN_MEM_PURGEABLE 0x00020000
03233 #define IMAGE_SCN_MEM_16BIT 0x00020000
03234 #define IMAGE_SCN_MEM_LOCKED 0x00040000
03235 #define IMAGE_SCN_MEM_PRELOAD 0x00080000
03236
03237 #define IMAGE_SCN_ALIGN_1BYTES 0x00100000

```

```
03238 #define IMAGE_SCN_ALIGN_2BYTES          0x00200000
03239 #define IMAGE_SCN_ALIGN_4BYTES          0x00300000
03240 #define IMAGE_SCN_ALIGN_8BYTES          0x00400000
03241 #define IMAGE_SCN_ALIGN_16BYTES         0x00500000 /* Default */
03242 #define IMAGE_SCN_ALIGN_32BYTES         0x00600000
03243 #define IMAGE_SCN_ALIGN_64BYTES         0x00700000
03244 /*          0x00800000 - Unused */
03245
03246 #define IMAGE_SCN_LNK_NRELOC_OVFL        0x01000000
03247
03248
03249 #define IMAGE_SCN_MEM_DISCARDABLE        0x02000000
03250 #define IMAGE_SCN_MEM_NOT_CACHED         0x04000000
03251 #define IMAGE_SCN_MEM_NOT_PAGED         0x08000000
03252 #define IMAGE_SCN_MEM_SHARED             0x10000000
03253 #define IMAGE_SCN_MEM_EXECUTE           0x20000000
03254 #define IMAGE_SCN_MEM_READ               0x40000000
03255 #define IMAGE_SCN_MEM_WRITE             0x80000000
03256
03257 #include "pshpack2.h"
03258
03259 typedef struct _IMAGE_SYMBOL {
03260     union {
03261         BYTE    ShortName[8];
03262         struct {
03263             DWORD    Short;
03264             DWORD    Long;
03265         } Name;
03266         DWORD    LongName[2];
03267     } N;
03268     DWORD    Value;
03269     SHORT    SectionNumber;
03270     WORD     Type;
03271     BYTE     StorageClass;
03272     BYTE     NumberOfAuxSymbols;
03273 } IMAGE_SYMBOL;
03274 typedef IMAGE_SYMBOL *PIMAGE_SYMBOL;
03275
03276 #define IMAGE_SIZEOF_SYMBOL 18
03277
03278 typedef struct _IMAGE_LINENUMBER {
03279     union {
03280         DWORD    SymbolTableIndex;
03281         DWORD    VirtualAddress;
03282     } Type;
03283     WORD     Linenumber;
03284 } IMAGE_LINENUMBER;
03285 typedef IMAGE_LINENUMBER *PIMAGE_LINENUMBER;
03286
03287 #define IMAGE_SIZEOF_LINENUMBER 6
03288
03289 typedef union _IMAGE_AUX_SYMBOL {
03290     struct {
03291         DWORD    TagIndex;
03292         union {
03293             struct {
03294                 WORD    Linenumber;
03295                 WORD    Size;
03296             } LnSz;
03297             DWORD    TotalSize;
03298         } Misc;
03299         union {
03300             struct {
03301                 DWORD    PointerToLinenumber;
03302                 DWORD    PointerToNextFunction;
03303             } Function;
03304             struct {
03305                 WORD     Dimension[4];
03306             } Array;
03307             FcnAry;
03308             WORD     TvIndex;
03309         } Sym;
03310     } struct {
03311         BYTE     Name[IMAGE_SIZEOF_SYMBOL];
03312     } File;
03313     struct {
03314         DWORD    Length;
03315         WORD     NumberOfRelocations;
03316         WORD     NumberOfLinenumbers;
03317         DWORD    CheckSum;
03318         SHORT    Number;
03319         BYTE     Selection;
03320     } Section;
03321 } IMAGE_AUX_SYMBOL;
03322 typedef IMAGE_AUX_SYMBOL *PIMAGE_AUX_SYMBOL;
03323
03324 #define IMAGE_SIZEOF_AUX_SYMBOL 18
```



```
03325
03326 #include "poppack.h"
03327
03328 #define IMAGE_SYM_UNDEFINED          (SHORT)0
03329 #define IMAGE_SYM_ABSOLUTE          (SHORT)-1
03330 #define IMAGE_SYM_DEBUG             (SHORT)-2
03331
03332 #define IMAGE_SYM_TYPE_NULL          0x0000
03333 #define IMAGE_SYM_TYPE_VOID          0x0001
03334 #define IMAGE_SYM_TYPE_CHAR          0x0002
03335 #define IMAGE_SYM_TYPE_SHORT         0x0003
03336 #define IMAGE_SYM_TYPE_INT           0x0004
03337 #define IMAGE_SYM_TYPE_LONG          0x0005
03338 #define IMAGE_SYM_TYPE_FLOAT         0x0006
03339 #define IMAGE_SYM_TYPE_DOUBLE        0x0007
03340 #define IMAGE_SYM_TYPE_STRUCT        0x0008
03341 #define IMAGE_SYM_TYPE_UNION         0x0009
03342 #define IMAGE_SYM_TYPE_ENUM          0x000A
03343 #define IMAGE_SYM_TYPE_MOE          0x000B
03344 #define IMAGE_SYM_TYPE_BYTE          0x000C
03345 #define IMAGE_SYM_TYPE_WORD          0x000D
03346 #define IMAGE_SYM_TYPE_UINT          0x000E
03347 #define IMAGE_SYM_TYPE_DWORD         0x000F
03348 #define IMAGE_SYM_TYPE_PCODE         0x8000
03349
03350 #define IMAGE_SYM_DTYPE_NULL          0
03351 #define IMAGE_SYM_DTYPE_POINTER       1
03352 #define IMAGE_SYM_DTYPE_FUNCTION     2
03353 #define IMAGE_SYM_DTYPE_ARRAY        3
03354
03355 #define IMAGE_SYM_CLASS_END_OF_FUNCTION (BYTE )-1
03356 #define IMAGE_SYM_CLASS_NULL          0x0000
03357 #define IMAGE_SYM_CLASS_AUTOMATIC     0x0001
03358 #define IMAGE_SYM_CLASS_EXTERNAL      0x0002
03359 #define IMAGE_SYM_CLASS_STATIC        0x0003
03360 #define IMAGE_SYM_CLASS_REGISTER      0x0004
03361 #define IMAGE_SYM_CLASS_EXTERNAL_DEF  0x0005
03362 #define IMAGE_SYM_CLASS_LABEL         0x0006
03363 #define IMAGE_SYM_CLASS_UNDEFINED_LABEL 0x0007
03364 #define IMAGE_SYM_CLASS_MEMBER_OF_STRUCT 0x0008
03365 #define IMAGE_SYM_CLASS_ARGUMENT     0x0009
03366 #define IMAGE_SYM_CLASS_STRUCT_TAG    0x000A
03367 #define IMAGE_SYM_CLASS_MEMBER_OF_UNION 0x000B
03368 #define IMAGE_SYM_CLASS_UNION_TAG     0x000C
03369 #define IMAGE_SYM_CLASS_TYPE_DEFINITION 0x000D
03370 #define IMAGE_SYM_CLASS_UNDEFINED_STATIC 0x000E
03371 #define IMAGE_SYM_CLASS_ENUM_TAG      0x000F
03372 #define IMAGE_SYM_CLASS_MEMBER_OF_ENUM 0x0010
03373 #define IMAGE_SYM_CLASS_REGISTER_PARAM 0x0011
03374 #define IMAGE_SYM_CLASS_BIT_FIELD     0x0012
03375
03376 #define IMAGE_SYM_CLASS_FAR_EXTERNAL  0x0044
03377 #define IMAGE_SYM_CLASS_BLOCK         0x0064
03378 #define IMAGE_SYM_CLASS_FUNCTION      0x0065
03379 #define IMAGE_SYM_CLASS_END_OF_STRUCT 0x0066
03380 #define IMAGE_SYM_CLASS_FILE          0x0067
03381 #define IMAGE_SYM_CLASS_SECTION       0x0068
03382 #define IMAGE_SYM_CLASS_WEAK_EXTERNAL 0x0069
03383
03384 #define N_BTMMASK                      0x000F
03385 #define N_TMMASK                      0x0030
03386 #define N_TMMASK1                     0x00C0
03387 #define N_TMMASK2                     0x00F0
03388 #define N_BTSHFT                      4
03389 #define N_TSHFT                      2
03390
03391 #define BTYPE(x) ((x) & N_BTMMASK)
03392
03393 #ifndef ISPTR
03394 #define ISPTR(x) (((x) & N_TMMASK) == (IMAGE_SYM_DTYPE_POINTER « N_BTSHFT))
03395 #endif
03396
03397 #ifndef ISFCN
03398 #define ISFCN(x) (((x) & N_TMMASK) == (IMAGE_SYM_DTYPE_FUNCTION « N_BTSHFT))
03399 #endif
03400
03401 #ifndef ISARY
03402 #define ISARY(x) (((x) & N_TMMASK) == (IMAGE_SYM_DTYPE_ARRAY « N_BTSHFT))
03403 #endif
03404
03405 #ifndef ISTAG
03406 #define ISTAG(x) ((x) == IMAGE_SYM_CLASS_STRUCT_TAG || (x) == IMAGE_SYM_CLASS_UNION_TAG ||
(x) == IMAGE_SYM_CLASS_ENUM_TAG)
03407 #endif
03408
03409 #ifndef INCREF
03410 #define INCREF(x) (((x) & ~N_BTMMASK) « N_TSHFT) | (IMAGE_SYM_DTYPE_POINTER « N_BTSHFT) | ((x) & N_BTMMASK)
```



```

03411 #endif
03412 #ifndef DECREF
03413 #define DECREF(x) (((x)»N_TSHIFT)&~N_BTMSK) | ((x)&N_BTMSK)
03414 #endif
03415
03416 #define IMAGE_COMDAT_SELECT_NODUPPLICATES 1
03417 #define IMAGE_COMDAT_SELECT_ANY 2
03418 #define IMAGE_COMDAT_SELECT_SAME_SIZE 3
03419 #define IMAGE_COMDAT_SELECT_EXACT_MATCH 4
03420 #define IMAGE_COMDAT_SELECT_ASSOCIATIVE 5
03421 #define IMAGE_COMDAT_SELECT_LARGEST 6
03422 #define IMAGE_COMDAT_SELECT_NEWEST 7
03423
03424 #define IMAGE_WEAK_EXTERN_SEARCH_NOLIBRARY 1
03425 #define IMAGE_WEAK_EXTERN_SEARCH_LIBRARY 2
03426 #define IMAGE_WEAK_EXTERN_SEARCH_ALIAS 3
03427
03428 /* Export module directory */
03429
03430 typedef struct _IMAGE_EXPORT_DIRECTORY {
03431     DWORD Characteristics;
03432     DWORD TimeDateStamp;
03433     WORD MajorVersion;
03434     WORD MinorVersion;
03435     DWORD Name;
03436     DWORD Base;
03437     DWORD NumberOfFunctions;
03438     DWORD NumberOfNames;
03439     DWORD AddressOfFunctions;
03440     DWORD AddressOfNames;
03441     DWORD AddressOfNameOrdinals;
03442 } IMAGE_EXPORT_DIRECTORY, *PIMAGE_EXPORT_DIRECTORY;
03443
03444 /* Import name entry */
03445 typedef struct _IMAGE_IMPORT_BY_NAME {
03446     WORD Hint;
03447     BYTE Name[1];
03448 } IMAGE_IMPORT_BY_NAME, *PIMAGE_IMPORT_BY_NAME;
03449
03450 /* Import thunk */
03451 typedef struct _IMAGE_THUNK_DATA {
03452     union {
03453         LPBYTE ForwarderString;
03454         PDWORD Function;
03455         DWORD Ordinal;
03456         PIMAGE_IMPORT_BY_NAME AddressOfData;
03457     } u1;
03458 } IMAGE_THUNK_DATA, *PIMAGE_THUNK_DATA;
03459
03460 /* Import module directory */
03461
03462 typedef struct _IMAGE_IMPORT_DESCRIPTOR {
03463     union {
03464         DWORD Characteristics; /* 0 for terminating null import descriptor */
03465         PIMAGE_THUNK_DATA OriginalFirstThunk; /* RVA to original unbound IAT */
03466     } u;
03467     DWORD TimeDateStamp; /* 0 if not bound,
03468         * -1 if bound, and real date\time stamp
03469         * in IMAGE_DIRECTORY_ENTRY_BOUND_IMPORT
03470         * (new BIND)
03471         * otherwise date/time stamp of DLL bound to
03472         * (Old BIND)
03473         */
03474     DWORD ForwarderChain; /* -1 if no forwarders */
03475     DWORD Name;
03476     /* RVA to IAT (if bound this IAT has actual addresses) */
03477     PIMAGE_THUNK_DATA FirstThunk;
03478 } IMAGE_IMPORT_DESCRIPTOR, *PIMAGE_IMPORT_DESCRIPTOR;
03479
03480 #define IMAGE_ORDINAL_FLAG 0x80000000
03481 #define IMAGE_SNAP_BY_ORDINAL(Ordinal) ((Ordinal & IMAGE_ORDINAL_FLAG) != 0)
03482 #define IMAGE_ORDINAL(Ordinal) (Ordinal & 0xffff)
03483
03484 typedef struct _IMAGE_BOUND_IMPORT_DESCRIPTOR {
03485     {
03486         DWORD TimeDateStamp;
03487         WORD OffsetModuleName;
03488         WORD NumberOfModuleForwarderRefs;
03489     } /* Array of zero or more IMAGE_BOUND_FORWARDER_REF follows */
03490 } IMAGE_BOUND_IMPORT_DESCRIPTOR, *PIMAGE_BOUND_IMPORT_DESCRIPTOR;
03491
03492 typedef struct _IMAGE_BOUND_FORWARDER_REF {
03493     {
03494         DWORD TimeDateStamp;
03495         WORD OffsetModuleName;
03496         WORD Reserved;
03497     } IMAGE_BOUND_FORWARDER_REF, *PIMAGE_BOUND_FORWARDER_REF;

```

```
03498
03499 #include "pshpack2.h"
03500
03501 typedef struct _IMAGE_BASE_RELOCATION
03502 {
03503     DWORD    VirtualAddress;
03504     DWORD    SizeOfBlock;
03505     /* WORD TypeOffset[1]; */
03506 } IMAGE_BASE_RELOCATION, *PIMAGE_BASE_RELOCATION;
03507
03508 typedef struct _IMAGE_RELOCATION
03509 {
03510     union {
03511         DWORD    VirtualAddress;
03512         DWORD    RelocCount;
03513     } u;
03514     DWORD    SymbolTableIndex;
03515     WORD     Type;
03516 } IMAGE_RELOCATION;
03517 typedef IMAGE_RELOCATION *PIMAGE_RELOCATION;
03518
03519 #include "poppack.h"
03520
03521 #define IMAGE_SIZEOF_RELOCATION 10
03522
03523 /* generic relocation types */
03524 #define IMAGE_REL_BASED_ABSOLUTE      0
03525 #define IMAGE_REL_BASED_HIGH         1
03526 #define IMAGE_REL_BASED_LOW          2
03527 #define IMAGE_REL_BASED_HIGHLOW      3
03528 #define IMAGE_REL_BASED_HIGHADJ      4
03529 #define IMAGE_REL_BASED_MIPS_JMPADDR 5
03530 #define IMAGE_REL_BASED_SECTION      6
03531 #define IMAGE_REL_BASED_REL          7
03532 #define IMAGE_REL_BASED_MIPS_JMPADDR16 9
03533 #define IMAGE_REL_BASED_IA64_IMM64   9 /* yes, 9 too */
03534 #define IMAGE_REL_BASED_DIR64        10
03535 #define IMAGE_REL_BASED_HIGH3ADJ     11
03536
03537 /* I386 relocation types */
03538 #define IMAGE_REL_I386_ABSOLUTE      0
03539 #define IMAGE_REL_I386_DIR16         1
03540 #define IMAGE_REL_I386_REL16         2
03541 #define IMAGE_REL_I386_DIR32         6
03542 #define IMAGE_REL_I386_DIR32NB       7
03543 #define IMAGE_REL_I386_SEG12         9
03544 #define IMAGE_REL_I386_SECTION       10
03545 #define IMAGE_REL_I386_SECREL        11
03546 #define IMAGE_REL_I386_REL32         20
03547
03548 /* MIPS relocation types */
03549 #define IMAGE_REL_MIPS_ABSOLUTE      0x0000
03550 #define IMAGE_REL_MIPS_REFHALF       0x0001
03551 #define IMAGE_REL_MIPS_REFWORD       0x0002
03552 #define IMAGE_REL_MIPS_JMPADDR       0x0003
03553 #define IMAGE_REL_MIPS_REFHI         0x0004
03554 #define IMAGE_REL_MIPS_REFLO         0x0005
03555 #define IMAGE_REL_MIPS_GPREL         0x0006
03556 #define IMAGE_REL_MIPS_LITERAL       0x0007
03557 #define IMAGE_REL_MIPS_SECTION       0x000A
03558 #define IMAGE_REL_MIPS_SECREL        0x000B
03559 #define IMAGE_REL_MIPS_SECRELLO      0x000C
03560 #define IMAGE_REL_MIPS_SECRELHI      0x000D
03561 #define IMAGE_REL_MIPS_JMPADDR16     0x0010
03562 #define IMAGE_REL_MIPS_REFWORDNB     0x0022
03563 #define IMAGE_REL_MIPS_PAIR          0x0025
03564
03565 /* ALPHA relocation types */
03566 #define IMAGE_REL_ALPHA_ABSOLUTE     0x0000
03567 #define IMAGE_REL_ALPHA_REFLONG       0x0001
03568 #define IMAGE_REL_ALPHA_REFQUAD       0x0002
03569 #define IMAGE_REL_ALPHA_GPREL         0x0003
03570 #define IMAGE_REL_ALPHA_LITERAL       0x0004
03571 #define IMAGE_REL_ALPHA_LITUSE        0x0005
03572 #define IMAGE_REL_ALPHA_GPDISP        0x0006
03573 #define IMAGE_REL_ALPHA_BRADDR        0x0007
03574 #define IMAGE_REL_ALPHA_HINT          0x0008
03575 #define IMAGE_REL_ALPHA_INLINE_REFLONG 0x0009
03576 #define IMAGE_REL_ALPHA_REFHI         0x000A
03577 #define IMAGE_REL_ALPHA_REFLO         0x000B
03578 #define IMAGE_REL_ALPHA_PAIR          0x000C
03579 #define IMAGE_REL_ALPHA_MATCH         0x000D
03580 #define IMAGE_REL_ALPHA_SECTION       0x000E
03581 #define IMAGE_REL_ALPHA_SECREL        0x000F
03582 #define IMAGE_REL_ALPHA_REFLONGNB     0x0010
03583 #define IMAGE_REL_ALPHA_SECRELLO      0x0011
03584 #define IMAGE_REL_ALPHA_SECRELHI      0x0012
```

```
03585 #define IMAGE_REL_ALPHA_REFQ3      0x0013
03586 #define IMAGE_REL_ALPHA_REFQ2      0x0014
03587 #define IMAGE_REL_ALPHA_REFQ1      0x0015
03588 #define IMAGE_REL_ALPHA_GPRELLO    0x0016
03589 #define IMAGE_REL_ALPHA_GPRELHI    0x0017
03590
03591 /* PowerPC relocation types */
03592 #define IMAGE_REL_PPC_ABSOLUTE      0x0000
03593 #define IMAGE_REL_PPC_ADDR64        0x0001
03594 #define IMAGE_REL_PPC_ADDR         0x0002
03595 #define IMAGE_REL_PPC_ADDR24        0x0003
03596 #define IMAGE_REL_PPC_ADDR16        0x0004
03597 #define IMAGE_REL_PPC_ADDR14        0x0005
03598 #define IMAGE_REL_PPC_REL24         0x0006
03599 #define IMAGE_REL_PPC_REL14         0x0007
03600 #define IMAGE_REL_PPC_TOCREL16      0x0008
03601 #define IMAGE_REL_PPC_TOCREL14      0x0009
03602 #define IMAGE_REL_PPC_ADDR32NB      0x000A
03603 #define IMAGE_REL_PPC_SECREL        0x000B
03604 #define IMAGE_REL_PPC_SECTION        0x000C
03605 #define IMAGE_REL_PPC_IFGLUE        0x000D
03606 #define IMAGE_REL_PPC_IMGLUE        0x000E
03607 #define IMAGE_REL_PPC_SECREL16      0x000F
03608 #define IMAGE_REL_PPC_REFHI         0x0010
03609 #define IMAGE_REL_PPC_REFLO         0x0011
03610 #define IMAGE_REL_PPC_PAIR          0x0012
03611 #define IMAGE_REL_PPC_SECRELLO      0x0013
03612 #define IMAGE_REL_PPC_SECRELHI      0x0014
03613 #define IMAGE_REL_PPC_GPREL         0x0015
03614 #define IMAGE_REL_PPC_TYPEMASK      0x00FF
03615 /* modifier bits */
03616 #define IMAGE_REL_PPC_NEG            0x0100
03617 #define IMAGE_REL_PPC_BRTAKEN        0x0200
03618 #define IMAGE_REL_PPC_BRNTAKEN      0x0400
03619 #define IMAGE_REL_PPC_TOCDEFN        0x0800
03620
03621 /* SH3 ? relocation type */
03622 #define IMAGE_REL_SH3_ABSOLUTE      0x0000
03623 #define IMAGE_REL_SH3_DIRECT16      0x0001
03624 #define IMAGE_REL_SH3_DIRECT        0x0002
03625 #define IMAGE_REL_SH3_DIRECT8       0x0003
03626 #define IMAGE_REL_SH3_DIRECT8_WORD  0x0004
03627 #define IMAGE_REL_SH3_DIRECT8_LONG  0x0005
03628 #define IMAGE_REL_SH3_DIRECT4       0x0006
03629 #define IMAGE_REL_SH3_DIRECT4_WORD  0x0007
03630 #define IMAGE_REL_SH3_DIRECT4_LONG  0x0008
03631 #define IMAGE_REL_SH3_PCREL8_WORD   0x0009
03632 #define IMAGE_REL_SH3_PCREL8_LONG   0x000A
03633 #define IMAGE_REL_SH3_PCREL12_WORD  0x000B
03634 #define IMAGE_REL_SH3_STARTOF_SECTION 0x000C
03635 #define IMAGE_REL_SH3_SIZEOF_SECTION 0x000D
03636 #define IMAGE_REL_SH3_SECTION       0x000E
03637 #define IMAGE_REL_SH3_SECREL        0x000F
03638 #define IMAGE_REL_SH3_DIRECT32_NB    0x0010
03639
03640 /* ARM (Archimedes?) relocation types */
03641 #define IMAGE_REL_ARM_ABSOLUTE      0x0000
03642 #define IMAGE_REL_ARM_ADDR          0x0001
03643 #define IMAGE_REL_ARM_ADDR32NB      0x0002
03644 #define IMAGE_REL_ARM_BRANCH24      0x0003
03645 #define IMAGE_REL_ARM_BRANCH11      0x0004
03646 #define IMAGE_REL_ARM_SECTION       0x000E
03647 #define IMAGE_REL_ARM_SECREL        0x000F
03648
03649 /* IA64 relocation types */
03650 #define IMAGE_REL_IA64_ABSOLUTE      0x0000
03651 #define IMAGE_REL_IA64_IMM14         0x0001
03652 #define IMAGE_REL_IA64_IMM22         0x0002
03653 #define IMAGE_REL_IA64_IMM64         0x0003
03654 #define IMAGE_REL_IA64_DIR           0x0004
03655 #define IMAGE_REL_IA64_DIR64         0x0005
03656 #define IMAGE_REL_IA64_PCREL21B      0x0006
03657 #define IMAGE_REL_IA64_PCREL21M      0x0007
03658 #define IMAGE_REL_IA64_PCREL21F      0x0008
03659 #define IMAGE_REL_IA64_GPREL22       0x0009
03660 #define IMAGE_REL_IA64_LTOFF22       0x000A
03661 #define IMAGE_REL_IA64_SECTION       0x000B
03662 #define IMAGE_REL_IA64_SECREL22      0x000C
03663 #define IMAGE_REL_IA64_SECREL64I     0x000D
03664 #define IMAGE_REL_IA64_SECREL        0x000E
03665 #define IMAGE_REL_IA64_LTOFF64       0x000F
03666 #define IMAGE_REL_IA64_DIR32NB       0x0010
03667 #define IMAGE_REL_IA64_RESERVED_11   0x0011
03668 #define IMAGE_REL_IA64_RESERVED_12   0x0012
03669 #define IMAGE_REL_IA64_RESERVED_13   0x0013
03670 #define IMAGE_REL_IA64_RESERVED_14   0x0014
03671 #define IMAGE_REL_IA64_RESERVED_15   0x0015
```

```

03672 #define IMAGE_REL_IA64_RESERVED_16 0x0016
03673 #define IMAGE_REL_IA64_ADDEND 0x001F
03674
03675 /* archive format */
03676
03677 #define IMAGE_ARCHIVE_START_SIZE 8
03678 #define IMAGE_ARCHIVE_START "!<arch>\n"
03679 #define IMAGE_ARCHIVE_END "`\n"
03680 #define IMAGE_ARCHIVE_PAD "\n"
03681 #define IMAGE_ARCHIVE_LINKER_MEMBER "/"
03682 #define IMAGE_ARCHIVE_LONGNAMES_MEMBER "//"
03683
03684 typedef struct _IMAGE_ARCHIVE_MEMBER_HEADER
03685 {
03686     BYTE    Name[16];
03687     BYTE    Date[12];
03688     BYTE    UserID[6];
03689     BYTE    GroupID[6];
03690     BYTE    Mode[8];
03691     BYTE    Size[10];
03692     BYTE    EndHeader[2];
03693 } IMAGE_ARCHIVE_MEMBER_HEADER, *PIMAGE_ARCHIVE_MEMBER_HEADER;
03694
03695 #define IMAGE_SIZEOF_ARCHIVE_MEMBER_HDR 60
03696
03697 /*
03698  * Resource directory stuff
03699  */
03700 typedef struct _IMAGE_RESOURCE_DIRECTORY {
03701     DWORD    Characteristics;
03702     DWORD    TimeDateStamp;
03703     WORD     MajorVersion;
03704     WORD     MinorVersion;
03705     WORD     NumberOfNamedEntries;
03706     WORD     NumberOfIdEntries;
03707     /* IMAGE_RESOURCE_DIRECTORY_ENTRY DirectoryEntries[]; */
03708 } IMAGE_RESOURCE_DIRECTORY, *PIMAGE_RESOURCE_DIRECTORY;
03709
03710 #define IMAGE_RESOURCE_NAME_IS_STRING 0x80000000
03711 #define IMAGE_RESOURCE_DATA_IS_DIRECTORY 0x80000000
03712
03713 typedef struct _IMAGE_RESOURCE_DIRECTORY_ENTRY {
03714     union ul {
03715         struct fleegle {
03716 #ifdef BITFIELDS_BIGENDIAN
03717             unsigned NameIsString:1;
03718             unsigned NameOffset:31;
03719 #else
03720             unsigned NameOffset:31;
03721             unsigned NameIsString:1;
03722 #endif
03723         } DUMMYSTRUCTNAME1;
03724         DWORD    Name;
03725         struct sneegle {
03726 #ifdef WORDS_BIGENDIAN
03727             WORD    __pad;
03728             WORD    Id;
03729 #else
03730             WORD    Id;
03731             WORD    __pad;
03732 #endif
03733         } DUMMYSTRUCTNAME2;
03734     } DUMMYUNIONNAME1;
03735     union u2 {
03736         DWORD    OffsetToData;
03737         struct drooper {
03738 #ifdef BITFIELDS_BIGENDIAN
03739             unsigned DataIsDirectory:1;
03740             unsigned OffsetToDirectory:31;
03741 #else
03742             unsigned OffsetToDirectory:31;
03743             unsigned DataIsDirectory:1;
03744 #endif
03745         } DUMMYSTRUCTNAME3;
03746     } DUMMYUNIONNAME2;
03747 } IMAGE_RESOURCE_DIRECTORY_ENTRY, *PIMAGE_RESOURCE_DIRECTORY_ENTRY;
03748
03749
03750 typedef struct _IMAGE_RESOURCE_DIRECTORY_STRING {
03751     WORD    Length;
03752     CHAR    NameString[ 1 ];
03753 } IMAGE_RESOURCE_DIRECTORY_STRING, *PIMAGE_RESOURCE_DIRECTORY_STRING;
03754
03755 typedef struct _IMAGE_RESOURCE_DIR_STRING_U {
03756     WORD    Length;
03757     WCHAR    NameString[ 1 ];
03758 } IMAGE_RESOURCE_DIR_STRING_U, *PIMAGE_RESOURCE_DIR_STRING_U;

```

```
03759
03760 typedef struct _IMAGE_RESOURCE_DATA_ENTRY {
03761     DWORD    OffsetToData;
03762     DWORD    Size;
03763     DWORD    CodePage;
03764     DWORD    ResourceHandle;
03765 } IMAGE_RESOURCE_DATA_ENTRY, *PIMAGE_RESOURCE_DATA_ENTRY;
03766
03767
03768 typedef VOID CALLBACK (*PIMAGE_TLS_CALLBACK) (
03769     LPVOID DllHandle, DWORD Reason, LPVOID Reserved
03770 );
03771
03772 typedef struct _IMAGE_TLS_DIRECTORY {
03773     DWORD    StartAddressOfRawData;
03774     DWORD    EndAddressOfRawData;
03775     LPDWORD  AddressOfIndex;
03776     PIMAGE_TLS_CALLBACK *AddressOfCallBacks;
03777     DWORD    SizeOfZeroFill;
03778     DWORD    Characteristics;
03779 } IMAGE_TLS_DIRECTORY, *PIMAGE_TLS_DIRECTORY;
03780
03781 typedef struct _IMAGE_DEBUG_DIRECTORY {
03782     DWORD    Characteristics;
03783     DWORD    TimeDateStamp;
03784     WORD     MajorVersion;
03785     WORD     MinorVersion;
03786     DWORD    Type;
03787     DWORD    SizeOfData;
03788     DWORD    AddressOfRawData;
03789     DWORD    PointerToRawData;
03790 } IMAGE_DEBUG_DIRECTORY, *PIMAGE_DEBUG_DIRECTORY;
03791
03792 #define IMAGE_DEBUG_TYPE_UNKNOWN    0
03793 #define IMAGE_DEBUG_TYPE_COFF      1
03794 #define IMAGE_DEBUG_TYPE_CODEVIEW  2
03795 #define IMAGE_DEBUG_TYPE_FPO       3
03796 #define IMAGE_DEBUG_TYPE_MISC      4
03797 #define IMAGE_DEBUG_TYPE_EXCEPTION 5
03798 #define IMAGE_DEBUG_TYPE_FIXUP     6
03799 #define IMAGE_DEBUG_TYPE_OMAP_TO_SRC 7
03800 #define IMAGE_DEBUG_TYPE_OMAP_FROM_SRC 8
03801 #define IMAGE_DEBUG_TYPE_BORLAND   9
03802 #define IMAGE_DEBUG_TYPE_RESERVED10 10
03803
03804 typedef struct _IMAGE_COFF_SYMBOLS_HEADER {
03805     DWORD    NumberOfSymbols;
03806     DWORD    LvaToFirstSymbol;
03807     DWORD    NumberOfLinenumbers;
03808     DWORD    LvaToFirstLinenumber;
03809     DWORD    RvaToFirstByteOfCode;
03810     DWORD    RvaToLastByteOfCode;
03811     DWORD    RvaToFirstByteOfData;
03812     DWORD    RvaToLastByteOfData;
03813 } IMAGE_COFF_SYMBOLS_HEADER, *PIMAGE_COFF_SYMBOLS_HEADER;
03814
03815 #define FRAME_FPO    0
03816 #define FRAME_TRAP   1
03817 #define FRAME_TSS    2
03818 #define FRAME_NONFPO 3
03819
03820 typedef struct _FPO_DATA {
03821     DWORD    ulOffStart;
03822     DWORD    cbProcSize;
03823     DWORD    cdwLocals;
03824     WORD     cdwParams;
03825     unsigned cbProlog : 8;
03826     unsigned cbRegs : 3;
03827     unsigned fHasSEH : 1;
03828     unsigned fUseBP : 1;
03829     unsigned reserved : 1;
03830     unsigned cbFrame : 2;
03831 } FPO_DATA, *PFPO_DATA;
03832
03833 typedef struct _IMAGE_LOAD_CONFIG_DIRECTORY {
03834     DWORD    Characteristics;
03835     DWORD    TimeDateStamp;
03836     WORD     MajorVersion;
03837     WORD     MinorVersion;
03838     DWORD    GlobalFlagsClear;
03839     DWORD    GlobalFlagsSet;
03840     DWORD    CriticalSectionDefaultTimeout;
03841     DWORD    DeCommitFreeBlockThreshold;
03842     DWORD    DeCommitTotalFreeThreshold;
03843     PVOID    LockPrefixTable;
03844     DWORD    MaximumAllocationSize;
03845     DWORD    VirtualMemoryThreshold;
```

```

03846     DWORD ProcessHeapFlags;
03847     DWORD ProcessAffinityMask;
03848     WORD  CSDVersion;
03849     WORD  Reserved1;
03850     PVOID EditList;
03851     DWORD Reserved[1];
03852 } IMAGE_LOAD_CONFIG_DIRECTORY, *PIMAGE_LOAD_CONFIG_DIRECTORY;
03853
03854 typedef struct _IMAGE_FUNCTION_ENTRY {
03855     DWORD StartingAddress;
03856     DWORD EndingAddress;
03857     DWORD EndOfPrologue;
03858 } IMAGE_FUNCTION_ENTRY, *PIMAGE_FUNCTION_ENTRY;
03859
03860 #define IMAGE_DEBUG_MISC_EXENAME    1
03861
03862 typedef struct _IMAGE_DEBUG_MISC {
03863     DWORD      DataType;
03864     DWORD      Length;
03865     BYTE       Unicode;
03866     BYTE       Reserved[ 3 ];
03867     BYTE       Data[ 1 ];
03868 } IMAGE_DEBUG_MISC, *PIMAGE_DEBUG_MISC;
03869
03870 /* This is the structure that appears at the very start of a .DBG file. */
03871
03872 typedef struct _IMAGE_SEPARATE_DEBUG_HEADER {
03873     WORD      Signature;
03874     WORD      Flags;
03875     WORD      Machine;
03876     WORD      Characteristics;
03877     DWORD     TimeDateStamp;
03878     DWORD     CheckSum;
03879     DWORD     ImageBase;
03880     DWORD     SizeOfImage;
03881     DWORD     NumberOfSections;
03882     DWORD     ExportedNamesSize;
03883     DWORD     DebugDirectorySize;
03884     DWORD     SectionAlignment;
03885     DWORD     Reserved[ 2 ];
03886 } IMAGE_SEPARATE_DEBUG_HEADER, *PIMAGE_SEPARATE_DEBUG_HEADER;
03887
03888 #define IMAGE_SEPARATE_DEBUG_SIGNATURE 0x4944
03889
03890
03891 typedef struct tagMESSAGE_RESOURCE_ENTRY {
03892     WORD      Length;
03893     WORD      Flags;
03894     BYTE      Text[1];
03895 } MESSAGE_RESOURCE_ENTRY, *PMESSAGE_RESOURCE_ENTRY;
03896 #define MESSAGE_RESOURCE_UNICODE    0x0001
03897
03898 typedef struct tagMESSAGE_RESOURCE_BLOCK {
03899     DWORD     LowId;
03900     DWORD     HighId;
03901     DWORD     OffsetToEntries;
03902 } MESSAGE_RESOURCE_BLOCK, *PMESSAGE_RESOURCE_BLOCK;
03903
03904 typedef struct tagMESSAGE_RESOURCE_DATA {
03905     DWORD     NumberOfBlocks;
03906     MESSAGE_RESOURCE_BLOCK  Blocks[ 1 ];
03907 } MESSAGE_RESOURCE_DATA, *PMESSAGE_RESOURCE_DATA;
03908
03909 /*
03910  * Here follows typedefs for security and tokens.
03911  */
03912
03913 /*
03914  * First a constant for the following typdefs.
03915  */
03916
03917 #define ANYSIZE_ARRAY    1
03918
03919 /* FIXME: Orphan. What does it point to? */
03920 typedef PVOID PACCESS_TOKEN;
03921
03922 /*
03923  * TOKEN_INFORMATION_CLASS
03924  */
03925
03926 typedef enum _TOKEN_INFORMATION_CLASS {
03927     TokenUser = 1,
03928     TokenGroups,
03929     TokenPrivileges,
03930     TokenOwner,
03931     TokenPrimaryGroup,
03932     TokenDefaultDacl,

```

```

03933     TokenSource,
03934     TokenType,
03935     TokenImpersonationLevel,
03936     TokenStatistics
03937 } TOKEN_INFORMATION_CLASS;
03938
03939 #define TOKEN_TOKEN_ADJUST_DEFAULT 0x0080
03940 #define TOKEN_ADJUST_GROUPS 0x0040
03941 #define TOKEN_ADJUST_PRIVILEGES 0x0020
03942 #define TOKEN_ADJUST_SESSIONID 0x0100
03943 #define TOKEN_ASSIGN_PRIMARY 0x0001
03944 #define TOKEN_DUPLICATE 0x0002
03945 #define TOKEN_EXECUTE STANDARD_RIGHTS_EXECUTE
03946 #define TOKEN_IMPERSONATE 0x0004
03947 #define TOKEN_QUERY 0x0008
03948 #define TOKEN_QUERY_SOURCE 0x0010
03949 #define TOKEN_ADJUST_DEFAULT 0x0080
03950 #define TOKEN_READ (STANDARD_RIGHTS_READ|TOKEN_QUERY)
03951 #define TOKEN_WRITE (STANDARD_RIGHTS_WRITE | \
03952                     TOKEN_ADJUST_PRIVILEGES | \
03953                     TOKEN_ADJUST_GROUPS | \
03954                     TOKEN_ADJUST_DEFAULT )
03955 #define TOKEN_ALL_ACCESS (STANDARD_RIGHTS_REQUIRED | \
03956                           TOKEN_ASSIGN_PRIMARY | \
03957                           TOKEN_DUPLICATE | \
03958                           TOKEN_IMPERSONATE | \
03959                           TOKEN_QUERY | \
03960                           TOKEN_QUERY_SOURCE | \
03961                           TOKEN_ADJUST_PRIVILEGES | \
03962                           TOKEN_ADJUST_GROUPS | \
03963                           TOKEN_ADJUST_SESSIONID | \
03964                           TOKEN_ADJUST_DEFAULT )
03965
03966 #ifndef _SECURITY_DEFINED
03967 #define _SECURITY_DEFINED
03968
03969
03970 typedef DWORD ACCESS_MASK, *PACCESS_MASK;
03971
03972 typedef struct _GENERIC_MAPPING {
03973     ACCESS_MASK GenericRead;
03974     ACCESS_MASK GenericWrite;
03975     ACCESS_MASK GenericExecute;
03976     ACCESS_MASK GenericAll;
03977 } GENERIC_MAPPING, *PGENERIC_MAPPING;
03978
03979 #ifndef SID_IDENTIFIER_AUTHORITY_DEFINED
03980 #define SID_IDENTIFIER_AUTHORITY_DEFINED
03981 typedef struct {
03982     BYTE Value[6];
03983 } SID_IDENTIFIER_AUTHORITY, *PSID_IDENTIFIER_AUTHORITY, *LPSID_IDENTIFIER_AUTHORITY;
03984 #endif /* !defined(SID_IDENTIFIER_AUTHORITY_DEFINED) */
03985
03986 #ifndef SID_DEFINED
03987 #define SID_DEFINED
03988 typedef struct _SID {
03989     BYTE Revision;
03990     BYTE SubAuthorityCount;
03991     SID_IDENTIFIER_AUTHORITY IdentifierAuthority;
03992     DWORD SubAuthority[1];
03993 } SID, *PSID;
03994 #endif /* !defined(SID_DEFINED) */
03995
03996 #define SID_REVISION (1) /* Current revision */
03997 #define SID_MAX_SUB_AUTHORITIES (15) /* current max subauths */
03998 #define SID_RECOMMENDED_SUB_AUTHORITIES (1) /* recommended subauths */
03999
04000
04001 /*
04002  * ACL
04003  */
04004
04005 #define ACL_REVISION1 1
04006 #define ACL_REVISION2 2
04007 #define ACL_REVISION3 3
04008 #define ACL_REVISION4 4
04009
04010 #define MIN_ACL_REVISION ACL_REVISION2
04011 #define MAX_ACL_REVISION ACL_REVISION4
04012
04013 typedef struct _ACL {
04014     BYTE AclRevision;
04015     BYTE Sbz1;
04016     WORD AclSize;
04017     WORD AceCount;
04018     WORD Sbz2;
04019 } ACL, *PACL;

```

```

04020
04021 /* SECURITY_DESCRIPTOR */
04022 #define SECURITY_DESCRIPTOR_REVISION 1
04023 #define SECURITY_DESCRIPTOR_REVISION1 1
04024
04025
04026 #define SE_OWNER_DEFAULTED 0x0001
04027 #define SE_GROUP_DEFAULTED 0x0002
04028 #define SE_DACL_PRESENT 0x0004
04029 #define SE_DACL_DEFAULTED 0x0008
04030 #define SE_SACL_PRESENT 0x0010
04031 #define SE_SACL_DEFAULTED 0x0020
04032 #define SE_SELF_RELATIVE 0x8000
04033
04034 typedef DWORD SECURITY_INFORMATION, *PSECURITY_INFORMATION;
04035 typedef WORD SECURITY_DESCRIPTOR_CONTROL, *PSECURITY_DESCRIPTOR_CONTROL;
04036
04037 /* The security descriptor structure */
04038 typedef struct {
04039     BYTE Revision;
04040     BYTE Sbz1;
04041     SECURITY_DESCRIPTOR_CONTROL Control;
04042     DWORD Owner;
04043     DWORD Group;
04044     DWORD Sacl;
04045     DWORD Dacl;
04046 } SECURITY_DESCRIPTOR_RELATIVE, *PISECURITY_DESCRIPTOR_RELATIVE;
04047
04048 typedef struct {
04049     BYTE Revision;
04050     BYTE Sbz1;
04051     SECURITY_DESCRIPTOR_CONTROL Control;
04052     PSID Owner;
04053     PSID Group;
04054     PACL Sacl;
04055     PACL Dacl;
04056 } SECURITY_DESCRIPTOR, *PSECURITY_DESCRIPTOR;
04057
04058 #define SECURITY_DESCRIPTOR_MIN_LENGTH (sizeof(SECURITY_DESCRIPTOR))
04059
04060 #endif /* _SECURITY_DEFINED */
04061
04062 /*
04063  * SID_AND_ATTRIBUTES
04064  */
04065
04066 typedef struct _SID_AND_ATTRIBUTES {
04067     PSID Sid;
04068     DWORD Attributes;
04069 } SID_AND_ATTRIBUTES ;
04070
04071 /* security entities */
04072 #define SECURITY_NULL_RID (0x00000000L)
04073 #define SECURITY_WORLD_RID (0x00000000L)
04074 #define SECURITY_LOCAL_RID (0x00000000L)
04075
04076 #define SECURITY_NULL_SID_AUTHORITY {0,0,0,0,0,0}
04077
04078 /* S-1-1 */
04079 #define SECURITY_WORLD_SID_AUTHORITY {0,0,0,0,0,1}
04080
04081 /* S-1-2 */
04082 #define SECURITY_LOCAL_SID_AUTHORITY {0,0,0,0,0,2}
04083
04084 /* S-1-3 */
04085 #define SECURITY_CREATOR_SID_AUTHORITY {0,0,0,0,0,3}
04086 #define SECURITY_CREATOR_OWNER_RID (0x00000000L)
04087 #define SECURITY_CREATOR_GROUP_RID (0x00000001L)
04088 #define SECURITY_CREATOR_OWNER_SERVER_RID (0x00000002L)
04089 #define SECURITY_CREATOR_GROUP_SERVER_RID (0x00000003L)
04090
04091 /* S-1-4 */
04092 #define SECURITY_NON_UNIQUE_AUTHORITY {0,0,0,0,0,4}
04093
04094 /* S-1-5 */
04095 #define SECURITY_NT_AUTHORITY {0,0,0,0,0,5}
04096 #define SECURITY_DIALUP_RID 0x00000001L
04097 #define SECURITY_NETWORK_RID 0x00000002L
04098 #define SECURITY_BATCH_RID 0x00000003L
04099 #define SECURITY_INTERACTIVE_RID 0x00000004L
04100 #define SECURITY_LOGON_IDS_RID 0x00000005L
04101 #define SECURITY_SERVICE_RID 0x00000006L
04102 #define SECURITY_ANONYMOUS_LOGON_RID 0x00000007L
04103 #define SECURITY_PROXY_RID 0x00000008L
04104 #define SECURITY_ENTERPRISE_CONTROLLERS_RID 0x00000009L
04105 #define SECURITY_PRINCIPAL_SELF_RID 0x0000000AL
04106 #define SECURITY_AUTHENTICATED_USER_RID 0x0000000BL

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```

04107 #define SECURITY_RESTRICTED_CODE_RID          0x0000000CL
04108 #define SECURITY_TERMINAL_SERVER_RID            0x0000000DL
04109 #define SECURITY_LOCAL_SYSTEM_RID              0x00000012L
04110 #define SECURITY_NT_NON_UNIQUE                  0x00000015L
04111 #define SECURITY_BUILTIN_DOMAIN_RID             0x00000020L
04112
04113 #define DOMAIN_GROUP_RID_ADMINS                  0x00000200L
04114 #define DOMAIN_GROUP_RID_USERS                   0x00000201L
04115 #define DOMAIN_GROUP_RID_GUESTS                  0x00000202L
04116
04117 #define DOMAIN_ALIAS_RID_ADMINS                   0x00000220L
04118 #define DOMAIN_ALIAS_RID_USERS                     0x00000221L
04119 #define DOMAIN_ALIAS_RID_GUESTS                     0x00000222L
04120
04121 #define SECURITY_SERVER_LOGON_RID                 SECURITY_ENTERPRISE_CONTROLLERS_RID
04122
04123 #define SECURITY_LOGON_IDS_RID_COUNT              (3L)
04124
04125 /*
04126  * TOKEN_USER
04127  */
04128
04129 typedef struct _TOKEN_USER {
04130     SID_AND_ATTRIBUTES User;
04131 } TOKEN_USER;
04132
04133 /*
04134  * TOKEN_GROUPS
04135  */
04136
04137 typedef struct _TOKEN_GROUPS {
04138     DWORD GroupCount;
04139     SID_AND_ATTRIBUTES Groups[ANYSIZE_ARRAY];
04140 } TOKEN_GROUPS;
04141
04142 /*
04143  * LUID_AND_ATTRIBUTES
04144  */
04145
04146 typedef union _LARGE_INTEGER {
04147     struct dorp {
04148         DWORD LowPart;
04149         LONG HighPart;
04150     } DUMMYSTRUCTNAME;
04151     LONGLONG QuadPart;
04152 } LARGE_INTEGER, *LPLARGE_INTEGER, *PLARGE_INTEGER;
04153
04154 typedef union _ULARGE_INTEGER {
04155     struct banana {
04156         DWORD LowPart;
04157         DWORD HighPart;
04158     } DUMMYSTRUCTNAME;
04159     ULONGLONG QuadPart;
04160 } ULARGE_INTEGER, *LPULARGE_INTEGER, *PULARGE_INTEGER;
04161
04162 /*
04163  * Locally Unique Identifier
04164  */
04165
04166 typedef struct _LUID {
04167     DWORD LowPart;
04168     LONG HighPart;
04169 } LUID, *PLUID;
04170
04171 #include "pshpack4.h"
04172 typedef struct _LUID_AND_ATTRIBUTES {
04173     LUID Luid;
04174     DWORD Attributes;
04175 } LUID_AND_ATTRIBUTES;
04176 #include "poppack.h"
04177
04178 /*
04179  * PRIVILEGE_SET
04180  */
04181
04182 typedef struct _PRIVILEGE_SET {
04183     DWORD PrivilegeCount;
04184     DWORD Control;
04185     LUID_AND_ATTRIBUTES Privilege[ANYSIZE_ARRAY];
04186 } PRIVILEGE_SET, *PPRIVILEGE_SET;
04187
04188 /*
04189  * TOKEN_PRIVILEGES
04190  */
04191
04192 typedef struct _TOKEN_PRIVILEGES {
04193     DWORD PrivilegeCount;

```

```

04194     LUID_AND_ATTRIBUTES Privileges[ANYSIZE_ARRAY];
04195 } TOKEN_PRIVILEGES, *PTOKEN_PRIVILEGES;
04196
04197 /*
04198  * TOKEN_OWNER
04199  */
04200
04201 typedef struct _TOKEN_OWNER {
04202     PSID Owner;
04203 } TOKEN_OWNER;
04204
04205 /*
04206  * TOKEN_PRIMARY_GROUP
04207  */
04208
04209 typedef struct _TOKEN_PRIMARY_GROUP {
04210     PSID PrimaryGroup;
04211 } TOKEN_PRIMARY_GROUP;
04212
04213 /*
04214  * TOKEN_DEFAULT_DACL
04215  */
04216
04217 typedef struct _TOKEN_DEFAULT_DACL {
04218     PACL DefaultDacl;
04219 } TOKEN_DEFAULT_DACL;
04220
04221 /*
04222  * TOKEN_SOURCE
04223  */
04224
04225 typedef struct _TOKEN_SOURCE {
04226     char Sourcename[8];
04227     LUID SourceIdentifier;
04228 } TOKEN_SOURCE;
04229
04230 /*
04231  * TOKEN_TYPE
04232  */
04233
04234 typedef enum tagTOKEN_TYPE {
04235     TokenPrimary = 1,
04236     TokenImpersonation
04237 } TOKEN_TYPE;
04238
04239 /*
04240  * SECURITY_IMPERSONATION_LEVEL
04241  */
04242
04243 typedef enum _SECURITY_IMPERSONATION_LEVEL {
04244     SecurityAnonymous,
04245     SecurityIdentification,
04246     SecurityImpersonation,
04247     SecurityDelegation
04248 } SECURITY_IMPERSONATION_LEVEL, *PSECURITY_IMPERSONATION_LEVEL;
04249
04250
04251 typedef BOOLEAN SECURITY_CONTEXT_TRACKING_MODE,
04252 * PSECURITY_CONTEXT_TRACKING_MODE;
04253
04254 /*
04255  * Quality of Service
04256  */
04257
04258 typedef struct _SECURITY_QUALITY_OF_SERVICE {
04259     DWORD Length;
04260     SECURITY_IMPERSONATION_LEVEL ImpersonationLevel;
04261     SECURITY_CONTEXT_TRACKING_MODE ContextTrackingMode;
04262     BOOLEAN EffectiveOnly;
04263 } SECURITY_QUALITY_OF_SERVICE, *PSECURITY_QUALITY_OF_SERVICE;
04264
04265 /*
04266  * TOKEN_STATISTICS
04267  */
04268
04269 typedef struct _TOKEN_STATISTICS {
04270     LUID TokenId;
04271     LUID AuthenticationId;
04272     LARGE_INTEGER ExpirationTime;
04273     TOKEN_TYPE TokenType;
04274     SECURITY_IMPERSONATION_LEVEL ImpersonationLevel;
04275     DWORD DynamicCharged;
04276     DWORD DynamicAvailable;
04277     DWORD GroupCount;
04278     DWORD PrivilegeCount;
04279     LUID ModifiedId;
04280 } TOKEN_STATISTICS;

```

```
04281
04282 /*
04283  * ACLs of NT
04284  */
04285
04286 #define ACL_REVISION    2
04287
04288 #define ACL_REVISION1    1
04289 #define ACL_REVISION2    2
04290
04291 /* ACEs, directly starting after an ACL */
04292 typedef struct _ACE_HEADER {
04293     BYTE    AceType;
04294     BYTE    AceFlags;
04295     WORD    AceSize;
04296 } ACE_HEADER, *PACE_HEADER;
04297
04298 /* AceType */
04299 #define ACCESS_ALLOWED_ACE_TYPE    0
04300 #define ACCESS_DENIED_ACE_TYPE    1
04301 #define SYSTEM_AUDIT_ACE_TYPE    2
04302 #define SYSTEM_ALARM_ACE_TYPE    3
04303
04304 /* inherit AceFlags */
04305 #define OBJECT_INHERIT_ACE    0x01
04306 #define CONTAINER_INHERIT_ACE    0x02
04307 #define NO_PROPAGATE_INHERIT_ACE    0x04
04308 #define INHERIT_ONLY_ACE    0x08
04309 #define VALID_INHERIT_FLAGS    0x0F
04310
04311 /* AceFlags mask for what events we (should) audit */
04312 #define SUCCESSFUL_ACCESS_ACE_FLAG    0x40
04313 #define FAILED_ACCESS_ACE_FLAG    0x80
04314
04315 /* different ACEs depending on AceType
04316  * SidStart marks the begin of a SID
04317  * so the thing finally looks like this:
04318  * 0: ACE_HEADER
04319  * 4: ACCESS_MASK
04320  * 8... : SID
04321  */
04322 typedef struct _ACCESS_ALLOWED_ACE {
04323     ACE_HEADER    Header;
04324     DWORD    Mask;
04325     DWORD    SidStart;
04326 } ACCESS_ALLOWED_ACE, *PACCESS_ALLOWED_ACE;
04327
04328 typedef struct _ACCESS_DENIED_ACE {
04329     ACE_HEADER    Header;
04330     DWORD    Mask;
04331     DWORD    SidStart;
04332 } ACCESS_DENIED_ACE, *PACCESS_DENIED_ACE;
04333
04334 typedef struct _SYSTEM_AUDIT_ACE {
04335     ACE_HEADER    Header;
04336     DWORD    Mask;
04337     DWORD    SidStart;
04338 } SYSTEM_AUDIT_ACE, *PSYSTEM_AUDIT_ACE;
04339
04340 typedef struct _SYSTEM_ALARM_ACE {
04341     ACE_HEADER    Header;
04342     DWORD    Mask;
04343     DWORD    SidStart;
04344 } SYSTEM_ALARM_ACE, *PSYSTEM_ALARM_ACE;
04345
04346 typedef enum tagSID_NAME_USE {
04347     SidTypeUser = 1,
04348     SidTypeGroup,
04349     SidTypeDomain,
04350     SidTypeAlias,
04351     SidTypeWellKnownGroup,
04352     SidTypeDeletedAccount,
04353     SidTypeInvalid,
04354     SidTypeUnknown
04355 } SID_NAME_USE, *PSID_NAME_USE;
04356
04357 /* Access rights */
04358
04359 /* DELETE may be already defined via /usr/include/arpa/nameser_compat.h */
04360 #undef    DELETE
04361 #define DELETE    0x00010000
04362 #define READ_CONTROL    0x00020000
04363 #define WRITE_DAC    0x00040000
04364 #define WRITE_OWNER    0x00080000
04365 #define SYNCHRONIZE    0x00100000
04366 #define STANDARD_RIGHTS_REQUIRED    0x000f0000
04367
```

```

04368 #define STANDARD_RIGHTS_READ      READ_CONTROL
04369 #define STANDARD_RIGHTS_WRITE      READ_CONTROL
04370 #define STANDARD_RIGHTS_EXECUTE    READ_CONTROL
04371
04372 #define STANDARD_RIGHTS_ALL         0x001f0000
04373
04374 #define SPECIFIC_RIGHTS_ALL         0x0000ffff
04375
04376 #define GENERIC_READ                0x80000000
04377 #define GENERIC_WRITE               0x40000000
04378 #define GENERIC_EXECUTE             0x20000000
04379 #define GENERIC_ALL                 0x10000000
04380
04381 #define MAXIMUM_ALLOWED             0x02000000
04382 #define ACCESS_SYSTEM_SECURITY      0x01000000
04383
04384 #define EVENT_MODIFY_STATE          0x0002
04385 #define EVENT_ALL_ACCESS             (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x3)
04386
04387 #define SEMAPHORE_MODIFY_STATE      0x0002
04388 #define SEMAPHORE_ALL_ACCESS        (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x3)
04389
04390 #define MUTEX_MODIFY_STATE          0x0001
04391 #define MUTEX_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x1)
04392
04393 #define TIMER_QUERY_STATE           0x0001
04394 #define TIMER_MODIFY_STATE         0x0002
04395 #define TIMER_ALL_ACCESS            (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x3)
04396
04397 #define PROCESS_TERMINATE           0x0001
04398 #define PROCESS_CREATE_THREAD      0x0002
04399 #define PROCESS_VM_OPERATION       0x0008
04400 #define PROCESS_VM_READ            0x0010
04401 #define PROCESS_VM_WRITE           0x0020
04402 #define PROCESS_DUP_HANDLE         0x0040
04403 #define PROCESS_CREATE_PROCESS     0x0080
04404 #define PROCESS_SET_QUOTA          0x0100
04405 #define PROCESS_SET_INFORMATION    0x0200
04406 #define PROCESS_QUERY_INFORMATION  0x0400
04407 #define PROCESS_ALL_ACCESS          (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0xffff)
04408
04409 #define THREAD_TERMINATE            0x0001
04410 #define THREAD_SUSPEND_RESUME       0x0002
04411 #define THREAD_GET_CONTEXT          0x0008
04412 #define THREAD_SET_CONTEXT          0x0010
04413 #define THREAD_SET_INFORMATION      0x0020
04414 #define THREAD_QUERY_INFORMATION    0x0040
04415 #define THREAD_SET_THREAD_TOKEN     0x0080
04416 #define THREAD_IMPERSONATE          0x0100
04417 #define THREAD_DIRECT_IMPERSONATION 0x0200
04418 #define THREAD_ALL_ACCESS           (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x3ff)
04419
04420 #define THREAD_BASE_PRIORITY_LOWRT  15
04421 #define THREAD_BASE_PRIORITY_MAX    2
04422 #define THREAD_BASE_PRIORITY_MIN    -2
04423 #define THREAD_BASE_PRIORITY_IDLE   -15
04424
04425 #define FILE_READ_DATA              0x0001 /* file & pipe */
04426 #define FILE_LIST_DIRECTORY         0x0001 /* directory */
04427 #define FILE_WRITE_DATA             0x0002 /* file & pipe */
04428 #define FILE_ADD_FILE               0x0002 /* directory */
04429 #define FILE_APPEND_DATA            0x0004 /* file */
04430 #define FILE_ADD_SUBDIRECTORY       0x0004 /* directory */
04431 #define FILE_CREATE_PIPE_INSTANCE  0x0004 /* named pipe */
04432 #define FILE_READ_EA               0x0008 /* file & directory */
04433 #define FILE_READ_PROPERTIES        FILE_READ_EA
04434 #define FILE_WRITE_EA              0x0010 /* file & directory */
04435 #define FILE_WRITE_PROPERTIES       FILE_WRITE_EA
04436 #define FILE_EXECUTE               0x0020 /* file */
04437 #define FILE_TRAVERSE              0x0020 /* directory */
04438 #define FILE_DELETE_CHILD          0x0040 /* directory */
04439 #define FILE_READ_ATTRIBUTES       0x0080 /* all */
04440 #define FILE_WRITE_ATTRIBUTES      0x0100 /* all */
04441 #define FILE_ALL_ACCESS             (STANDARD_RIGHTS_REQUIRED | SYNCHRONIZE | 0x1ff)
04442
04443 #define FILE_GENERIC_READ           (STANDARD_RIGHTS_READ | FILE_READ_DATA | \
04444 FILE_READ_ATTRIBUTES | FILE_READ_EA | \
04445 SYNCHRONIZE)
04446 #define FILE_GENERIC_WRITE          (STANDARD_RIGHTS_WRITE | FILE_WRITE_DATA | \
04447 FILE_WRITE_ATTRIBUTES | FILE_WRITE_EA | \
04448 FILE_APPEND_DATA | SYNCHRONIZE)
04449 #define FILE_GENERIC_EXECUTE        (STANDARD_RIGHTS_EXECUTE | FILE_EXECUTE | \
04450 FILE_READ_ATTRIBUTES | SYNCHRONIZE)
04451
04452
04453 /* File attribute flags */
04454 #define FILE_SHARE_READ             0x00000001L

```

```
04455 #define FILE_SHARE_WRITE          0x00000002L
04456 #define FILE_SHARE_DELETE          0x00000004L
04457 #define FILE_ATTRIBUTE_READONLY    0x00000001L
04458 #define FILE_ATTRIBUTE_HIDDEN      0x00000002L
04459 #define FILE_ATTRIBUTE_SYSTEM      0x00000004L
04460 #define FILE_ATTRIBUTE_LABEL       0x00000008L /* Not in Windows API */
04461 #define FILE_ATTRIBUTE_DIRECTORY   0x00000010L
04462 #define FILE_ATTRIBUTE_ARCHIVE     0x00000020L
04463 #define FILE_ATTRIBUTE_NORMAL      0x00000080L
04464 #define FILE_ATTRIBUTE_TEMPORARY   0x00000100L
04465 #define FILE_ATTRIBUTE_ATOMIC_WRITE 0x00000200L
04466 #define FILE_ATTRIBUTE_XACTION_WRITE 0x00000400L
04467 #define FILE_ATTRIBUTE_COMPRESSED  0x00000800L
04468 #define FILE_ATTRIBUTE_OFFLINE     0x00001000L
04469 #define FILE_ATTRIBUTE_SYMLINK     0x80000000L /* Not in Windows API */
04470
04471 /* File notification flags */
04472 #define FILE_NOTIFY_CHANGE_FILE_NAME 0x00000001
04473 #define FILE_NOTIFY_CHANGE_DIR_NAME 0x00000002
04474 #define FILE_NOTIFY_CHANGE_ATTRIBUTES 0x00000004
04475 #define FILE_NOTIFY_CHANGE_SIZE      0x00000008
04476 #define FILE_NOTIFY_CHANGE_LAST_WRITE 0x00000010
04477 #define FILE_NOTIFY_CHANGE_LAST_ACCESS 0x00000020
04478 #define FILE_NOTIFY_CHANGE_CREATION  0x00000040
04479 #define FILE_NOTIFY_CHANGE_SECURITY  0x00000100
04480
04481 #define FILE_ACTION_ADDED             0x00000001
04482 #define FILE_ACTION_REMOVED           0x00000002
04483 #define FILE_ACTION_MODIFIED          0x00000003
04484 #define FILE_ACTION_RENAMED_OLD_NAME 0x00000004
04485 #define FILE_ACTION_RENAMED_NEW_NAME 0x00000005
04486
04487
04488 #define FILE_CASE_SENSITIVE_SEARCH    0x00000001
04489 #define FILE_CASE_PRESERVED_NAMES     0x00000002
04490 #define FILE_UNICODE_ON_DISK         0x00000004
04491 #define FILE_PERSISTENT_ACLS         0x00000008
04492 #define FILE_FILE_COMPRESSION        0x00000010
04493 #define FILE_VOLUME_IS_COMPRESSED    0x00008000
04494
04495 /* File alignments (NT) */
04496 #define FILE_BYTE_ALIGNMENT          0x00000000
04497 #define FILE_WORD_ALIGNMENT          0x00000001
04498 #define FILE_LONG_ALIGNMENT          0x00000003
04499 #define FILE_QUAD_ALIGNMENT          0x00000007
04500 #define FILE_OCTA_ALIGNMENT          0x0000000f
04501 #define FILE_32_BYTE_ALIGNMENT       0x0000001f
04502 #define FILE_64_BYTE_ALIGNMENT       0x0000003f
04503 #define FILE_128_BYTE_ALIGNMENT      0x0000007f
04504 #define FILE_256_BYTE_ALIGNMENT      0x000000ff
04505 #define FILE_512_BYTE_ALIGNMENT      0x000001ff
04506
04507 #define REG_NONE                     0 /* no type */
04508 #define REG_SZ                       1 /* string type (ASCII) */
04509 #define REG_EXPAND_SZ                2 /* string, includes %ENVVAR% (expanded by caller) (ASCII) */
04510 #define REG_BINARY                   3 /* binary format, callerspecific */
04511 /* YES, REG_DWORD == REG_DWORD_LITTLE_ENDIAN */
04512 #define REG_DWORD                    4 /* DWORD in little endian format */
04513 #define REG_DWORD_LITTLE_ENDIAN      4 /* DWORD in little endian format */
04514 #define REG_DWORD_BIG_ENDIAN         5 /* DWORD in big endian format */
04515 #define REG_LINK                     6 /* symbolic link (Unicode) */
04516 #define REG_MULTI_SZ                 7 /* multiple strings, delimited by \0, terminated by \0\0 (ASCII) */
04517 #define REG_RESOURCE_LIST            8 /* resource list? huh? */
04518 #define REG_FULL_RESOURCE_DESCRIPTOR 9 /* full resource descriptor? huh? */
04519 #define REG_RESOURCE_REQUIREMENTS_LIST 10
04520
04521 /* ----- begin registry ----- */
04522
04523 /* Registry security values */
04524 #define OWNER_SECURITY_INFORMATION 0x00000001
04525 #define GROUP_SECURITY_INFORMATION 0x00000002
04526 #define DACL_SECURITY_INFORMATION 0x00000004
04527 #define SACL_SECURITY_INFORMATION 0x00000008
04528
04529 #define REG_OPTION_RESERVED          0x00000000
04530 #define REG_OPTION_NON_VOLATILE      0x00000000
04531 #define REG_OPTION_VOLATILE          0x00000001
04532 #define REG_OPTION_CREATE_LINK       0x00000002
04533 #define REG_OPTION_BACKUP_RESTORE    0x00000004 /* FIXME */
04534 #define REG_OPTION_OPEN_LINK         0x00000008
04535 #define REG_LEGAL_OPTION              (REG_OPTION_RESERVED| \
04536     REG_OPTION_NON_VOLATILE| \
04537     REG_OPTION_VOLATILE| \
04538     REG_OPTION_CREATE_LINK| \
04539     REG_OPTION_BACKUP_RESTORE| \
04540     REG_OPTION_OPEN_LINK)
```

```

04542
04543 #define REG_CREATED_NEW_KEY 0x00000001
04544 #define REG_OPENED_EXISTING_KEY 0x00000002
04545
04546 /* For RegNotifyChangeKeyValue */
04547 #define REG_NOTIFY_CHANGE_NAME 0x1
04548
04549 #define KEY_QUERY_VALUE 0x00000001
04550 #define KEY_SET_VALUE 0x00000002
04551 #define KEY_CREATE_SUB_KEY 0x00000004
04552 #define KEY_ENUMERATE_SUB_KEYS 0x00000008
04553 #define KEY_NOTIFY 0x00000010
04554 #define KEY_CREATE_LINK 0x00000020
04555
04556 #define KEY_READ ((STANDARD_RIGHTS_READ| \
04557     KEY_QUERY_VALUE| \
04558     KEY_ENUMERATE_SUB_KEYS| \
04559     KEY_NOTIFY) \
04560     & (~SYNCHRONIZE) \
04561     )
04562 #define KEY_WRITE ((STANDARD_RIGHTS_WRITE| \
04563     KEY_SET_VALUE| \
04564     KEY_CREATE_SUB_KEY) \
04565     & (~SYNCHRONIZE) \
04566     )
04567 #define KEY_EXECUTE ((KEY_READ) \
04568     & (~SYNCHRONIZE)) \
04569     )
04570 #define KEY_ALL_ACCESS ((STANDARD_RIGHTS_ALL| \
04571     KEY_QUERY_VALUE| \
04572     KEY_SET_VALUE| \
04573     KEY_CREATE_SUB_KEY| \
04574     KEY_ENUMERATE_SUB_KEYS| \
04575     KEY_NOTIFY| \
04576     KEY_CREATE_LINK) \
04577     & (~SYNCHRONIZE) \
04578     )
04579 /* ----- end registry ----- */
04580
04581
04582 #define EVENTLOG_SUCCESS 0x0000
04583 #define EVENTLOG_ERROR_TYPE 0x0001
04584 #define EVENTLOG_WARNING_TYPE 0x0002
04585 #define EVENTLOG_INFORMATION_TYPE 0x0004
04586 #define EVENTLOG_AUDIT_SUCCESS 0x0008
04587 #define EVENTLOG_AUDIT_FAILURE 0x0010
04588
04589 #define SERVICE_BOOT_START 0x00000000
04590 #define SERVICE_SYSTEM_START 0x00000001
04591 #define SERVICE_AUTO_START 0x00000002
04592 #define SERVICE_DEMAND_START 0x00000003
04593 #define SERVICE_DISABLED 0x00000004
04594
04595 #define SERVICE_ERROR_IGNORE 0x00000000
04596 #define SERVICE_ERROR_NORMAL 0x00000001
04597 #define SERVICE_ERROR_SEVERE 0x00000002
04598 #define SERVICE_ERROR_CRITICAL 0x00000003
04599
04600 /* Service types */
04601 #define SERVICE_KERNEL_DRIVER 0x00000001
04602 #define SERVICE_FILE_SYSTEM_DRIVER 0x00000002
04603 #define SERVICE_ADAPTER 0x00000004
04604 #define SERVICE_RECOGNIZER_DRIVER 0x00000008
04605
04606 #define SERVICE_DRIVER ( SERVICE_KERNEL_DRIVER | SERVICE_FILE_SYSTEM_DRIVER | \
04607     SERVICE_RECOGNIZER_DRIVER )
04608
04609 #define SERVICE_WIN32_OWN_PROCESS 0x00000010
04610 #define SERVICE_WIN32_SHARE_PROCESS 0x00000020
04611 #define SERVICE_WIN32 (SERVICE_WIN32_OWN_PROCESS | SERVICE_WIN32_SHARE_PROCESS)
04612
04613 #define SERVICE_INTERACTIVE_PROCESS 0x00000100
04614
04615 #define SERVICE_TYPE_ALL ( SERVICE_WIN32 | SERVICE_ADAPTER | \
04616     SERVICE_DRIVER | SERVICE_INTERACTIVE_PROCESS )
04617
04618
04619 typedef enum _CM_SERVICE_NODE_TYPE
04620 {
04621     DriverType = SERVICE_KERNEL_DRIVER,
04622     FileSystemType = SERVICE_FILE_SYSTEM_DRIVER,
04623     Win32ServiceOwnProcess = SERVICE_WIN32_OWN_PROCESS,
04624     Win32ServiceShareProcess = SERVICE_WIN32_SHARE_PROCESS,
04625     AdapterType = SERVICE_ADAPTER,
04626     RecognizerType = SERVICE_RECOGNIZER_DRIVER
04627 } SERVICE_NODE_TYPE;
04628

```

```

04629 typedef enum _CM_SERVICE_LOAD_TYPE
04630 {
04631     BootLoad      = SERVICE_BOOT_START,
04632     SystemLoad    = SERVICE_SYSTEM_START,
04633     AutoLoad      = SERVICE_AUTO_START,
04634     DemandLoad    = SERVICE_DEMAND_START,
04635     DisableLoad   = SERVICE_DISABLED
04636 } SERVICE_LOAD_TYPE;
04637
04638 typedef enum _CM_ERROR_CONTROL_TYPE
04639 {
04640     IgnoreError    = SERVICE_ERROR_IGNORE,
04641     NormalError    = SERVICE_ERROR_NORMAL,
04642     SevereError    = SERVICE_ERROR_SEVERE,
04643     CriticalError  = SERVICE_ERROR_CRITICAL
04644 } SERVICE_ERROR_TYPE;
04645
04646
04647
04648 #define RtlEqualMemory(Destination, Source, Length) (!memcmp((Destination), (Source), (Length)))
04649 #define RtlMoveMemory(Destination, Source, Length) memmove((Destination), (Source), (Length))
04650 #define RtlCopyMemory(Destination, Source, Length) memcpy((Destination), (Source), (Length))
04651 #define RtlFillMemory(Destination, Length, Fill) memset((Destination), (Fill), (Length))
04652 #define RtlZeroMemory(Destination, Length) memset((Destination), 0, (Length))
04653
04654 #include "guiddef.h"
04655
04656 typedef struct _RTL_CRITICAL_SECTION_DEBUG
04657 {
04658     WORD    Type;
04659     WORD    CreatorBackTraceIndex;
04660     struct _RTL_CRITICAL_SECTION *CriticalSection;
04661     LIST_ENTRY ProcessLocksList;
04662     DWORD   EntryCount;
04663     DWORD   ContentionCount;
04664     DWORD   Spare[ 2 ];
04665 } RTL_CRITICAL_SECTION_DEBUG, *PRTL_CRITICAL_SECTION_DEBUG, RTL_RESOURCE_DEBUG, *PRTL_RESOURCE_DEBUG;
04666
04667 typedef struct _RTL_CRITICAL_SECTION {
04668     PRTL_CRITICAL_SECTION_DEBUG DebugInfo;
04669     LONG    LockCount;
04670     LONG    RecursionCount;
04671     HANDLE  OwningThread;
04672     HANDLE  LockSemaphore;
04673     ULONG_PTR SpinCount;
04674 } RTL_CRITICAL_SECTION, *PRTL_CRITICAL_SECTION;
04675
04676 #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 ACESSTIMEOUT dwFlags field */
00136 #define ATF_ONOFFFEEDBACK 0x00000002
00137 #define ATF_AVAILABLE 0x00000004
00138 #define ATF_TIMEOUTON 0x00000001
00139
00140 typedef struct tagACESSTIMEOUT
00141 {
00142     UINT cbSize;
00143     DWORD dwFlags;
00144     DWORD iTimeOutMSec;
00145 } ACESSTIMEOUT, *PACESSTIMEOUT, *LPACESSTIMEOUT;
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_HOTKEYYAVAILABLE 0x00000040
00237
00238 typedef struct tagHIGHCONTRASTA
00239 {
00240     UINT    cbSize;
00241     DWORD   dwFlags;
00242     LPSTR    lpszDefaultScheme;
00243 } HIGHCONTRASTA, *LPHIGHCONTRASTA;
00244
00245 typedef struct tagHIGHCONTRASTW
00246 {
00247     UINT    cbSize;
00248     DWORD   dwFlags;
00249     LPWSTR  lpszDefaultScheme;
00250 } HIGHCONTRASTW, *LPHIGHCONTRASTW;
00251
00252 DECL_WINELIB_TYPE_AW(HIGHCONTRAST)
00253 DECL_WINELIB_TYPE_AW(LPHIGHCONTRAST)
00254
00255 typedef struct
00256 {
00257     UINT    message;
00258     UINT    paramL;
00259     UINT    paramH;
00260     DWORD   time;
00261     HWND    hwnd;
00262 } EVENTMSG, *PEVENTMSG, *LPEVENTMSG;
00263
00264 /* WH_KEYBOARD_LL structure */
00265 typedef struct tagKBDLLHOOKSTRUCT
00266 {
00267     DWORD   vkCode;
00268     DWORD   scanCode;
00269     DWORD   flags;
00270     DWORD   time;
00271     ULONG_PTR dwExtraInfo;
00272 } KBDLLHOOKSTRUCT, *LPKBDLLHOOKSTRUCT, *PKBDLLHOOKSTRUCT;
00273
00274 #define LLKHF_EXTENDED (KF_EXTENDED » 8)
00275 #define LLKHF_INJECTED 0x00000010
00276 #define LLKHF_ALTDOWN (KF_ALTDOWN » 8)
00277 #define LLKHF_UP (KF_UP » 8)
00278
00279 /* WH_MOUSE_LL structure */
00280 typedef struct tagMSLLHOOKSTRUCT
00281 {
00282     POINT    pt;
00283     DWORD   mouseData;
00284     DWORD   flags;
00285     DWORD   time;
00286     ULONG_PTR dwExtraInfo;
00287 } MSLLHOOKSTRUCT, *LPMSLLHOOKSTRUCT, *PMSLLHOOKSTRUCT;
00288
00289 #define LLMHF_INJECTED 0x00000001
00290
00291 /* Mouse hook structure */
00292
00293 typedef struct
00294 {

```

```

00295     POINT pt;
00296     HWND  hwnd;
00297     UINT  wHitTestCode;
00298     DWORD dwExtraInfo;
00299 } MOUSEHOOKSTRUCT, *PMOUSEHOOKSTRUCT, *LPMOUSEHOOKSTRUCT;
00300
00301
00302     /* Hardware hook structure */
00303
00304 typedef struct
00305 {
00306     HWND  hwnd;
00307     UINT  wMessage;
00308     WPARAM wParam;
00309     LPARAM lParam;
00310 } HARDWAREHOOKSTRUCT, *PHARDWAREHOOKSTRUCT, *LPHARDWAREHOOKSTRUCT;
00311
00312
00313     /* Debug hook structure */
00314
00315 typedef struct
00316 {
00317     DWORD    idThread;
00318     DWORD    idThreadInstaller;
00319     LPARAM   lParam;
00320     WPARAM   wParam;
00321     INT      code;
00322 } DEBUGHOOKINFO, *PDEBUGHOOKINFO, *LPDEBUGHOOKINFO;
00323
00324 #define HKL_PREV    0
00325 #define HKL_NEXT    1
00326
00327 #define KLF_ACTIVATE        0x00000001
00328 #define KLF_SUBSTITUTE_OK   0x00000002
00329 #define KLF_UNLOADPREVIOUS  0x00000004
00330 #define KLF_REORDER         0x00000008
00331 #define KLF_REPLACELANG     0x00000010
00332 #define KLF_NOTELLSHELL     0x00000080
00333
00334 #define KL_NAMELENGTH      9
00335
00336 typedef struct tagMOUSEINPUT
00337 {
00338     LONG    dx;
00339     LONG    dy;
00340     DWORD   mouseData;
00341     DWORD   dwFlags;
00342     DWORD   time;
00343     ULONG_PTR dwExtraInfo;
00344 } MOUSEINPUT, *PMOUSEINPUT, *LPMOUSEINPUT;
00345
00346 typedef struct tagKEYBDINPUT
00347 {
00348     WORD     wVk;
00349     WORD     wScan;
00350     DWORD    dwFlags;
00351     DWORD    time;
00352     ULONG_PTR dwExtraInfo;
00353 } KEYBDINPUT, *PKEYBDINPUT, *LPKEYBDINPUT;
00354
00355 typedef struct tagHARDWAREINPUT
00356 {
00357     DWORD    uMsg;
00358     WORD     wParamL;
00359     WORD     wParamH;
00360 } HARDWAREINPUT, *PHARDWAREINPUT, *LPHARDWAREINPUT;
00361
00362 #define INPUT_MOUSE        0
00363 #define INPUT_KEYBOARD     1
00364 #define INPUT_HARDWARE     2
00365
00366 typedef struct tagINPUT
00367 {
00368     DWORD type;
00369     union
00370     {
00371         MOUSEINPUT    mi;
00372         KEYBDINPUT     ki;
00373         HARDWAREINPUT  hi;
00374     } DUMMYUNIONNAME;
00375 } INPUT, *PINPUT, *LPINPUT;
00376
00377
00378 /***** Dialogs *****/
00379
00380 /* Gcc on Solaris has a version of this that we don't care about */
00381 #undef FSHIFT

```

```

00382
00383 #define FVIRTKEY    TRUE           /* Assumed to be == TRUE */
00384 #define FNOINVERT   0x02
00385 #define FSHIFT      0x04
00386 #define FCONTROL     0x08
00387 #define FALT         0x10
00388
00389
00390 typedef struct tagANIMATIONINFO
00391 {
00392     UINT      cbSize;
00393     INT       iMinAnimate;
00394 } ANIMATIONINFO, *LPANIMATIONINFO;
00395
00396 typedef struct tagNMHDR
00397 {
00398     HWND      hwndFrom;
00399     UINT      idFrom;
00400     UINT      code;
00401 } NMHDR, *LPNMHDR;
00402
00403 typedef struct
00404 {
00405     UINT      cbSize;
00406     INT       iTabLength;
00407     INT       iLeftMargin;
00408     INT       iRightMargin;
00409     UINT      uiLengthDrawn;
00410 } 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_CURSORA      MAKEINTRESOURCEA(1)
00461 #define RT_CURSORW      MAKEINTRESOURCEW(1)
00462 #define RT_CURSOR       WINELIB_NAME_AW(RT_CURSOR)
00463 #define RT_BITMAPA      MAKEINTRESOURCEA(2)
00464 #define RT_BITMAPW      MAKEINTRESOURCEW(2)
00465 #define RT_BITMAP       WINELIB_NAME_AW(RT_BITMAP)
00466 #define RT_ICONA        MAKEINTRESOURCEA(3)
00467 #define RT_ICONW        MAKEINTRESOURCEW(3)
00468 #define RT_ICON         WINELIB_NAME_AW(RT_ICON)

```

```

00469 #define RT_MENU          MAKEINTRESOURCE(4)
00470 #define RT_MENUW          MAKEINTRESOURCEW(4)
00471 #define RT_MENU           WINELIB_NAME_AW(RT_MENU)
00472 #define RT_DIALOGA       MAKEINTRESOURCE(5)
00473 #define RT_DIALOGW       MAKEINTRESOURCEW(5)
00474 #define RT_DIALOG        WINELIB_NAME_AW(RT_DIALOG)
00475 #define RT_STRINGA       MAKEINTRESOURCE(6)
00476 #define RT_STRINGW       MAKEINTRESOURCEW(6)
00477 #define RT_STRING        WINELIB_NAME_AW(RT_STRING)
00478 #define RT_FONTDIRA      MAKEINTRESOURCE(7)
00479 #define RT_FONTDIRW      MAKEINTRESOURCEW(7)
00480 #define RT_FONTDIR       WINELIB_NAME_AW(RT_FONTDIR)
00481 #define RT_FONTA         MAKEINTRESOURCE(8)
00482 #define RT_FONTW         MAKEINTRESOURCEW(8)
00483 #define RT_FONT          WINELIB_NAME_AW(RT_FONT)
00484 #define RT_ACCELERATORA  MAKEINTRESOURCE(9)
00485 #define RT_ACCELERATORW  MAKEINTRESOURCEW(9)
00486 #define RT_ACCELERATOR   WINELIB_NAME_AW(RT_ACCELERATOR)
00487 #define RT_RCDATAA       MAKEINTRESOURCE(10)
00488 #define RT_RCDATAW       MAKEINTRESOURCEW(10)
00489 #define RT_RCDATA        WINELIB_NAME_AW(RT_RCDATA)
00490 #define RT_MESSAGETABLEA MAKEINTRESOURCE(11)
00491 #define RT_MESSAGETABLEW MAKEINTRESOURCEW(11)
00492 #define RT_MESSAGETABLE  WINELIB_NAME_AW(RT_MESSAGETABLE)
00493 #define RT_GROUP_CURSORA MAKEINTRESOURCE(12)
00494 #define RT_GROUP_COURSOW MAKEINTRESOURCEW(12)
00495 #define RT_GROUP_CURSOR  WINELIB_NAME_AW(RT_GROUP_CURSOR)
00496 #define RT_GROUP_ICONA   MAKEINTRESOURCE(14)
00497 #define RT_GROUP_ICONW   MAKEINTRESOURCEW(14)
00498 #define RT_GROUP_ICON    WINELIB_NAME_AW(RT_GROUP_ICON)
00499 #define RT_VERSIONA      MAKEINTRESOURCE(16)
00500 #define RT_VERSIONW      MAKEINTRESOURCEW(16)
00501 #define RT_VERSION       WINELIB_NAME_AW(RT_VERSION)
00502 #define RT_DLGINCLUDEA   MAKEINTRESOURCE(17)
00503 #define RT_DLGINCLUDEW   MAKEINTRESOURCEW(17)
00504 #define RT_DLGINCLUDE    WINELIB_NAME_AW(RT_DLGINCLUDE)
00505 #define RT_PLUGPLAYA     MAKEINTRESOURCE(19)
00506 #define RT_PLUGPLAYW     MAKEINTRESOURCEW(19)
00507 #define RT_PLUGPLAY      WINELIB_NAME_AW(RT_PLUGPLAY)
00508 #define RT_VXDA          MAKEINTRESOURCE(20)
00509 #define RT_VXDW          MAKEINTRESOURCEW(20)
00510 #define RT_VXD           WINELIB_NAME_AW(RT_VXD)
00511 #define RT_ANICURSORA    MAKEINTRESOURCE(21)
00512 #define RT_ANICOURSOW    MAKEINTRESOURCEW(21)
00513 #define RT_ANICURSOR     WINELIB_NAME_AW(RT_ANICURSOR)
00514 #define RT_ANIICONA      MAKEINTRESOURCE(22)
00515 #define RT_ANIICONW      MAKEINTRESOURCEW(22)
00516 #define RT_ANIICON       WINELIB_NAME_AW(RT_ANIICON)
00517 #define RT_HTMLA         MAKEINTRESOURCE(23)
00518 #define RT_HTMLW         MAKEINTRESOURCEW(23)
00519 #define RT_HTML          WINELIB_NAME_AW(RT_HTML)
00520
00521
00522 /* cbWndExtra bytes for dialog class */
00523 #define DLGWINDOWEXTRA    30
00524
00525 /* Button control styles */
00526 #define BS_PUSHBUTTON      0x00000000L
00527 #define BS_DEFPUSHBUTTON   0x00000001L
00528 #define BS_CHECKBOX        0x00000002L
00529 #define BS_AUTOCHECKBOX    0x00000003L
00530 #define BS_RADIOBUTTON     0x00000004L
00531 #define BS_3STATE          0x00000005L
00532 #define BS_AUTO3STATE      0x00000006L
00533 #define BS_GROUPBOX        0x00000007L
00534 #define BS_USERBUTTON      0x00000008L
00535 #define BS_AUTORADIOBUTTON 0x00000009L
00536 #define BS_OWNERDRAW       0x0000000BL
00537 #define BS_LEFTTEXT        0x00000020L
00538 #define BS_RIGHTBUTTON     BS_LEFTTEXT
00539
00540 #define BS_TEXT             0x00000000L
00541 #define BS_ICON             0x00000040L
00542 #define BS_BITMAP           0x00000080L
00543 #define BS_LEFT             0x00000100L
00544 #define BS_RIGHT            0x00000200L
00545 #define BS_CENTER           0x00000300L
00546 #define BS_TOP              0x00000400L
00547 #define BS_BOTTOM           0x00000800L
00548 #define BS_VCENTER          0x00000C00L
00549 #define BS_PUSHLIKE         0x00001000L
00550 #define BS_MULTILINE        0x00002000L
00551 #define BS_NOTIFY           0x00004000L
00552 #define BS_FLAT             0x00008000L
00553
00554 /* Dialog styles */
00555 #define DS_ABSALIGN         0x0001

```

```
00556 #define DS_SYSMODAL      0x0002
00557 #define DS_3DLOOK         0x0004 /* win95 */
00558 #define DS_FIXEDSYS        0x0008 /* win95 */
00559 #define DS_NOFAILCREATE     0x0010 /* win95 */
00560 #define DS_LOCALEDIT       0x0020
00561 #define DS_SETFONT         0x0040
00562 #define DS_MODALFRAME      0x0080
00563 #define DS_NOIDLEMSG       0x0100
00564 #define DS_SETFOREGROUND   0x0200 /* win95 */
00565 #define DS_CONTROL         0x0400 /* win95 */
00566 #define DS_CENTER          0x0800 /* win95 */
00567 #define DS_CENTERMOUSE     0x1000 /* win95 */
00568 #define DS_CONTEXTHELP     0x2000 /* win95 */
00569
00570
00571 /* Dialog messages */
00572 #define DM_GETDEFID         (WM_USER+0)
00573 #define DM_SETDEFID         (WM_USER+1)
00574 #define DM_REPOSITION      (WM_USER+2)
00575
00576 #define DC_HASDEFID         0x534b
00577
00578 /* Owner draw control types */
00579 #define ODT_MENU            1
00580 #define ODT_LISTBOX        2
00581 #define ODT_COMBOBOX       3
00582 #define ODT_BUTTON         4
00583 #define ODT_STATIC         5
00584
00585 /* Owner draw actions */
00586 #define ODA_DRAWENTIRE     0x0001
00587 #define ODA_SELECT         0x0002
00588 #define ODA_FOCUS         0x0004
00589
00590 /* Owner draw state */
00591 #define ODS_SELECTED       0x0001
00592 #define ODS_GRAYED        0x0002
00593 #define ODS_DISABLED      0x0004
00594 #define ODS_CHECKED       0x0008
00595 #define ODS_FOCUS         0x0010
00596 #define ODS_COMBOBOXEDIT  0x1000
00597 #define ODS_HOTLIGHT      0x0040
00598 #define ODS_INACTIVE      0x0080
00599
00600 /* Edit control styles */
00601 #define ES_LEFT            0x00000000
00602 #define ES_CENTER          0x00000001
00603 #define ES_RIGHT           0x00000002
00604 #define ES_MULTILINE       0x00000004
00605 #define ES_UPPERCASE       0x00000008
00606 #define ES_LOWERCASE       0x00000010
00607 #define ES_PASSWORD        0x00000020
00608 #define ES_AUTOVSCROLL     0x00000040
00609 #define ES_AUTOHSCROLL     0x00000080
00610 #define ES_NOHIDESEL       0x00000100
00611 #define ES_COMBO           0x00000200 /* Undocumented. Parent is a combobox */
00612 #define ES_OEMCONVERT      0x00000400
00613 #define ES_READONLY        0x00000800
00614 #define ES_WANTRETURN      0x00001000
00615 #define ES_NUMBER          0x00002000
00616
00617 /* OEM Resource Ordinal Numbers */
00618 #define OBM_CLOSED         32731
00619 #define OBM_TRITYPE        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_SIZEW            32644
00665 #define OCR_SIZES             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_QUE                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_SETPASSWORDCHAR 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_CXHSCROLL 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_ERASEBKGDND         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_ICONERASEBKGDND     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_SYNTASK 0x0089
00997
00998 /* Non-client mouse messages */
00999 #define WM_NCMOUSEMOVE 0x00a0
01000 #define WM_NCLBUTTONDOWN 0x00a1
01001 #define WM_NCLBUTTONUP 0x00a2
01002 #define WM_NCLBUTTONDBLCLK 0x00a3
01003 #define WM_NCRBUTTONDOWN 0x00a4
01004 #define WM_NCRBUTTONUP 0x00a5
01005 #define WM_NCRBUTTONDBLCLK 0x00a6
01006 #define WM_NCMBUTTONDOWN 0x00a7
01007 #define WM_NCMBUTTONUP 0x00a8
01008 #define WM_NCMBUTTONDBLCLK 0x00a9
01009
01010 #define WM_NCXBUTTONDOWN 0x00ab
01011 #define WM_NCXBUTTONUP 0x00ac
01012 #define WM_NCXBUTTONDBLCLK 0x00ad
01013
01014 /* Keyboard messages */
01015 #define WM_KEYDOWN 0x0100
01016 #define WM_KEYUP 0x0101
01017 #define WM_CHAR 0x0102
01018 #define WM_DEADCHAR 0x0103
01019 #define WM_SYSKEYDOWN 0x0104
01020 #define WM_SYSKEYUP 0x0105
01021 #define WM_SYSCHAR 0x0106
01022 #define WM_SYSDEADCHAR 0x0107
01023 #define WM_KEYFIRST WM_KEYDOWN
01024 #define WM_KEYLAST 0x0108
01025
01026 /* Win32 4.0 messages for IME */
01027 #define WM_IME_STARTCOMPOSITION 0x010d
01028 #define WM_IME_ENDCOMPOSITION 0x010e
01029 #define WM_IME_COMPOSITION 0x010f
01030 #define WM_IME_KEYLAST 0x010f
01031
01032 #define WM_INITDIALOG 0x0110
01033 #define WM_COMMAND 0x0111
01034 #define WM_SYSCOMMAND 0x0112
01035 #define WM_TIMER 0x0113
01036 #define WM_SYSTIMER 0x0118
01037
01038 /* scroll messages */
01039 #define WM_HSCROLL 0x0114
01040 #define WM_VSCROLL 0x0115
01041
01042 /* Menu messages */
01043 #define WM_INITMENU 0x0116
01044 #define WM_INITMENUPOPUP 0x0117
01045
01046 #define WM_MENUSELECT 0x011f
01047 #define WM_MENUCHAR 0x0120
01048 #define WM_ENTERIDLE 0x0121
01049
01050 #define WM_LBTRACKPOINT 0x0131
01051
01052 /* Win32 CTLCOLOR messages */
01053 #define WM_CTLCOLORMSGBOX 0x0132
01054 #define WM_CTLCOLOREDIT 0x0133
01055 #define WM_CTLCOLORLISTBOX 0x0134
01056 #define WM_CTLCOLORBTN 0x0135
01057 #define WM_CTLCOLORDLG 0x0136
01058 #define WM_CTLCOLORSCROLLBAR 0x0137
01059 #define WM_CTLCOLORSTATIC 0x0138
01060
01061 /* Mouse messages */
01062 #define WM_MOUSEMOVE 0x0200
01063 #define WM_LBUTTONDOWN 0x0201
01064 #define WM_LBUTTONUP 0x0202
01065 #define WM_LBUTTONDBLCLK 0x0203
01066 #define WM_RBUTTONDOWN 0x0204
01067 #define WM_RBUTTONUP 0x0205
01068 #define WM_RBUTTONDBLCLK 0x0206
01069 #define WM_MBUTTONDOWN 0x0207
01070 #define WM_MBUTTONUP 0x0208
01071 #define WM_MBUTTONDBLCLK 0x0209
01072 #define WM_MOUSEWHEEL 0x020a
01073 #define WM_XBUTTONDOWN 0x020b
01074 #define WM_XBUTTONUP 0x020c
01075 #define WM_XBUTTONDBLCLK 0x020d
01076
01077 #define WM_MOUSEFIRST 0x0200
```

```
01078 #define WM_MOUSELAST          0x020D
01079
01080 #define WHEEL_DELTA              120
01081 #define WHEEL_PAGESCROLL        (UINT_MAX)
01082 #define WM_PARENTNOTIFY          0x0210
01083 #define WM_ENTERMENULOOP         0x0211
01084 #define WM_EXITMENULOOP          0x0212
01085 #define WM_NEXTMENU              0x0213
01086
01087 /* Win32 4.0 messages */
01088 #define WM_SIZING                 0x0214
01089 #define WM_CAPTURECHANGED        0x0215
01090 #define WM_MOVING                 0x0216
01091 #define WM_POWERBROADCAST         0x0218
01092 #define WM_DEVICECHANGE           0x0219
01093
01094 /* wParam for WM_SIZING message */
01095 #define WMSZ_LEFT                 1
01096 #define WMSZ_RIGHT                2
01097 #define WMSZ_TOP                  3
01098 #define WMSZ_TOPLEFT              4
01099 #define WMSZ_TOPRIGHT             5
01100 #define WMSZ_BOTTOM               6
01101 #define WMSZ_BOTTOMLEFT           7
01102 #define WMSZ_BOTTOMRIGHT          8
01103
01104 /* MDI messages */
01105 #define WM_MDICREATE              0x0220
01106 #define WM_MDIESTROY              0x0221
01107 #define WM_MDIACTIVATE            0x0222
01108 #define WM_MDIRESTORE             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_DROPOBJECT              0x022A
01119 #define WM_QUERYDROPOBJECT        0x022B
01120 #define WM_BEGINDRAG              0x022C
01121 #define WM_DRAGLOOP               0x022D
01122 #define WM_DRAGSELECT             0x022E
01123 #define WM_DRAGMOVE               0x022F
01124 #define WM_MDISETMENU             0x0230
01125
01126 #define WM_ENTERSIZEMOVE           0x0231
01127 #define WM_EXITSIZEMOVE           0x0232
01128 #define WM_DROPFILES              0x0233
01129
01130
01131 /* Win32 4.0 messages for IME */
01132 #define WM_IME_SETCONTEXT          0x0281
01133 #define WM_IME_NOTIFY              0x0282
01134 #define WM_IME_CONTROL             0x0283
01135 #define WM_IME_COMPOSITIONFULL    0x0284
01136 #define WM_IME_SELECT              0x0285
01137 #define WM_IME_CHAR                0x0286
01138 /* Win32 5.0 messages for IME */
01139 #define WM_IME_REQUEST             0x0288
01140
01141 /* Win32 4.0 messages for IME */
01142 #define WM_IME_KEYDOWN             0x0290
01143 #define WM_IME_KEYUP              0x0291
01144
01145 /* Clipboard command messages */
01146 #define WM_CUT                    0x0300
01147 #define WM_COPY                   0x0301
01148 #define WM_PASTE                  0x0302
01149 #define WM_CLEAR                  0x0303
01150 #define WM_UNDO                   0x0304
01151
01152 /* Clipboard owner messages */
01153 #define WM_RENDERFORMAT            0x0305
01154 #define WM_RENDERALLFORMATS       0x0306
01155 #define WM_DESTROYCLIPBOARD       0x0307
01156
01157 /* Clipboard viewer messages */
01158 #define WM_DRAWCLIPBOARD           0x0308
01159 #define WM_PAINTCLIPBOARD         0x0309
01160 #define WM_VSCROLLCLIPBOARD       0x030A
01161 #define WM_SIZECLIPBOARD          0x030B
01162 #define WM_ASKCBFORMATNAME        0x030C
01163 #define WM_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, *LPCLIENTCREATESTRUCT;
01260
01261
01262 typedef struct
01263 {
01264     LPCSTR    szClass;
01265     LPCSTR    szTitle;
01266     HINSTANCE hOwner;
01267     INT       x;
01268     INT       y;
01269     INT       cx;
01270     INT       cy;
01271     DWORD     style;
01272     LPARAM    lParam;
01273 } MDICREATESTRUCTA, *LPMDICREATESTRUCTA;
01274
01275 typedef struct
01276 {
01277     LPCWSTR    szClass;
01278     LPCWSTR    szTitle;
01279     HINSTANCE  hOwner;
01280     INT        x;
01281     INT        y;
01282     INT        cx;
01283     INT        cy;
01284     DWORD      style;
01285     LPARAM     lParam;
01286 } MDICREATESTRUCTW, *LPMDICREATESTRUCTW;
01287
01288 DECL_WINELIB_TYPE_AW(MDICREATESTRUCT)
01289 DECL_WINELIB_TYPE_AW(LPMDICREATESTRUCT)
01290
01291 #define MDITILE_VERTICAL      0x0000
01292 #define MDITILE_HORIZONTAL    0x0001
01293 #define MDITILE_SKIPDISABLED 0x0002
01294
01295 #define MDIS_ALLCHILDSTYLES  0x0001
01296
01297 typedef struct {
01298     DWORD    styleOld;
01299     DWORD    styleNew;
01300 } STYLESTRUCT, *LPSTYLESTRUCT;
01301
01302 #define WC_DIALOGA MAKEINTATOMA(0x8002)
01303 #define WC_DIALOGW MAKEINTATOMW(0x8002)
01304 #define WC_DIALOG  WINELIB_NAME_AW(WC_DIALOG)
01305
01306 /* Offsets for GetWindowLong() and GetWindowWord() */
01307 #define GWL_USERDATA      (-21)
01308 #define GWL_EXSTYLE       (-20)
01309 #define GWL_STYLE         (-16)
01310 #define GWL_ID            (-12)
01311 #define GWL_HWNDPARENT    (-8)
01312 #define GWL_HINSTANCE     (-6)
01313 #define GWL_WNDPROC       (-4)
01314 #define DWL_MSGRESULT     0
01315 #define DWL_DLGPROC       4
01316 #define DWL_USER          8
01317
01318 /* GetWindow() constants */
01319 #define GW_HWNDFIRST      0
01320 #define GW_HWNDLAST      1
01321 #define GW_HWNDNEXT      2
01322 #define GW_HWNDPREV      3
01323 #define GW_OWNER          4
01324 #define GW_CHILD          5
01325
01326 /* GetAncestor() constants */
01327 #define GA_PARENT         1
01328 #define GA_ROOT           2
01329 #define GA_ROOTOWNER      3
01330
01331 /* WM_GETMINMAXINFO struct */
01332 typedef struct
01333 {
01334     POINT    ptReserved;
01335     POINT    ptMaxSize;
01336     POINT    ptMaxPosition;
01337     POINT    ptMinTrackSize;
01338     POINT    ptMaxTrackSize;

```

```

01339 } MINMAXINFO, *PMINMAXINFO, *LPMINMAXINFO;
01340
01341
01342 /* RedrawWindow() flags */
01343 #define RDW_INVALIDATE 0x0001
01344 #define RDW_INTERNALPAINT 0x0002
01345 #define RDW_ERASE 0x0004
01346 #define RDW_VALIDATE 0x0008
01347 #define RDW_NOINTERNALPAINT 0x0010
01348 #define RDW_NOERASE 0x0020
01349 #define RDW_NOCHILDREN 0x0040
01350 #define RDW_ALLCHILDREN 0x0080
01351 #define RDW_UPDATENOW 0x0100
01352 #define RDW_ERASENOW 0x0200
01353 #define RDW_FRAME 0x0400
01354 #define RDW_NOFRAME 0x0800
01355
01356 /* debug flags */
01357 #define DBGFILL_ALLOC 0xfd
01358 #define DBGFILL_FREE 0xfb
01359 #define DBGFILL_BUFFER 0xf9
01360 #define DBGFILL_STACK 0xf7
01361
01362 /* WM_WINDOWPOSCHANGING/CHANGED struct */
01363 typedef struct tagWINDOWPOS
01364 {
01365     HWND hwnd;
01366     HWND hwndInsertAfter;
01367     INT x;
01368     INT y;
01369     INT cx;
01370     INT cy;
01371     UINT flags;
01372 } WINDOWPOS, *PWINDOWPOS, *LPWINDOWPOS;
01373
01374
01375 /* WM_MOUSEACTIVATE return values */
01376 #define MA_ACTIVATE 1
01377 #define MA_ACTIVATEANDEAT 2
01378 #define MA_NOACTIVATE 3
01379 #define MA_NOACTIVATEANDEAT 4
01380
01381 /* WM_ACTIVATE wParam values */
01382 #define WA_INACTIVE 0
01383 #define WA_ACTIVE 1
01384 #define WA_CLICKACTIVE 2
01385
01386 /* WM_GETICON/WM_SETICON params values */
01387 #define ICON_SMALL 0
01388 #define ICON_BIG 1
01389
01390 /* WM_NCCALCSIZE parameter structure */
01391 typedef struct
01392 {
01393     RECT rgrc[3];
01394     WINDOWPOS *lppos;
01395 } NCCALCSIZE_PARAMS, *LPNCCALCSIZE_PARAMS;
01396
01397
01398 /* WM_NCCALCSIZE return flags */
01399 #define WVR_ALIGNTOP 0x0010
01400 #define WVR_ALIGNLEFT 0x0020
01401 #define WVR_ALIGNBOTTOM 0x0040
01402 #define WVR_ALIGNRIGHT 0x0080
01403 #define WVR_HREDRAW 0x0100
01404 #define WVR_VREDRAW 0x0200
01405 #define WVR_REDRAW (WVR_HREDRAW | WVR_VREDRAW)
01406 #define WVR_VALIDRECTS 0x0400
01407
01408 /* WM_NCHITTEST return codes */
01409 #define HTERROR (-2)
01410 #define HTTRANSPARENT (-1)
01411 #define HTNOWHERE 0
01412 #define HTCLIENT 1
01413 #define HTCAPTION 2
01414 #define HTSYSMENU 3
01415 #define HTSIZE 4
01416 #define HTMENU 5
01417 #define HTHSCROLL 6
01418 #define HTVSCROLL 7
01419 #define HTMINBUTTON 8
01420 #define HTMAXBUTTON 9
01421 #define HTLEFT 10
01422 #define HTRIGHT 11
01423 #define HTTOP 12
01424 #define HTTOPLEFT 13
01425 #define HTTOPRIGHT 14

```

```

01426 #define HTBOTTOM          15
01427 #define HTBOTTOMLEFT       16
01428 #define HTBOTTOMRIGHT     17
01429 #define HTBORDER           18
01430 #define HTGROWBOX           HTSIZE
01431 #define HTREDUCE            HTMINBUTTON
01432 #define HTZOOM              HTMAXBUTTON
01433 #define HTOBJECT            19
01434 #define HTCLOSE             20
01435 #define HTHELP              21
01436 #define HTSIZEFIRST        HTLEFT
01437 #define HTSIZELAST         HTBOTTOMRIGHT
01438
01439 /* SendMessageTimeout flags */
01440 #define SMTO_NORMAL          0x0000
01441 #define SMTO_BLOCK           0x0001
01442 #define SMTO_ABORTIFHUNG    0x0002
01443 #define SMTO_NOTIMEOUTIFNOTHUNG 0x0008
01444
01445 /* WM_SYSCOMMAND parameters */
01446 #ifndef SC_SIZE /* at least HP-UX: already defined in /usr/include/sys/signal.h */
01447 #undef SC_SIZE
01448 #endif
01449 #define SC_SIZE              0xf000
01450 #define SC_MOVE              0xf010
01451 #define SC_MINIMIZE          0xf020
01452 #define SC_MAXIMIZE          0xf030
01453 #define SC_NEXTWINDOW        0xf040
01454 #define SC_PREVWINDOW        0xf050
01455 #define SC_CLOSE             0xf060
01456 #define SC_VSCROLL           0xf070
01457 #define SC_HSCROLL           0xf080
01458 #define SC_MOUSEMENU         0xf090
01459 #define SC_KEYMENU           0xf100
01460 #define SC_ARRANGE           0xf110
01461 #define SC_RESTORE           0xf120
01462 #define SC_TASKLIST          0xf130
01463 #define SC_SCREENSAVE        0xf140
01464 #define SC_HOTKEY            0xf150
01465 /* Win32 4.0 */
01466 #define SC_DEFAULT           0xf160
01467 #define SC_MONITORPOWER      0xf170
01468 #define SC_CONTEXTHELP       0xf180
01469 #define SC_SEPARATOR         0xf00f
01470
01471 /* obsolete names(SC_ICON and SC_ZOOM) */
01472 #define SC_ICON              SC_MINIMIZE
01473 #define SC_ZOOM              SC_MAXIMIZE
01474
01475
01476 #define CS_VREDRAW            0x0001
01477 #define CS_HREDRAW            0x0002
01478 #define CS_KEYCVTWINDOW      0x0004
01479 #define CS_DBLCLKS           0x0008
01480 #define CS_OWNDC              0x0020
01481 #define CS_CLASSDC            0x0040
01482 #define CS_PARENTDC          0x0080
01483 #define CS_NOKEYCVT          0x0100
01484 #define CS_NOCLOSE           0x0200
01485 #define CS_SAVEBITS          0x0800
01486 #define CS_BYTEALIGNCLIENT   0x1000
01487 #define CS_BYTEALIGNWINDOW    0x2000
01488 #define CS_GLOBALCLASS        0x4000
01489 #define CS_IME                0x00010000
01490
01491 #define PRF_CHECKVISIBLE      0x00000001L
01492 #define PRF_NONCLIENT        0x00000002L
01493 #define PRF_CLIENT           0x00000004L
01494 #define PRF_ERASEBKGND       0x00000008L
01495 #define PRF_CHILDREN         0x00000010L
01496 #define PRF_OWNED            0x00000020L
01497
01498 /* Offsets for GetClassLong() and GetClassWord() */
01499 #define GCL_MENUNAME          (-8)
01500 #define GCL_HBRBACKGROUND     (-10)
01501 #define GCL_HCURSOR           (-12)
01502 #define GCL_HICON             (-14)
01503 #define GCL_HMODULE           (-16)
01504 #define GCL_CBWNDEXTRA        (-18)
01505 #define GCL_CBCLSEXTRA        (-20)
01506 #define GCL_WNDPROC           (-24)
01507 #define GCL_STYLE             (-26)
01508 #define GCW_ATOM              (-32)
01509 #define GCL_HICONSM           (-34)
01510
01511
01512 /***** Window hooks *****/

```



```

01513
01514  /* Hook values */
01515 #define WH_MIN          (-1)
01516 #define WH_MSGFILTER    (-1)
01517 #define WH_JOURNALRECORD 0
01518 #define WH_JOURNALPLAYBACK 1
01519 #define WH_KEYBOARD     2
01520 #define WH_GETMESSAGE   3
01521 #define WH_CALLWNDPROC  4
01522 #define WH_CBT          5
01523 #define WH_SYSMSGFILTER  6
01524 #define WH_MOUSE        7
01525 #define WH_HARDWARE     8
01526 #define WH_DEBUG        9
01527 #define WH_SHELL        10
01528 #define WH_FOREGROUNDIDLE 11
01529 #define WH_CALLWNDPROCRET 12
01530 #define WH_KEYBOARD_LL   13
01531 #define WH_MOUSE_LL      14
01532 #define WH_MAX           14
01533
01534 #define WH_MINHOOK       WH_MIN
01535 #define WH_MAXHOOK       WH_MAX
01536
01537  /* Hook action codes */
01538 #define HC_ACTION        0
01539 #define HC_GETNEXT       1
01540 #define HC_SKIP          2
01541 #define HC_NOREMOVE      3
01542 #define HC_NOREM         HC_NOREMOVE
01543 #define HC_SYSMODALON    4
01544 #define HC_SYSMODALOFF   5
01545
01546  /* CallMsgFilter() values */
01547 #define MSGF_DIALOGBOX   0
01548 #define MSGF_MESSAGEBOX  1
01549 #define MSGF_MENU        2
01550 #define MSGF_MOVE        3
01551 #define MSGF_SIZE        4
01552 #define MSGF_SCROLLBAR   5
01553 #define MSGF_NEXTWINDOW  6
01554 #define MSGF_MAX         8
01555 #define MSGF_USER        0x1000
01556 #define MSGF_DDEMGR      0x8001
01557
01558 typedef struct
01559 {
01560     UINT        style;
01561     WNDPROC      lpfnWndProc;
01562     INT          cbClsExtra;
01563     INT          cbWndExtra;
01564     HINSTANCE    hInstance;
01565     HICON        hIcon;
01566     HCURSOR      hCursor;
01567     HBRUSH       hbrBackground;
01568     LPCSTR       lpszMenuName;
01569     LPCSTR       lpszClassName;
01570 } WNDCLASSA, *PWNDCLASSA, *LPWNDCLASSA;
01571
01572 typedef struct
01573 {
01574     UINT        style;
01575     WNDPROC      lpfnWndProc;
01576     INT          cbClsExtra;
01577     INT          cbWndExtra;
01578     HINSTANCE    hInstance;
01579     HICON        hIcon;
01580     HCURSOR      hCursor;
01581     HBRUSH       hbrBackground;
01582     LPCWSTR      lpszMenuName;
01583     LPCWSTR      lpszClassName;
01584 } WNDCLASSW, *PWNDCLASSW, *LPWNDCLASSW;
01585
01586 DECL_WINELIB_TYPE_AW(WNDCLASS)
01587 DECL_WINELIB_TYPE_AW(PWNDCLASS)
01588 DECL_WINELIB_TYPE_AW(LPWNDCLASS)
01589
01590 typedef struct {
01591     DWORD dwData;
01592     DWORD cbData;
01593     LPVOID lpData;
01594 } COPYDATASTRUCT, *PCOPYDATASTRUCT;
01595
01596 typedef struct {
01597     HMENU hmenuIn;
01598     HMENU hmenuNext;
01599     HWND hwndNext;

```

```

01600 } MDINEXTMENU, *PMDINEXTMENU, *LPMDINEXTMENU;
01601
01602 typedef struct
01603 {
01604     DWORD    mkSize;
01605     CHAR      mkKeyList;
01606     CHAR      szKeyphrase[1];
01607 } MULTIKEYHELPA, *PMULTIKEYHELPA, *LPMULTIKEYHELPA;
01608
01609 typedef struct
01610 {
01611     DWORD    mkSize;
01612     WCHAR     mkKeyList;
01613     WCHAR     szKeyphrase[1];
01614 } 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

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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    *LPMENUTEMPLATE;
01853
01854 /* Field specifiers for MENUITEMINFO[AW] type. */
01855 #define MIIM_STATE      0x00000001
01856 #define MIIM_ID          0x00000002
01857 #define MIIM_SUBMENU      0x00000004
01858 #define MIIM_CHECKMARKS  0x00000008
01859 #define MIIM_TYPE        0x00000010
01860 #define MIIM_DATA        0x00000020

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```
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_NOREDRA              0x0004
02031 #define LBS_MULTIPLESEL          0x0008
02032 #define LBS_OWNERDRAWFIXED       0x0010
02033 #define LBS_OWNERDRAWVARIABLE    0x0020
02034 #define LBS_HASSTRINGS           0x0040

```

```
02035 #define LBS_USETABSTOPS          0x0080
02036 #define LBS_NOINTEGRALHEIGHT      0x0100
02037 #define LBS_MULTICOLUMN           0x0200
02038 #define LBS_WANTKEYBOARDINPUT      0x0400
02039 #define LBS_EXTENDEDSEL            0x0800
02040 #define LBS_DISABLENOSCROLL        0x1000
02041 #define LBS_NODATA                  0x2000
02042 #define LBS_NOSEL                   0x4000
02043 #define LBS_STANDARD (LBS_NOTIFY | LBS_SORT | WS_VSCROLL | WS_BORDER)
02044
02045 /* Listbox messages */
02046 #define LB_ADDSTRING                0x0180
02047 #define LB_INSERTSTRING             0x0181
02048 #define LB_DELETESTRING             0x0182
02049 #define LB_SELITEMRANGEEX           0x0183
02050 #define LB_RESETCONTENT             0x0184
02051 #define LB_SETSEL                   0x0185
02052 #define LB_SETCURSEL                0x0186
02053 #define LB_GETSEL                   0x0187
02054 #define LB_GETCURSEL               0x0188
02055 #define LB_GETTEXT                  0x0189
02056 #define LB_GETTEXTLEN               0x018a
02057 #define LB_GETCOUNT               0x018b
02058 #define LB_SELECTSTRING             0x018c
02059 #define LB_DIR                      0x018d
02060 #define LB_GETTOPINDEX              0x018e
02061 #define LB_FINDSTRING               0x018f
02062 #define LB_GETSELCOUNT              0x0190
02063 #define LB_GETSELITEMS              0x0191
02064 #define LB_SETTABSTOPS              0x0192
02065 #define LB_GETHORIZONTALEXTENT      0x0193
02066 #define LB_SETHORIZONTALEXTENT      0x0194
02067 #define LB_SETCOLUMNWIDTH           0x0195
02068 #define LB_ADDFILE                  0x0196
02069 #define LB_SETTOPINDEX              0x0197
02070 #define LB_GETITEMRECT              0x0198
02071 #define LB_GETITEMDATA              0x0199
02072 #define LB_SETITEMDATA              0x019a
02073 #define LB_SELITEMRANGE             0x019b
02074 #define LB_SETANCHORINDEX           0x019c
02075 #define LB_GETANCHORINDEX           0x019d
02076 #define LB_SETCARETINDEX            0x019e
02077 #define LB_GETCARETINDEX            0x019f
02078 #define LB_SETITEMHEIGHT            0x01a0
02079 #define LB_GETITEMHEIGHT            0x01a1
02080 #define LB_FINDSTRINGEXACT          0x01a2
02081 #define LB_CARETON                   0x01a3
02082 #define LB_CARETOFF                  0x01a4
02083 #define LB_SETLOCALE                 0x01a5
02084 #define LB_GETLOCALE                 0x01a6
02085 #define LB_SETCOUNT                 0x01a7
02086 #define LB_INITSTORAGE              0x01a8
02087 #define LB_ITEMFROMPOINT             0x01a9
02088
02089 /* Listbox notification codes */
02090 #define LBN_ERRSPACE                (-2)
02091 #define LBN_SELCHANGE                1
02092 #define LBN_DBLCLK                   2
02093 #define LBN_SELCANCEL                 3
02094 #define LBN_SETFOCUS                 4
02095 #define LBN_KILLFOCUS                 5
02096
02097 /* Listbox message return values */
02098 #define LB_OKAY                      0
02099 #define LB_ERR                       (-1)
02100 #define LB_ERRSPACE                  (-2)
02101
02102 #define LB_CTLCODE                   0L
02103
02104 /* Combo box styles */
02105 #define CBS_SIMPLE                    0x0001L
02106 #define CBS_DROPDOWN                  0x0002L
02107 #define CBS_DROPDOWNLIST              0x0003L
02108 #define CBS_OWNERDRAWFIXED            0x0010L
02109 #define CBS_OWNERDRAWVARIABLE          0x0020L
02110 #define CBS_AUTOHSCROLL               0x0040L
02111 #define CBS_OEMCONVERT                0x0080L
02112 #define CBS_SORT                      0x0100L
02113 #define CBS_HASSTRINGS                0x0200L
02114 #define CBS_NOINTEGRALHEIGHT          0x0400L
02115 #define CBS_DISABLENOSCROLL           0x0800L
02116
02117 #define CBS_UPPERCASE                  0x2000L
02118 #define CBS_LOWERCASE                  0x4000L
02119
02120
02121 /* Combo box messages */
```

```

02122 #define CB_GETEDITSEL          0x0140
02123 #define CB_LIMITTEXT            0x0141
02124 #define CB_SETEDITSEL          0x0142
02125 #define CB_ADDSTRING            0x0143
02126 #define CB_DELETESTRING        0x0144
02127 #define CB_DIR                  0x0145
02128 #define CB_GETCOUNT           0x0146
02129 #define CB_GETCURSEL            0x0147
02130 #define CB_GETLBTEXT           0x0148
02131 #define CB_GETLBTEXTLEN        0x0149
02132 #define CB_INSERTSTRING        0x014a
02133 #define CB_RESETCONTENT        0x014b
02134 #define CB_FINDSTRING          0x014c
02135 #define CB_SELECTSTRING        0x014d
02136 #define CB_SETCURSEL           0x014e
02137 #define CB_SHOWDROPDOWN        0x014f
02138 #define CB_GETITEMDATA         0x0150
02139 #define CB_SETITEMDATA         0x0151
02140 #define CB_GETDROPPEDCONTROLRECT 0x0152
02141 #define CB_SETITEMHEIGHT       0x0153
02142 #define CB_GETITEMHEIGHT       0x0154
02143 #define CB_SETEXTENDEDUI       0x0155
02144 #define CB_GETEXTENDEDUI       0x0156
02145 #define CB_GETDROPPEDSTATE     0x0157
02146 #define CB_FINDSTRINGEXACT     0x0158
02147 #define CB_SETLOCALE           0x0159
02148 #define CB_GETLOCALE           0x015a
02149 #define CB_GETTOPINDEX         0x015b
02150 #define CB_SETTOPINDEX         0x015c
02151 #define CB_GETHORIZONTALEXTENT 0x015d
02152 #define CB_SETHORIZONTALEXTENT 0x015e
02153 #define CB_GETDROPPEDWIDTH     0x015f
02154 #define CB_SETDROPPEDWIDTH     0x0160
02155 #define CB_INITSTORAGE         0x0161
02156
02157 /* Combo box notification codes */
02158 #define CBN_ERRSPACE           (-1)
02159 #define CBN_SELCHANGE          1
02160 #define CBN_DBLCLK             2
02161 #define CBN_SETFOCUS           3
02162 #define CBN_KILLFOCUS          4
02163 #define CBN_EDITCHANGE         5
02164 #define CBN_EDITUPDATE         6
02165 #define CBN_DROPDOWN           7
02166 #define CBN_CLOSEUP           8
02167 #define CBN_SELENDOK           9
02168 #define CBN_SELENDNCANCEL      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_RETRYSANCEL         0x00000005
02181 #define MB_TYPEMASK            0x0000000F
02182
02183 #define MB_ICONHAND            0x00000010
02184 #define MB_ICONQUESTION        0x00000020
02185 #define MB_ICONEXCLAMATION    0x00000030
02186 #define MB_ICONASTERISK       0x00000040
02187 #define MB_USERICON            0x00000080
02188 #define MB_ICONMASK            0x000000F0
02189
02190 #define MB_ICONINFORMATION     MB_ICONASTERISK
02191 #define MB_ICONSTOP            MB_ICONHAND
02192 #define MB_ICONWARNING         MB_ICONEXCLAMATION
02193 #define MB_ICONERROR           MB_ICONHAND
02194
02195 #define MB_DEFBUTTON1          0x00000000
02196 #define MB_DEFBUTTON2          0x00000100
02197 #define MB_DEFBUTTON3          0x00000200
02198 #define MB_DEFBUTTON4          0x00000300
02199 #define MB_DEFMASK             0x00000F00
02200
02201 #define MB_APPLMODAL           0x00000000
02202 #define MB_SYSTEMMODAL         0x00001000
02203 #define MB_TASKMODAL           0x00002000
02204 #define MB_MODEMASK           0x00003000
02205
02206 #define MB_HELP                0x00004000
02207 #define MB_NOFOCUS             0x00008000
02208 #define MB_MISCMASK            0x0000C000

```



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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)

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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_CREATEWDA, *LPCBT_CREATEWDA;
02361
02362 typedef struct
02363 {
02364     CREATESTRUCTW *lpcs;
02365     HWND hwndInsertAfter;
02366 } CBT_CREATEWDAW, *LPCBT_CREATEWDAW;
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

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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_APPLICATION MAKEINTRESOURCE(32512)
02422 #define IDI_APPLICATIONW MAKEINTRESOURCEW(32512)
02423 #define IDI_APPLICATION WINELIB_NAME_AW(IDI_APPLICATION)
02424 #define IDI_HANDA MAKEINTRESOURCE(32513)
02425 #define IDI_HANDW MAKEINTRESOURCEW(32513)
02426 #define IDI_HAND WINELIB_NAME_AW(IDI_HAND)
02427 #define IDI_QUESTIONA MAKEINTRESOURCE(32514)
02428 #define IDI_QUESTIONW MAKEINTRESOURCEW(32514)
02429 #define IDI_QUESTION WINELIB_NAME_AW(IDI_QUESTION)
02430 #define IDI_EXCLAMATIONA MAKEINTRESOURCE(32515)
02431 #define IDI_EXCLAMATIONW MAKEINTRESOURCEW(32515)
02432 #define IDI_EXCLAMATION WINELIB_NAME_AW(IDI_EXCLAMATION)
02433 #define IDI_ASTERISKA MAKEINTRESOURCE(32516)
02434 #define IDI_ASTERISKW MAKEINTRESOURCEW(32516)
02435 #define IDI_ASTERISK WINELIB_NAME_AW(IDI_ASTERISK)
02436 #define IDI_WINLOGOA MAKEINTRESOURCE(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_ARROW MAKEINTRESOURCE(32512)
02445 #define IDC_ARROWW MAKEINTRESOURCEW(32512)
02446 #define IDC_ARROW WINELIB_NAME_AW(IDC_ARROW)
02447 #define IDC_IBEAMA MAKEINTRESOURCE(32513)
02448 #define IDC_IBEAMW MAKEINTRESOURCEW(32513)
02449 #define IDC_IBEAM WINELIB_NAME_AW(IDC_IBEAM)
02450 #define IDC_WAITA MAKEINTRESOURCE(32514)
02451 #define IDC_WAITW MAKEINTRESOURCEW(32514)
02452 #define IDC_WAIT WINELIB_NAME_AW(IDC_WAIT)
02453 #define IDC_CROSSA MAKEINTRESOURCE(32515)
02454 #define IDC_CROSSW MAKEINTRESOURCEW(32515)
02455 #define IDC_CROSS WINELIB_NAME_AW(IDC_CROSS)
02456 #define IDC_UPARROWA MAKEINTRESOURCE(32516)
02457 #define IDC_UPARROWW MAKEINTRESOURCEW(32516)
02458 #define IDC_UPARROW WINELIB_NAME_AW(IDC_UPARROW)
02459 #define IDC_SIZEA MAKEINTRESOURCE(32640)
02460 #define IDC_SIZEW MAKEINTRESOURCEW(32640)
02461 #define IDC_SIZE WINELIB_NAME_AW(IDC_SIZE)
02462 #define IDC_ICONA MAKEINTRESOURCE(32641)
02463 #define IDC_ICONW MAKEINTRESOURCEW(32641)
02464 #define IDC_ICON WINELIB_NAME_AW(IDC_ICON)
02465 #define IDC_SIZENWSEA MAKEINTRESOURCE(32642)
02466 #define IDC_SIZENWSEW MAKEINTRESOURCEW(32642)
02467 #define IDC_SIZENWSE WINELIB_NAME_AW(IDC_SIZENWSE)
02468 #define IDC_SIZENESWA MAKEINTRESOURCE(32643)
02469 #define IDC_SIZENESWW MAKEINTRESOURCEW(32643)
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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
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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
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          0x00000200L
02944 #define MFT_SEPARATOR           MF_SEPARATOR
02945 #define MFT_RIGHTORDER          0x00002000L
02946 #define MFT_RIGHTJUSTIFY        MF_RIGHTJUSTIFY
02947
02948 /* Flags for extended menu item states. */
02949 #define MFS_GRAYED              0x00000003L
02950 #define MFS_DISABLED            MFS_GRAYED
02951 #define MFS_CHECKED             MF_CHECKED
02952 #define MFS_HILITE              MF_HILITE
02953 #define MFS_ENABLED             MF_ENABLED
02954 #define MFS_UNCHECKED           MF_UNCHECKED
02955 #define MFS_UNHILITE            MF_UNHILITE
02956 #define MFS_DEFAULT             MF_DEFAULT
02957 #define MFS_MASK                 0x0000108BL
02958 #define MFS_HOTTRACKDRAWN       0x10000000L
02959 #define MFS_CACHEDBMP           0x20000000L
02960 #define MFS_BOTTOMGAPDROP        0x40000000L
02961 #define MFS_TOPGAPDROP           0x80000000L
02962 #define MFS_GAPDROP             0xC0000000L
02963
02964 /* for GetMenuDefaultItem */
02965 #define GMDI_USEDISABLED        0x0001L
02966 #define GMDI_GOINTOPOPUPS       0x0002L
02967
02968 #define DT_TOP 0
02969 #define DT_LEFT 0
02970 #define DT_CENTER 1
02971 #define DT_RIGHT 2
02972 #define DT_VCENTER 4
02973 #define DT_BOTTOM 8
02974 #define DT_WORDBREAK 16
02975 #define DT_SINGLELINE 32
02976 #define DT_EXPANDTABS 64
02977 #define DT_TABSTOP 128
02978 #define DT_NOCLIP 256
02979 #define DT_EXTERNALLEADING 512
02980 #define DT_CALCRECT 1024
02981 #define DT_NOPREFIX 2048
02982 #define DT_INTERNAL 4096
02983
02984 /* DrawCaption()/DrawCaptionTemp() flags */
02985 #define DC_ACTIVE                0x0001
02986 #define DC_SMALLCAP              0x0002
02987 #define DC_ICON                  0x0004
02988 #define DC_TEXT                  0x0008
02989 #define DC_INBUTTON              0x0010
02990
```

```

02991 /* DrawEdge() flags */
02992 #define BDR_RAISEDOUTER 0x0001
02993 #define BDR_SUNKENOUTER 0x0002
02994 #define BDR_RAISEDINNER 0x0004
02995 #define BDR_SUNKENINNER 0x0008
02996
02997 #define BDR_OUTER 0x0003
02998 #define BDR_INNER 0x000c
02999 #define BDR_RAISED 0x0005
03000 #define BDR_SUNKEN 0x000a
03001
03002 #define EDGE_RAISED (BDR_RAISEDOUTER | BDR_RAISEDINNER)
03003 #define EDGE_SUNKEN (BDR_SUNKENOUTER | BDR_SUNKENINNER)
03004 #define EDGE_ETCHED (BDR_SUNKENOUTER | BDR_RAISEDINNER)
03005 #define EDGE_BUMP (BDR_RAISEDOUTER | BDR_SUNKENINNER)
03006
03007 /* border flags */
03008 #define BF_LEFT 0x0001
03009 #define BF_TOP 0x0002
03010 #define BF_RIGHT 0x0004
03011 #define BF_BOTTOM 0x0008
03012 #define BF_DIAGONAL 0x0010
03013 #define BF_MIDDLE 0x0800 /* Fill in the middle */
03014 #define BF_SOFT 0x1000 /* For softer buttons */
03015 #define BF_ADJUST 0x2000 /* Calculate the space left over */
03016 #define BF_FLAT 0x4000 /* For flat rather than 3D borders */
03017 #define BF_MONO 0x8000 /* For monochrome borders */
03018 #define BF_TOPLEFT (BF_TOP | BF_LEFT)
03019 #define BF_TOPRIGHT (BF_TOP | BF_RIGHT)
03020 #define BF_BOTTOMLEFT (BF_BOTTOM | BF_LEFT)
03021 #define BF_BOTTOMRIGHT (BF_BOTTOM | BF_RIGHT)
03022 #define BF_RECT (BF_LEFT | BF_TOP | BF_RIGHT | BF_BOTTOM)
03023 #define BF_DIAGONAL_ENDTOPRIGHT (BF_DIAGONAL | BF_TOP | BF_RIGHT)
03024 #define BF_DIAGONAL_ENDTOPLEFT (BF_DIAGONAL | BF_TOP | BF_LEFT)
03025 #define BF_DIAGONAL_ENDBOTTOMLEFT (BF_DIAGONAL | BF_BOTTOM | BF_LEFT)
03026 #define BF_DIAGONAL_ENDBOTTOMRIGHT (BF_DIAGONAL | BF_BOTTOM | BF_RIGHT)
03027
03028 /* DrawFrameControl() uType's */
03029
03030 #define DFC_CAPTION 1
03031 #define DFC_MENU 2
03032 #define DFC_SCROLL 3
03033 #define DFC_BUTTON 4
03034
03035 /* uState's */
03036
03037 #define DFCS_CAPTIONCLOSE 0x0000
03038 #define DFCS_CAPTIONMIN 0x0001
03039 #define DFCS_CAPTIONMAX 0x0002
03040 #define DFCS_CAPTIONRESTORE 0x0003
03041 #define DFCS_CAPTIONHELP 0x0004 /* Windows 95 only */
03042
03043 #define DFCS_MENUARROW 0x0000
03044 #define DFCS_MENUCHECK 0x0001
03045 #define DFCS_MENUBULLET 0x0002
03046 #define DFCS_MENUARROWRIGHT 0x0004
03047
03048 #define DFCS_SCROLLUP 0x0000
03049 #define DFCS_SCROLLDOWN 0x0001
03050 #define DFCS_SCROLLLEFT 0x0002
03051 #define DFCS_SCROLLRIGHT 0x0003
03052 #define DFCS_SCROLLCOMBOBOX 0x0005
03053 #define DFCS_SCROLLSIZEGRIP 0x0008
03054 #define DFCS_SCROLLSIZEGRIPRIGHT 0x0010
03055
03056 #define DFCS_BUTTONCHECK 0x0000
03057 #define DFCS_BUTTONRADIOIMAGE 0x0001
03058 #define DFCS_BUTTONRADIOMASK 0x0002 /* to draw nonsquare button */
03059 #define DFCS_BUTTONRADIO 0x0004
03060 #define DFCS_BUTTON3STATE 0x0008
03061 #define DFCS_BUTTONPUSH 0x0010
03062
03063 /* additional state of the control */
03064
03065 #define DFCS_INACTIVE 0x0100
03066 #define DFCS_PUSHED 0x0200
03067 #define DFCS_CHECKED 0x0400
03068 #define DFCS_ADJUSTRECT 0x2000 /* exclude surrounding edge */
03069 #define DFCS_FLAT 0x4000
03070 #define DFCS_MONO 0x8000
03071
03072 /* Image type */
03073 #define DST_COMPLEX 0x0000
03074 #define DST_TEXT 0x0001
03075 #define DST_PREFIXTEXT 0x0002
03076 #define DST_ICON 0x0003
03077 #define DST_BITMAP 0x0004

```

```

03078
03079 /* State type */
03080 #define DSS_NORMAL 0x0000
03081 #define DSS_UNION 0x0010 /* Gray string appearance */
03082 #define DSS_DISABLED 0x0020
03083 #define DSS_DEFAULT 0x0040 /* Make it bold */
03084 #define DSS_MONO 0x0080
03085 #define DSS_RIGHT 0x8000
03086
03087 typedef struct
03088 {
03089     UINT CtlType;
03090     UINT CtlID;
03091     UINT itemID;
03092     UINT itemAction;
03093     UINT itemState;
03094     HWND hwndItem;
03095     HDC hDC;
03096     RECT rcItem WINE_PACKED;
03097     DWORD itemData WINE_PACKED;
03098 } DRAWITEMSTRUCT, *PDRAWITEMSTRUCT, *LPDRAWITEMSTRUCT;
03099
03100
03101 typedef struct
03102 {
03103     UINT CtlType;
03104     UINT CtlID;
03105     UINT itemID;
03106     UINT itemWidth;
03107     UINT itemHeight;
03108     DWORD itemData;
03109 } MEASUREITEMSTRUCT, *PMEASUREITEMSTRUCT, *LPMEASUREITEMSTRUCT;
03110
03111
03112 typedef struct
03113 {
03114     UINT CtlType;
03115     UINT CtlID;
03116     UINT itemID;
03117     HWND hwndItem;
03118     DWORD itemData;
03119 } DELETEITEMSTRUCT, *PDELETEITEMSTRUCT, *LPDELETEITEMSTRUCT;
03120
03121
03122 typedef struct
03123 {
03124     UINT CtlType;
03125     UINT CtlID;
03126     HWND hwndItem;
03127     UINT itemID1;
03128     DWORD itemData1;
03129     UINT itemID2;
03130     DWORD itemData2;
03131     DWORD dwLocaleId;
03132 } COMPAREITEMSTRUCT, *PCOMPAREITEMSTRUCT, *LPCOMPAREITEMSTRUCT;
03133
03134
03135 /* WM_KEYUP/DOWN/CHAR HIWORD(lParam) flags */
03136 #define KF_EXTENDED 0x0100
03137 #define KF_DLGMODE 0x0800
03138 #define KF_MENU MODE 0x1000
03139 #define KF_ALTDOWN 0x2000
03140 #define KF_REPEAT 0x4000
03141 #define KF_UP 0x8000
03142
03143 /* Virtual key codes */
03144 #define VK_LBUTTON 0x01
03145 #define VK_RBUTTON 0x02
03146 #define VK_CANCEL 0x03
03147 #define VK_MBUTTON 0x04
03148 #define VK_XBUTTON1 0x05
03149 #define VK_XBUTTON2 0x06
03150 /* 0x07 Undefined */
03151 #define VK_BACK 0x08
03152 #define VK_TAB 0x09
03153 /* 0x0A-0x0B Undefined */
03154 #define VK_CLEAR 0x0C
03155 #define VK_RETURN 0x0D
03156 /* 0x0E-0x0F Undefined */
03157 #define VK_SHIFT 0x10
03158 #define VK_CONTROL 0x11
03159 #define VK_MENU 0x12
03160 #define VK_PAUSE 0x13
03161 #define VK_CAPITAL 0x14
03162 /* 0x15-0x19 Reserved for Kanji systems */
03163 /* 0x1A Undefined */
03164 #define VK_ESCAPE 0x1B

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03165 /*                                0x1C-0x1F  Reserved for Kanji systems */
03166 #define VK_SPACE                      0x20
03167 #define VK_PRIOR                      0x21
03168 #define VK_NEXT                      0x22
03169 #define VK_END                      0x23
03170 #define VK_HOME                     0x24
03171 #define VK_LEFT                     0x25
03172 #define VK_UP                      0x26
03173 #define VK_RIGHT                    0x27
03174 #define VK_DOWN                    0x28
03175 #define VK_SELECT                   0x29
03176 #define VK_PRINT                    0x2A /* OEM specific in Windows 3.1 SDK */
03177 #define VK_EXECUTE                  0x2B
03178 #define VK_SNAPSHOT                 0x2C
03179 #define VK_INSERT                   0x2D
03180 #define VK_DELETE                   0x2E
03181 #define VK_HELP                     0x2F
03182 #define VK_0                       0x30
03183 #define VK_1                       0x31
03184 #define VK_2                       0x32
03185 #define VK_3                       0x33
03186 #define VK_4                       0x34
03187 #define VK_5                       0x35
03188 #define VK_6                       0x36
03189 #define VK_7                       0x37
03190 #define VK_8                       0x38
03191 #define VK_9                       0x39
03192 /*                                0x3A-0x40  Undefined */
03193 #define VK_A                        0x41
03194 #define VK_B                        0x42
03195 #define VK_C                        0x43
03196 #define VK_D                        0x44
03197 #define VK_E                        0x45
03198 #define VK_F                        0x46
03199 #define VK_G                        0x47
03200 #define VK_H                        0x48
03201 #define VK_I                        0x49
03202 #define VK_J                        0x4A
03203 #define VK_K                        0x4B
03204 #define VK_L                        0x4C
03205 #define VK_M                        0x4D
03206 #define VK_N                        0x4E
03207 #define VK_O                        0x4F
03208 #define VK_P                        0x50
03209 #define VK_Q                        0x51
03210 #define VK_R                        0x52
03211 #define VK_S                        0x53
03212 #define VK_T                        0x54
03213 #define VK_U                        0x55
03214 #define VK_V                        0x56
03215 #define VK_W                        0x57
03216 #define VK_X                        0x58
03217 #define VK_Y                        0x59
03218 #define VK_Z                        0x5A
03219
03220 #define VK_LWIN                     0x5B
03221 #define VK_RWIN                     0x5C
03222 #define VK_APPS                     0x5D
03223 /*                                0x5E-0x5F  Unassigned */
03224 #define VK_NUMPAD0                  0x60
03225 #define VK_NUMPAD1                  0x61
03226 #define VK_NUMPAD2                  0x62
03227 #define VK_NUMPAD3                  0x63
03228 #define VK_NUMPAD4                  0x64
03229 #define VK_NUMPAD5                  0x65
03230 #define VK_NUMPAD6                  0x66
03231 #define VK_NUMPAD7                  0x67
03232 #define VK_NUMPAD8                  0x68
03233 #define VK_NUMPAD9                  0x69
03234 #define VK_MULTIPLY                  0x6A
03235 #define VK_ADD                       0x6B
03236 #define VK_SEPARATOR                 0x6C
03237 #define VK_SUBTRACT                  0x6D
03238 #define VK_DECIMAL                   0x6E
03239 #define VK_DIVIDE                    0x6F
03240 #define VK_F1                       0x70
03241 #define VK_F2                       0x71
03242 #define VK_F3                       0x72
03243 #define VK_F4                       0x73
03244 #define VK_F5                       0x74
03245 #define VK_F6                       0x75
03246 #define VK_F7                       0x76
03247 #define VK_F8                       0x77
03248 #define VK_F9                       0x78
03249 #define VK_F10                      0x79
03250 #define VK_F11                      0x7A
03251 #define VK_F12                      0x7B
```

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03252 #define VK_F13                0x7C
03253 #define VK_F14                0x7D
03254 #define VK_F15                0x7E
03255 #define VK_F16                0x7F
03256 #define VK_F17                0x80
03257 #define VK_F18                0x81
03258 #define VK_F19                0x82
03259 #define VK_F20                0x83
03260 #define VK_F21                0x84
03261 #define VK_F22                0x85
03262 #define VK_F23                0x86
03263 #define VK_F24                0x87
03264 /*                0x88-0x8F  Unassigned */
03265 #define VK_NUMLOCK             0x90
03266 #define VK_SCROLL              0x91
03267 /*                0x92-0x9F  Unassigned */
03268 /*
03269  * differencing between right and left shift/control/alt key.
03270  * Used only by GetAsyncKeyState() and GetKeyState().
03271  */
03272 #define VK_LSHIFT              0xA0
03273 #define VK_RSHIFT              0xA1
03274 #define VK_LCONTROL            0xA2
03275 #define VK_RCONTROL            0xA3
03276 #define VK_LMENU               0xA4
03277 #define VK_RMENU               0xA5
03278 /*                0xA6-0xB9  Unassigned */
03279 #define VK_OEM_1                0xBA
03280 #define VK_OEM_PLUS             0xBB
03281 #define VK_OEM_COMMA           0xBC
03282 #define VK_OEM_MINUS           0xBD
03283 #define VK_OEM_PERIOD          0xBE
03284 #define VK_OEM_2               0xBF
03285 #define VK_OEM_3               0xC0
03286 /*                0xC1-0xDA  Unassigned */
03287 #define VK_OEM_4                0xDB
03288 #define VK_OEM_5                0xDC
03289 #define VK_OEM_6                0xDD
03290 #define VK_OEM_7                0xDE
03291 #define VK_OEM_8                0xDF
03292 /*                0xE0      OEM specific */
03293 #define VK_OEM_AX               0xE1  /* "AX" key on Japanese AX keyboard */
03294 #define VK_OEM_102             0xE2  /* "<>" or "\|" on RT 102-key keyboard */
03295 #define VK_ICO_HELP            0xE3  /* Help key on ICO */
03296 #define VK_ICO_00              0xE4  /* 00 key on ICO */
03297 #define VK_PROCESSKEY          0xE5
03298
03299 /*                0xE6      OEM specific */
03300 /*                0xE7-0xE8  Unassigned */
03301 /*                0xE9-0xF5  OEM specific */
03302
03303 #define VK_ATTN                 0xF6
03304 #define VK_CRSEL                0xF7
03305 #define VK_EXSEL                0xF8
03306 #define VK_EREOF                0xF9
03307 #define VK_PLAY                 0xFA
03308 #define VK_ZOOM                 0xFB
03309 #define VK_NONAME                0xFC
03310 #define VK_PA1                  0xFD
03311 #define VK_OEM_CLEAR            0xFE
03312
03313 /* Key status flags for mouse events */
03314 #define MK_LBUTTON              0x0001
03315 #define MK_RBUTTON              0x0002
03316 #define MK_SHIFT                0x0004
03317 #define MK_CONTROL              0x0008
03318 #define MK_MBUTTON              0x0010
03319 #define MK_XBUTTON1             0x0020
03320 #define MK_XBUTTON2             0x0040
03321
03322 /* Queue status flags */
03323 #define QS_KEY                  0x0001
03324 #define QS_MOUSEMOVE            0x0002
03325 #define QS_MOUSEBUTTON          0x0004
03326 #define QS_MOUSE                (QS_MOUSEMOVE | QS_MOUSEBUTTON)
03327 #define QS_POSTMESSAGE          0x0008
03328 #define QS_TIMER                0x0010
03329 #define QS_PAINT                0x0020
03330 #define QS_SENDMESSAGE          0x0040
03331 #define QS_HOTKEY               0x0080
03332 #define QS_INPUT                (QS_MOUSE | QS_KEY)
03333 #define QS_ALLEVENTS            (QS_INPUT | QS_POSTMESSAGE | QS_TIMER | QS_PAINT | QS_HOTKEY)
03334 #define QS_ALLINPUT             (QS_ALLEVENTS | QS_SENDMESSAGE)
03335
03336 /* Extra (undocumented) queue wake bits - see "Undoc. Windows" */
03337 #define QS_SMRESULT              0x8000
03338

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```
03339 /* InSendMessageEx flags */
03340 #define ISMEX_NOSEND 0x00000000
03341 #define ISMEX_SEND 0x00000001
03342 #define ISMEX_NOTIFY 0x00000002
03343 #define ISMEX_CALLBACK 0x00000004
03344 #define ISMEX_REPLIED 0x00000008
03345
03346 #define DDL_READWRITE 0x0000
03347 #define DDL_READONLY 0x0001
03348 #define DDL_HIDDEN 0x0002
03349 #define DDL_SYSTEM 0x0004
03350 #define DDL_DIRECTORY 0x0010
03351 #define DDL_ARCHIVE 0x0020
03352
03353 #define DDL_POSTMSGS 0x2000
03354 #define DDL_DRIVES 0x4000
03355 #define DDL_EXCLUSIVE 0x8000
03356
03357 /* Shell hook values */
03358 #define HSHELL_WINDOWCREATED 1
03359 #define HSHELL_WINDOWDESTROYED 2
03360 #define HSHELL_ACTIVATESHELLWINDOW 3
03361
03362 /* Predefined Clipboard Formats */
03363 #define CF_TEXT 1
03364 #define CF_BITMAP 2
03365 #define CF_METAFILEPICT 3
03366 #define CF_SYLK 4
03367 #define CF_DIF 5
03368 #define CF_TIFF 6
03369 #define CF_OEMTEXT 7
03370 #define CF_DIB 8
03371 #define CF_PALETTE 9
03372 #define CF_PENDATA 10
03373 #define CF_RIFF 11
03374 #define CF_WAVE 12
03375 #define CF_UNICODETEXT 13
03376 #define CF_ENHMETAFILE 14
03377 #define CF_HDROP 15
03378 #define CF_LOCALE 16
03379 #define CF_DIBV5 17
03380 #define CF_MAX 18
03381
03382 #define CF_OWNERDISPLAY 0x0080
03383 #define CF_DSPTEXT 0x0081
03384 #define CF_DSPBITMAP 0x0082
03385 #define CF_DSPMETAFILEPICT 0x0083
03386 #define CF_DSPENHMETAFILE 0x008E
03387
03388 /* "Private" formats don't get GlobalFree()'d */
03389 #define CF_PRIVATEFIRST 0x0200
03390 #define CF_PRIVATELAST 0x02FF
03391
03392 /* "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
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_QUERY 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,PROPNUMPROCEXA,LPARAM);
03483 INT WINAPI EnumPropsExW(HWND,PROPNUMPROCEXW,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 GetMenuItemInfo(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);
03500 DWORD WINAPI GetWindowThreadProcessId(HWND,LPDWORD);
03501 BOOL WINAPI IsWindowUnicode(HWND);
03502 HKL WINAPI LoadKeyboardLayoutA(LPCSTR,UINT);
03503 HKL WINAPI LoadKeyboardLayoutW(LPCWSTR,UINT);
03504 #define LoadKeyboardLayout WINELIB_NAME_AW(LoadKeyboardLayout)
03505 INT WINAPI MessageBoxExA(HWND,LPCSTR,LPCSTR,UINT,WORD);
03506 INT WINAPI MessageBoxExW(HWND,LPCWSTR,LPCWSTR,UINT,WORD);
03507 #define MessageBoxEx WINELIB_NAME_AW(MessageBoxEx)
03508 HMONITOR WINAPI MonitorFromPoint(POINT,DWORD);
03509 HMONITOR WINAPI MonitorFromRect(LPRECT,DWORD);
03510 HMONITOR WINAPI MonitorFromWindow(HWND,DWORD);
03511 DWORD WINAPI MsgWaitForMultipleObjects(DWORD,CONST HANDLE*,BOOL,DWORD,DWORD);
03512 DWORD WINAPI MsgWaitForMultipleObjectsEx(DWORD,CONST HANDLE*,DWORD,DWORD,DWORD);

```



```

03513 BOOL        WINAPI PaintDesktop (HDC);
03514 BOOL        WINAPI PostThreadMessageA (DWORD, UINT, WPARAM, LPARAM);
03515 BOOL        WINAPI PostThreadMessageW (DWORD, UINT, WPARAM, LPARAM);
03516 #define       PostThreadMessage WINELIB_NAME_AW(PostThreadMessage)
03517 BOOL        WINAPI RegisterHotKey (HWND, INT, UINT, UINT);
03518 HDEVNOTIFY   WINAPI RegisterDeviceNotificationA (HANDLE, LPVOID, DWORD);
03519 HDEVNOTIFY   WINAPI RegisterDeviceNotificationW (HANDLE, LPVOID, DWORD);
03520 #define       RegisterDeviceNotification WINELIB_NAME_AW(RegisterDeviceNotification)
03521 BOOL        WINAPI SendMessageCallbackA (HWND, UINT, WPARAM, LPARAM, SENDASYNCPROC, ULONG_PTR);
03522 BOOL        WINAPI SendMessageCallbackW (HWND, UINT, WPARAM, LPARAM, SENDASYNCPROC, ULONG_PTR);
03523 #define       SendMessageCallback WINELIB_NAME_AW(SendMessageCallback)
03524 BOOL        WINAPI SendNotifyMessageA (HWND, UINT, WPARAM, LPARAM);
03525 BOOL        WINAPI SendNotifyMessageW (HWND, UINT, WPARAM, LPARAM);
03526 #define       SendNotifyMessage WINELIB_NAME_AW(SendNotifyMessage)
03527 VOID        WINAPI SetDebugErrorLevel (DWORD);
03528 VOID        WINAPI SetLastErrorEx (DWORD, DWORD);
03529 BOOL        WINAPI SetMenuDefaultItem (HMENU, UINT, UINT);
03530 BOOL        WINAPI SetMenuInfo (HMENU, LPCMENUINFO);
03531 BOOL        WINAPI SetMenuItemInfoA (HMENU, UINT, BOOL, const MENUITEMINFOA*);
03532 BOOL        WINAPI SetMenuItemInfoW (HMENU, UINT, BOOL, const MENUITEMINFOW*);
03533 #define       SetMenuItemInfo WINELIB_NAME_AW(SetMenuItemInfo)
03534 BOOL        WINAPI SetWindowContextHelpId (HWND, DWORD);
03535 WORD        WINAPI TileWindows (HWND, UINT, const LPRECT,
03536                                UINT, const HWND *);
03537 INT         WINAPI ToUnicode (UINT, UINT, PBYTE, LPWSTR, int, UINT);
03538 BOOL        WINAPI TrackPopupMenuEx (HMENU, UINT, INT, INT, HWND,
03539                                     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);
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 WORD        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, LPCVOID, LPCVOID);
03648 #define      CreateDialogA(inst, ptr, hwnd, dlg) \
03649      CreateDialogParamA(inst, ptr, hwnd, dlg, 0)
03650 #define      CreateDialogW(inst, ptr, hwnd, dlg) \
03651      CreateDialogParamW(inst, ptr, hwnd, dlg, 0)
03652 #define      CreateDialog WINELIB_NAME_AW(CreateDialog)
03653 #define      CreateDialogIndirectA(inst, ptr, hwnd, dlg) \
03654      CreateDialogIndirectParamA(inst, ptr, hwnd, dlg, 0)
03655 #define      CreateDialogIndirectW(inst, ptr, hwnd, dlg) \
03656      CreateDialogIndirectParamW(inst, ptr, hwnd, dlg, 0)
03657 #define      CreateDialogIndirect WINELIB_NAME_AW(CreateDialogIndirect)
03658 HWND        WINAPI CreateDialogIndirectParamA(HINSTANCE, LPCVOID, HWND,
03659      DLGPROC, LPARAM);
03660 HWND        WINAPI CreateDialogIndirectParamW(HINSTANCE, LPCVOID, HWND,
03661      DLGPROC, LPARAM);
03662 #define      CreateDialogIndirectParam WINELIB_NAME_AW(CreateDialogIndirectParam)
03663 HWND        WINAPI CreateDialogParamA(HINSTANCE, LPCSTR, HWND, DLGPROC, LPARAM);
03664 HWND        WINAPI CreateDialogParamW(HINSTANCE, LPCWSTR, HWND, DLGPROC, LPARAM);
03665 #define      CreateDialogParam WINELIB_NAME_AW(CreateDialogParam)
03666 HICON        WINAPI CreateIcon(HINSTANCE, INT, INT, BYTE, BYTE, LPCVOID, LPCVOID);
03667 HICON        WINAPI CreateIconFromResource(LPBYTE, UINT, BOOL, DWORD);
03668 HICON        WINAPI CreateIconFromResourceEx(LPBYTE, UINT, BOOL, DWORD, INT, INT, UINT);
03669 HMENU        WINAPI CreateMenu(void);
03670 HMENU        WINAPI CreatePopupMenu(void);
03671 #define      CreateWindowA(className, titleName, style, x, y, width, height, \
03672      parent, menu, instance, param) \
03673      CreateWindowExA(0, className, titleName, style, x, y, width, height, \
03674      parent, menu, instance, param)
03675 #define      CreateWindowW(className, titleName, style, x, y, width, height, \
03676      parent, menu, instance, param) \
03677      CreateWindowExW(0, className, titleName, style, x, y, width, height, \
03678      parent, menu, instance, param)
03679 #define      CreateWindow WINELIB_NAME_AW(CreateWindow)
03680 HWND        WINAPI CreateWindowExA(DWORD, LPCSTR, LPCSTR, DWORD, INT, INT,
03681      INT, INT, HWND, HMENU, HINSTANCE, LPVOID);
03682 HWND        WINAPI CreateWindowExW(DWORD, LPCWSTR, LPCWSTR, DWORD, INT, INT,
03683      INT, INT, HWND, HMENU, HINSTANCE, LPVOID);
03684 #define      CreateWindowEx WINELIB_NAME_AW(CreateWindowEx)
03685 HWINSTA      WINAPI CreateWindowStationA(LPSTR, DWORD, DWORD, LPSECURITY_ATTRIBUTES);
03686 HWINSTA      WINAPI CreateWindowStationW(LPWSTR, DWORD, DWORD, LPSECURITY_ATTRIBUTES);

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03687 #define      CreateWindowStation WINELIB_NAME_AW(CreateWindowStation)
03688 HWND      WINAPI CreateMDIWindowA(LPCSTR, LPCSTR, DWORD, INT, INT,
03689      INT, INT, HWND, HINSTANCE, LPARAM);
03690 HWND      WINAPI CreateMDIWindowW(LPCWSTR, LPCWSTR, DWORD, INT, INT,
03691      INT, INT, HWND, HINSTANCE, LPARAM);
03692 #define      CreateMDIWindow WINELIB_NAME_AW(CreateMDIWindow)
03693 LRESULT     WINAPI DefDlgProcA(HWND, UINT, WPARAM, LPARAM);
03694 LRESULT     WINAPI DefDlgProcW(HWND, UINT, WPARAM, LPARAM);
03695 #define      DefDlgProc WINELIB_NAME_AW(DefDlgProc)
03696 HDWP      WINAPI DeferWindowPos(HDWP, HWND, HWND, INT, INT, INT, INT, UINT);
03697 LRESULT     WINAPI DefFrameProcA(HWND, HWND, UINT, WPARAM, LPARAM);
03698 LRESULT     WINAPI DefFrameProcW(HWND, HWND, UINT, WPARAM, LPARAM);
03699 #define      DefFrameProc WINELIB_NAME_AW(DefFrameProc)
03700 #define      DefHookProc(code, wparam, lparam, phhook) \
03701      CallNextHookEx(* (phhook), code, wparam, lparam)
03702 LRESULT     WINAPI DefMDIChildProcA(HWND, UINT, WPARAM, LPARAM);
03703 LRESULT     WINAPI DefMDIChildProcW(HWND, UINT, WPARAM, LPARAM);
03704 #define      DefMDIChildProc WINELIB_NAME_AW(DefMDIChildProc)
03705 LRESULT     WINAPI DefWindowProcA(HWND, UINT, WPARAM, LPARAM);
03706 LRESULT     WINAPI DefWindowProcW(HWND, UINT, WPARAM, LPARAM);
03707 #define      DefWindowProc WINELIB_NAME_AW(DefWindowProc)
03708 BOOL      WINAPI DeleteMenu(HMENU, UINT, UINT);
03709 BOOL      WINAPI DestroyCaret(void);
03710 BOOL      WINAPI DestroyCursor(HCURSOR);
03711 BOOL      WINAPI DestroyIcon(HICON);
03712 BOOL      WINAPI DestroyMenu(HMENU);
03713 BOOL      WINAPI DestroyWindow(HWND);
03714 #define      DialogBoxA(inst, template, owner, func) \
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, INT, INT);
03759 BOOL      WINAPI DrawStateW(HDC, HBRUSH, DRAWSTATEPROC, LPARAM, WPARAM, INT, INT, INT, INT, INT, INT);
03760 #define      DrawState WINELIB_NAME_AW(DrawState)
03761 INT      WINAPI DrawTextA(HDC, LPCSTR, INT, LPRECT, UINT);
03762 INT      WINAPI DrawTextW(HDC, LPCWSTR, INT, LPRECT, UINT);
03763 #define      DrawText WINELIB_NAME_AW(DrawText)
03764 INT      WINAPI DrawTextExA(HDC, LPSTR, INT, LPRECT, UINT, LPDRAWTEXTPARAMS);
03765 INT      WINAPI DrawTextExW(HDC, LPWSTR, INT, LPRECT, UINT, LPDRAWTEXTPARAMS);
03766 #define      DrawTextEx WINELIB_NAME_AW(DrawTextEx)
03767 BOOL      WINAPI EmptyClipboard(void);
03768 UINT      WINAPI EnableMenuItem(HMENU, UINT, UINT);
03769 BOOL      WINAPI EnableScrollBar(HWND, INT, UINT);
03770 BOOL      WINAPI EnableWindow(HWND, BOOL);
03771 BOOL      WINAPI EndDeferWindowPos(HDWP);
03772 BOOL      WINAPI EndDialog(HWND, INT);
03773 BOOL      WINAPI EndPaint(HWND, const PAINTSTRUCT*);

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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);
03822 BOOL        WINAPI GetClipCursor(LPRECT);
03823 HCURSOR      WINAPI GetCursor(void);
03824 BOOL        WINAPI GetCursorPos(LPPOINT);
03825 HDC         WINAPI GetDC(HWND);
03826 HDC         WINAPI GetDCEx(HWND, HRGN, DWORD);
03827 HWND        WINAPI GetDesktopWindow(void);
03828 INT         WINAPI GetDlgCtrlID(HWND);
03829 HWND        WINAPI GetDlgItem(HWND, INT);
03830 UINT        WINAPI GetDlgItemInt(HWND, INT, BOOL*, BOOL);
03831 INT         WINAPI GetDlgItemTextA(HWND, INT, LPSTR, UINT);
03832 INT         WINAPI GetDlgItemTextW(HWND, INT, LPWSTR, UINT);
03833 #define        GetDlgItemText WINELIB_NAME_AW(GetDlgItemText)
03834 UINT        WINAPI GetDoubleClickTime(void);
03835 HWND        WINAPI GetFocus(void);
03836 HWND        WINAPI GetForegroundWindow(void);
03837 BOOL        WINAPI GetInputState(void);
03838 INT         WINAPI GetInternalWindowPos(HWND, LPRECT, LPPOINT);
03839 UINT        WINAPI GetKBCodePage(void);
03840 INT         WINAPI GetKeyboardType(INT);
03841 INT         WINAPI GetKeyNameTextA(LONG, LPSTR, INT);
03842 INT         WINAPI GetKeyNameTextW(LONG, LPWSTR, INT);
03843 #define        GetKeyNameText WINELIB_NAME_AW(GetKeyNameText)
03844 INT         WINAPI GetKeyboardLayoutNameA(LPSTR);
03845 INT         WINAPI GetKeyboardLayoutNameW(LPWSTR);
03846 #define        GetKeyboardLayoutName WINELIB_NAME_AW(GetKeyboardLayoutName)
03847 SHORT       WINAPI GetKeyState(INT);
03848 HWND        WINAPI GetLastActivePopup(HWND);
03849 HMENU        WINAPI GetMenu(HWND);
03850 INT         WINAPI GetMenuItemCount(HMENU);
03851 UINT        WINAPI GetMenuItemID(HMENU, INT);
03852 BOOL        WINAPI GetMenuItemRect(HWND, HMENU, UINT, LPRECT);
03853 UINT        WINAPI GetMenuState(HMENU, UINT, UINT);
03854 INT         WINAPI GetMenuStringA(HMENU, UINT, LPSTR, INT, UINT);
03855 INT         WINAPI GetMenuStringW(HMENU, UINT, LPWSTR, INT, UINT);
03856 #define        GetMenuString WINELIB_NAME_AW(GetMenuString)
03857 BOOL        WINAPI GetMessageA(LPMSG, HWND, UINT, UINT);
03858 BOOL        WINAPI GetMessageW(LPMSG, HWND, UINT, UINT);
03859 #define        GetMessage WINELIB_NAME_AW(GetMessage)
03860 HWND        WINAPI GetNextDlgGroupItem(HWND, HWND, BOOL);

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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 HWINSTA    WINAPI GetProcessWindowStation(void);
03898 #define      GetWindowTask(hwnd) ((HTASK)GetWindowThreadProcessId(hwnd,NULL))
03899 INT      WINAPI GetWindowTextA(HWND,LPSTR,INT);
03900 INT      WINAPI GetWindowTextW(HWND,LPWSTR,INT);
03901 #define      GetWindowText WINELIB_NAME_AW(GetWindowText)
03902 INT      WINAPI GetWindowTextLengthA(HWND);
03903 INT      WINAPI GetWindowTextLengthW(HWND);
03904 #define      GetWindowTextLength WINELIB_NAME_AW(GetWindowTextLength)
03905 WORD      WINAPI GetWindowWord(HWND,INT);
03906 BOOL      WINAPI GrayStringA(HDC,HBRUSH,GRAYSTRINGPROC,LPARAM,
03907                               INT,INT,INT,INT,INT);
03908 BOOL      WINAPI GrayStringW(HDC,HBRUSH,GRAYSTRINGPROC,LPARAM,
03909                               INT,INT,INT,INT,INT);
03910 #define      GrayString WINELIB_NAME_AW(GrayString)
03911 BOOL      WINAPI HideCaret(HWND);
03912 BOOL      WINAPI HiliteMenuItem(HWND,HMENU,UINT,UINT);
03913 BOOL      WINAPI InflateRect(LPRECT,INT,INT);
03914 BOOL      WINAPI InSendMessage(void);
03915 DWORD      WINAPI InSendMessageEx(LPVOID);
03916 BOOL      WINAPI InsertMenuA(HMENU,UINT,UINT,UINT,LPCSTR);
03917 BOOL      WINAPI InsertMenuW(HMENU,UINT,UINT,UINT,LPCWSTR);
03918 #define      InsertMenu WINELIB_NAME_AW(InsertMenu)
03919 BOOL      WINAPI InsertMenuItemA(HMENU,UINT,BOOL,const 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,LPMMSG);
03942 BOOL      WINAPI IsDialogMessageW(HWND,LPMMSG);
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*);

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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 LoadIcon(HINSTANCE,LPCSTR);
03967 HICON         WINAPI LoadIconW(HINSTANCE,LPCWSTR);
03968 #define        LoadIcon WINELIB_NAME_AW(LoadIcon)
03969 HANDLE        WINAPI LoadImageA(HINSTANCE,LPCSTR,UINT,INT,INT,UINT);
03970 HANDLE        WINAPI LoadImageW(HINSTANCE,LPCWSTR,UINT,INT,INT,UINT);
03971 #define        LoadImage WINELIB_NAME_AW(LoadImage)
03972 HMENU         WINAPI LoadMenuA(HINSTANCE,LPCSTR);
03973 HMENU         WINAPI LoadMenuW(HINSTANCE,LPCWSTR);
03974 #define        LoadMenu WINELIB_NAME_AW(LoadMenu)
03975 HMENU         WINAPI LoadMenuIndirectA(LPCVOID);
03976 HMENU         WINAPI LoadMenuIndirectW(LPCVOID);
03977 #define        LoadMenuIndirect WINELIB_NAME_AW(LoadMenuIndirect)
03978 INT           WINAPI LoadStringA(HINSTANCE,UINT,LPSTR,INT);
03979 INT           WINAPI LoadStringW(HINSTANCE,UINT,LPWSTR,INT);
03980 #define        LoadString WINELIB_NAME_AW(LoadString)
03981 BOOL         WINAPI LockWindowUpdate(HWND);
03982 INT           WINAPI LookupIconIdFromDirectory(LPBYTE,BOOL);
03983 INT           WINAPI LookupIconIdFromDirectoryEx(LPBYTE,BOOL,INT,INT,UINT);
03984 UINT          WINAPI MapVirtualKeyA(UINT,UINT);
03985 UINT          WINAPI MapVirtualKeyW(UINT,UINT);
03986 #define        MapVirtualKey WINELIB_NAME_AW(MapVirtualKey)
03987 UINT          WINAPI MapVirtualKeyExA(UINT,UINT,HKL);
03988 UINT          WINAPI MapVirtualKeyExW(UINT,UINT,HKL);
03989 #define        MapVirtualKeyEx WINELIB_NAME_AW(MapVirtualKeyEx)
03990 BOOL         WINAPI MapDialogRect(HWND,LPRECT);
03991 INT           WINAPI MapWindowPoints(HWND,HWND,LPPOINT,UINT);
03992 UINT          WINAPI MenuItemFromPoint(HWND,HMENU,POINT);
03993 BOOL         WINAPI MessageBeep(UINT);
03994 INT           WINAPI MessageBoxA(HWND,LPCSTR,LPCSTR,UINT);
03995 INT           WINAPI MessageBoxW(HWND,LPCWSTR,LPCWSTR,UINT);
03996 #define        MessageBox WINELIB_NAME_AW(MessageBox)
03997 INT           WINAPI MessageBoxIndirectA(LPMSGBOXPARAMSA);
03998 INT           WINAPI MessageBoxIndirectW(LPMSGBOXPARAMSW);
03999 #define        MessageBoxIndirect WINELIB_NAME_AW(MessageBoxIndirect)
04000 BOOL         WINAPI ModifyMenuA(HMENU,UINT,UINT,UINT,LPCSTR);
04001 BOOL         WINAPI ModifyMenuW(HMENU,UINT,UINT,UINT,LPCWSTR);
04002 #define        ModifyMenu WINELIB_NAME_AW(ModifyMenu)
04003 BOOL         WINAPI MoveWindow(HWND,INT,INT,INT,INT,BOOL);
04004 BOOL         WINAPI OemToCharA(LPCSTR,LPSTR);
04005 BOOL         WINAPI OemToCharW(LPCSTR,LPWSTR);
04006 #define        OemToChar WINELIB_NAME_AW(OemToChar)
04007 BOOL         WINAPI OemToCharBufA(LPCSTR,LPSTR,DWORD);
04008 BOOL         WINAPI OemToCharBufW(LPCSTR,LPWSTR,DWORD);
04009 #define        OemToCharBuf WINELIB_NAME_AW(OemToCharBuf)
04010 BOOL         WINAPI OffsetRect(LPRECT,INT,INT);
04011 BOOL         WINAPI OpenClipboard(HWND);
04012 BOOL         WINAPI OpenIcon(HWND);
04013 HWINSTA       WINAPI OpenWindowStationA(LPSTR,BOOL,ACCESS_MASK);
04014 HWINSTA       WINAPI OpenWindowStationW(LPWSTR,BOOL,ACCESS_MASK);
04015 #define        OpenWindowStation WINELIB_NAME_AW(OpenWindowStation)
04016 BOOL         WINAPI PeekMessageA(LPMSG,HWND,UINT,UINT,UINT);
04017 BOOL         WINAPI PeekMessageW(LPMSG,HWND,UINT,UINT,UINT);
04018 #define        PeekMessage WINELIB_NAME_AW(PeekMessage)
04019 #define        PostAppMessageA(thread,msg,wparam,lparam) \
04020     PostThreadMessageA((DWORD)(thread),msg,wparam,lparam)
04021 #define        PostAppMessageW(thread,msg,wparam,lparam) \
04022     PostThreadMessageW((DWORD)(thread),msg,wparam,lparam)
04023 #define        PostAppMessage WINELIB_NAME_AW(PostAppMessage)
04024 BOOL         WINAPI PostMessageA(HWND,UINT,WPARAM,LPARAM);
04025 BOOL         WINAPI PostMessageW(HWND,UINT,WPARAM,LPARAM);
04026 #define        PostMessage WINELIB_NAME_AW(PostMessage)
04027 void          WINAPI PostQuitMessage(INT);
04028 BOOL         WINAPI PtInRect(const RECT*,POINT);
04029 BOOL         WINAPI RedrawWindow(HWND,const RECT*,HRGN,UINT);
04030 ATOM          WINAPI RegisterClassA(const WNDCLASSA *);
04031 ATOM          WINAPI RegisterClassW(const WNDCLASSW *);
04032 #define        RegisterClass WINELIB_NAME_AW(RegisterClass)
04033 ATOM          WINAPI RegisterClassExA(const WNDCLASSEXA *);
04034 ATOM          WINAPI RegisterClassExW(const WNDCLASSEXP *);

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04035 #define RegisterClassEx WINELIB_NAME_AW(RegisterClassEx)
04036 UNT WINAPI RegisterClipboardFormatA(LPCSTR);
04037 UNT 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, LPDWORD);
04061 LRESULT WINAPI SendMessageTimeoutW(HWND, UINT, WPARAM, LPARAM, 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 UNT WINAPI SetTimer(HWND, UINT, UINT, TIMERPROC);
04104 BOOL WINAPI SetUserObjectSecurity(HANDLE, PSECURITY_INFORMATION, PSECURITY_DESCRIPTOR);
04105 LONG WINAPI SetWindowLongA(HWND, INT, LONG);
04106 LONG WINAPI SetWindowLongW(HWND, INT, LONG);
04107 #define SetWindowLong WINELIB_NAME_AW(SetWindowLong)
04108 BOOL WINAPI SetWindowPlacement(HWND, const WINDOWPLACEMENT*);
04109 HHOOK WINAPI SetWindowsHookA(INT, HOOKPROC);
04110 HHOOK WINAPI SetWindowsHookW(INT, HOOKPROC);
04111 #define SetWindowsHook WINELIB_NAME_AW(SetWindowsHook)
04112 HHOOK WINAPI SetWindowsHookExA(INT, HOOKPROC, HINSTANCE, DWORD);
04113 HHOOK WINAPI SetWindowsHookExW(INT, HOOKPROC, HINSTANCE, DWORD);
04114 #define SetWindowsHookEx WINELIB_NAME_AW(SetWindowsHookEx)
04115 BOOL WINAPI SetWindowPos(HWND, HWND, INT, INT, INT, INT, UINT);
04116 INT WINAPI SetWindowRgn(HWND, HRGN, BOOL);
04117 BOOL WINAPI SetWindowTextA(HWND, LPCSTR);
04118 BOOL WINAPI SetWindowTextW(HWND, LPCWSTR);
04119 #define SetWindowText WINELIB_NAME_AW(SetWindowText)
04120 WORD WINAPI SetWindowWord(HWND, INT, WORD);
04121 BOOL WINAPI ShowCaret(HWND);

```

```

04122 INT      WINAPI ShowCursor (BOOL);
04123 BOOL      WINAPI ShowScrollBar (HWND, INT, BOOL);
04124 BOOL      WINAPI ShowOwnedPopups (HWND, BOOL);
04125 BOOL      WINAPI ShowWindow (HWND, INT);
04126 BOOL      WINAPI SubtractRect (LPRECT, const RECT*, const RECT*);
04127 BOOL      WINAPI SwapMouseButton (BOOL);
04128 VOID      WINAPI SwitchToThisWindow (HWND, BOOL);
04129 BOOL      WINAPI SystemParametersInfoA (UINT, UINT, LPVOID, UINT);
04130 BOOL      WINAPI SystemParametersInfoW (UINT, UINT, LPVOID, UINT);
04131 #define      SystemParametersInfo WINELIB_NAME_AW(SystemParametersInfo)
04132 LONG      WINAPI TabbedTextOutA (HDC, INT, INT, LPCSTR, INT, INT, const INT*, INT);
04133 LONG      WINAPI TabbedTextOutW (HDC, INT, INT, LPCWSTR, INT, INT, const INT*, INT);
04134 #define      TabbedTextOut WINELIB_NAME_AW(TabbedTextOut)
04135 INT      WINAPI ToAscii (UINT, UINT, LPBYTE, LPWORD, UINT);
04136 INT      WINAPI ToAsciiEx (UINT, UINT, LPBYTE, LPWORD, UINT, HKL);
04137 BOOL      WINAPI TrackPopupMenu (HMENU, UINT, INT, INT, INT, HWND, const RECT*);
04138 INT      WINAPI TranslateAccelerator (HWND, HACCEL, LPMSG);
04139 BOOL      WINAPI TranslateMDISysAccel (HWND, LPMSG);
04140 BOOL      WINAPI TranslateMessage (const MSG*);
04141 BOOL      WINAPI UnhookWindowsHook (INT, HOOKPROC);
04142 BOOL      WINAPI UnhookWindowsHookEx (HOOK);
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 wsprintfA (LPSTR, LPCSTR, ...);
04164 INT      WINAPI wsprintfW (LPWSTR, LPCWSTR, ...);
04165 #define      wsprintf WINELIB_NAME_AW(wsprintf)
04166 INT      WINAPI wvsprintfA (LPSTR, LPCSTR, va_list);
04167 INT      WINAPI wvsprintfW (LPWSTR, LPCWSTR, va_list);
04168 #define      wvsprintf WINELIB_NAME_AW(wvsprintf)
04169
04170 /* Undocumented functions */
04171
04172 /* NOTE: This is SYSTEM.3, not USER.182, which is also named KillSystemTimer */
04173 WORD      WINAPI SYSTEM_KillSystemTimer (WORD);
04174
04175 HRESULT     WINAPI PrivateExtractIconsA (LPCSTR, INT, DWORD, DWORD, HICON*, DWORD, UINT, DWORD);
04176 HRESULT     WINAPI PrivateExtractIconsW (LPCWSTR, INT, DWORD, DWORD, HICON*, DWORD, UINT, DWORD);
04177
04178 /* Extra functions that don't exist in the Windows API */
04179
04180 HPEN      WINAPI GetSysColorPen (INT);
04181 INT      WINAPI 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

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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/wl6.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
00155
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 }
00335 DATASTREAM& operator« ( DWORD& dword )
00336 {
00337     if ( swap_ ) {
00338 unsigned char* p = (unsigned char*)&dword;
00339 fread( &p[3], sizeof(unsigned char), 1, fp_ );
00340 fread( &p[2], sizeof(unsigned char), 1, fp_ );
00341 fread( &p[1], sizeof(unsigned char), 1, fp_ );
00342 fread( &p[0], sizeof(unsigned char), 1, fp_ );
00343     }
00344     else
00345 fread( &dword, sizeof(DWORD), 1, fp_ );
00346     return *this;
00347 }
00348 #if !defined( __LP64__ )
00349 DATASTREAM& operator« ( const LONG& long_ )
00350 {
00351     if ( swap_ ) {
00352 unsigned char const* p = (unsigned char const*)&long_;
00353 fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00354 fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00355 fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00356 fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00357     }
00358     else
00359 fwrite( &long_, sizeof(LONG), 1, fp_ );
00360     return *this;
00361 }
00362 DATASTREAM& operator« ( LONG& long_ )
00363 {
00364     if ( swap_ ) {
00365 unsigned char* p = (unsigned char*)&long_;
00366 fread( &p[3], sizeof(unsigned char), 1, fp_ );
00367 fread( &p[2], sizeof(unsigned char), 1, fp_ );
00368 fread( &p[1], sizeof(unsigned char), 1, fp_ );
00369 fread( &p[0], sizeof(unsigned char), 1, fp_ );
00370     }
00371     else
00372 fread( &long_, sizeof(LONG), 1, fp_ );
00373     return *this;
00374 }
00375 #endif /* __x86_64__ */
00376 DATASTREAM& operator« ( const INT& int_ )
00377 {
00378     if ( swap_ ) {
00379 unsigned char const* p = (unsigned char const*)&int_;
00380 fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00381 fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00382 fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00383 fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00384     }
00385     else
00386 fwrite( &int_, sizeof(INT), 1, fp_ );
00387     return *this;
00388 }
00389 DATASTREAM& operator« ( INT& int_ )
00390 {
00391     if ( swap_ ) {
00392 unsigned char* p = (unsigned char*)&int_;
00393 fread( &p[3], sizeof(unsigned char), 1, fp_ );
00394 fread( &p[2], sizeof(unsigned char), 1, fp_ );
00395 fread( &p[1], sizeof(unsigned char), 1, fp_ );
00396 fread( &p[0], sizeof(unsigned char), 1, fp_ );
00397     }
00398     else
00399 fread( &int_, sizeof(INT), 1, fp_ );
00400     return *this;
00401 }
00402 #if !defined( __LP64__ )
00403 DATASTREAM& operator« ( const UINT& uint )
00404 {
00405     if ( swap_ ) {
00406 unsigned char const* p = (unsigned char const*)&uint;
00407 fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00408 fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00409 fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00410 fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00411     }
00412     else
00413 fwrite( &uint, sizeof(UINT), 1, fp_ );
00414     return *this;
00415 }
00416 #endif
00417 DATASTREAM& operator« ( const VOID& void_ )
00418 {
00419     if ( swap_ ) {
00420 unsigned char const* p = (unsigned char const*)&void_;
00421 fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00422 fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00423 fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00424 fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00425     }
00426     else
00427 fwrite( &void_, sizeof(VOID), 1, fp_ );
00428     return *this;
00429 }
00430 DATASTREAM& operator« ( VOID& void_ )
00431 {
00432     if ( swap_ ) {
00433 unsigned char* p = (unsigned char*)&void_;
00434 fread( &p[3], sizeof(unsigned char), 1, fp_ );
00435 fread( &p[2], sizeof(unsigned char), 1, fp_ );
00436 fread( &p[1], sizeof(unsigned char), 1, fp_ );
00437 fread( &p[0], sizeof(unsigned char), 1, fp_ );
00438     }
00439     else
00440 fread( &void_, sizeof(VOID), 1, fp_ );
00441     return *this;
00442 }

```

```

00435     }
00436     else
00437     fwrite( &uint, sizeof(UINT), 1, fp_ );
00438     return *this;
00439 }
00440 DATASTREAM& operator« ( UINT& uint )
00441 {
00442     if ( swap_ ) {
00443         unsigned char* p = (unsigned char*)&uint;
00444         fread( &p[3], sizeof(unsigned char), 1, fp_ );
00445         fread( &p[2], sizeof(unsigned char), 1, fp_ );
00446         fread( &p[1], sizeof(unsigned char), 1, fp_ );
00447         fread( &p[0], sizeof(unsigned char), 1, fp_ );
00448     }
00449     else
00450     fread( &uint, sizeof(UINT), 1, fp_ );
00451     return *this;
00452 }
00453 #endif /* !__x86_64__ */
00454 DATASTREAM& operator« ( const FLOAT& float_ )
00455 {
00456     if ( swap_ ) {
00457         unsigned char const* p = (unsigned char const*)&float_;
00458         fwrite( &p[3], sizeof(unsigned char), 1, fp_ );
00459         fwrite( &p[2], sizeof(unsigned char), 1, fp_ );
00460         fwrite( &p[1], sizeof(unsigned char), 1, fp_ );
00461         fwrite( &p[0], sizeof(unsigned char), 1, fp_ );
00462     }
00463     else
00464     fwrite( &float_, sizeof(FLOAT), 1, fp_ );
00465     return *this;
00466 }
00467 DATASTREAM& operator« ( FLOAT& float_ )
00468 {
00469     if ( swap_ ) {
00470         unsigned char* p = (unsigned char*)&float_;
00471         fread( &p[3], sizeof(unsigned char), 1, fp_ );
00472         fread( &p[2], sizeof(unsigned char), 1, fp_ );
00473         fread( &p[1], sizeof(unsigned char), 1, fp_ );
00474         fread( &p[0], sizeof(unsigned char), 1, fp_ );
00475     }
00476     else
00477     fread( &float_, sizeof(FLOAT), 1, fp_ );
00478     return *this;
00479 }
00480 DATASTREAM& operator« ( const PADDING& padding )
00481 {
00482     if ( padding.size_ != 0 )
00483     fwrite( &padding.padding_, sizeof(CHAR), padding.size_, fp_ );
00484     return *this;
00485 }
00486 DATASTREAM& operator« ( const RECTL& rectl )
00487 {
00488     *this « rectl.left « rectl.top « rectl.right « rectl.bottom;
00489     return *this;
00490 }
00491 DATASTREAM& operator« ( RECTL& rectl )
00492 {
00493     *this » rectl.left » rectl.top » rectl.right » rectl.bottom;
00494     return *this;
00495 }
00496 DATASTREAM& operator« ( const SIZEL& sizel )
00497 {
00498     *this « sizel.cx « sizel.cy;
00499     return *this;
00500 }
00501 DATASTREAM& operator« ( SIZEL& sizel )
00502 {
00503     *this » sizel.cx » sizel.cy;
00504     return *this;
00505 }
00506 DATASTREAM& operator« ( const WCHARSTR& wcharstr )
00507 {
00508     for ( int i = 0; i < wcharstr.length_; i++ )
00509     *this « wcharstr.string_[i];
00510     return *this;
00511 }
00512 DATASTREAM& operator« ( WCHARSTR& wcharstr )
00513 {
00514     for ( int i = 0; i < wcharstr.length_; i++ )
00515     *this » wcharstr.string_[i];
00516     return *this;
00517 }
00518 DATASTREAM& operator« ( const CHARSTR& charstr )
00519 {
00520     fwrite( charstr.string_, sizeof(CHAR), charstr.length_, fp_ );
00521     return *this;
00522 }

```

```

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 }
00874 DATASTREAM& operator« ( const PANOSE& panose )
00875 {
00876     fwrite( &panose, sizeof(PANOSE), 1, fp_ );
00877     return *this;
00878 }
00879 DATASTREAM& operator» ( PANOSE& panose )
00880 {
00881     fread( &panose, sizeof(PANOSE), 1, fp_ );
00882     return *this;
00883 }
00884 DATASTREAM& operator« ( const EXTLOGFONTW& font )
00885 {
00886     *this « font.elfLogFont
00887         « WCHARSTR( const_cast<WCHAR*>(font.elfFullName),
00888             LF_FULLFACESIZE )
00889         « WCHARSTR( const_cast<WCHAR*>(font.elfStyle), LF_FACESIZE )
00890         « font.elfVersion « font.elfStyleSize « font.elfMatch
00891         « font.elfReserved
00892         « BYTEARRAY( const_cast<BYTE*>(font.elfVendorId),
00893             ELF_VENDOR_SIZE )
00894         « font.elfCulture « font.elfPanose;
00895     return *this;
00896 }
00897 DATASTREAM& operator» ( EXTLOGFONTW& font )
00898 {
00899     WCHARSTR wFullName( font.elfFullName, LF_FULLFACESIZE );
00900     WCHARSTR wStyle( font.elfStyle, LF_FACESIZE );
00901     BYTEARRAY bVendorId( font.elfVendorId, ELF_VENDOR_SIZE );
00902     *this » font.elfLogFont
00903         » wFullName » wStyle
00904         » font.elfVersion » font.elfStyleSize » font.elfMatch
00905         » font.elfReserved » bVendorId
00906         » font.elfCulture » font.elfPanose;
00907     return *this;
00908 }
00909 DATASTREAM& operator« ( const LOGPALETTE& palette )
00910 {
00911     // *** How big is this structure if the palette is empty? ***
00912     *this « palette.palVersion « palette.palNumEntries;
00913     return *this;
00914 }
00915 DATASTREAM& operator» ( LOGPALETTE& palette )
00916 {
00917     // *** How big is this structure if the palette is empty? ***
00918     *this » palette.palVersion » palette.palNumEntries;
00919     return *this;
00920 }
00921 private:
00922 void fread ( void* ptr, size_t size, size_t nmemb, FILE* stream )
00923 {
00924     size_t res = ::fread( ptr, size, nmemb, stream );
00925     if ( res < nmemb ) {
00926         throw std::runtime_error( "Premature EOF on EMF stream" );
00927     }
00928 }
00929 void fwrite ( const void* ptr, size_t size, size_t nmemb, FILE* stream )
00930 {
00931     size_t res = ::fwrite( ptr, size, nmemb, stream );
00932     if ( res < nmemb ) {
00933         throw std::runtime_error( "error writing EMF stream" );
00934     }
00935 }
00936 };
00937
00938 class METAFILEDEVICECONTEXT;
00939
00940 class METARECORD {
00941 public:
00942     virtual void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const = 0;
00943     virtual bool serialize ( DATASTREAM ds ) = 0;
00944     virtual int size ( void ) const = 0;
00945     virtual ~METARECORD() { }
00946 #ifdef ENABLE_EDITING
00947     virtual void edit ( void ) const { }
00948 #endif
00949 };

```

```

01025
01026 #ifndef 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_pointl6array ( const char* tag, const unsigned int cpts,
01102     const POINTL6* points )
01103 {
01104     printf( "\tcpts%s\t: %d\n", tag, cpts );
01105     printf( "\tappts%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
01189     enum OBJECTTYPE { O_METAFILEDEVICECONTEXT = OBJ_METADC,
01190                     O_FONT = OBJ_FONT,
01191                     O_PEN = OBJ_PEN,
01192                     O_EXTPEN = OBJ_EXTPEN,
01193                     O_BRUSH = OBJ_BRUSH,
01194                     O_PALETTE = OBJ_PAL };
01195
01196     #if 0
01197     static char* typStr ( OBJECTTYPE type )
01198     {
01199         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
01225
01231 class OBJECT {
01232 public:
01233     HGDIOBJ handle;
01234     virtual ~OBJECT () {}
01235     OBJECT ( void ) : handle( 0 ) {}
01236     virtual OBJECTTYPE getType ( void ) const = 0;
01237 };
01238
01253 class GRAPHICSOBJECT : public OBJECT {
01254 public:
01255     virtual ~GRAPHICSOBJECT () {}
01256     std::map< HDC, HGDIOBJ > contexts;
01257     virtual METARECORD* newEMR ( HDC dc, HGDIOBJ handle ) = 0;
01258 };
01259
01271 typedef METARECORD* (*METARECORDCTOR) (DATASTREAM&);
01272
01276 class GLOBALOBJECTS {
01277     std::vector<OBJECT*> objects;
01278
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 );
01311     static EMF::METARECORD* new_setviewportorgex ( DATASTREAM& ds );
01312     static EMF::METARECORD* new_setwindoworgex ( DATASTREAM& ds );
01313     static EMF::METARECORD* new_setviewportextex ( DATASTREAM& ds );
01314     static EMF::METARECORD* new_setwindowextex ( DATASTREAM& ds );
01315     static EMF::METARECORD* new_scaleviewportextex ( DATASTREAM& ds );
01316     static EMF::METARECORD* new_scalewindowextex ( DATASTREAM& ds );
01317     static EMF::METARECORD* new_modifyworldtransform ( DATASTREAM& ds );
01318     static EMF::METARECORD* new_setworldtransform ( DATASTREAM& ds );
01319     static EMF::METARECORD* new_settextalign ( DATASTREAM& ds );
01320     static EMF::METARECORD* new_settextcolor ( DATASTREAM& ds );
01321     static EMF::METARECORD* new_setbkcolor ( DATASTREAM& ds );
01322     static EMF::METARECORD* new_setbkmode ( DATASTREAM& ds );
01323     static EMF::METARECORD* new_setpolyfillmode ( DATASTREAM& ds );
01324     static EMF::METARECORD* new_setmapmode ( DATASTREAM& ds );
01325     static EMF::METARECORD* new_selectobject ( DATASTREAM& ds );
01326     static EMF::METARECORD* new_deleteobject ( DATASTREAM& ds );
01327     static EMF::METARECORD* new_movetoex ( DATASTREAM& ds );
01328     static EMF::METARECORD* new_lineto ( DATASTREAM& ds );
01329     static EMF::METARECORD* new_arc ( DATASTREAM& ds );
01330     static EMF::METARECORD* new_arcto ( DATASTREAM& ds );
01331     static EMF::METARECORD* new_rectangle ( DATASTREAM& ds );
01332     static EMF::METARECORD* new_ellipse ( DATASTREAM& ds );
01333     static EMF::METARECORD* new_polyline ( DATASTREAM& ds );
01334     static EMF::METARECORD* new_polyline16 ( DATASTREAM& ds );
01335     static EMF::METARECORD* new_polygon ( DATASTREAM& ds );
01336     static EMF::METARECORD* new_polygon16 ( DATASTREAM& ds );
01337     static EMF::METARECORD* new_polypolygon ( DATASTREAM& ds );
01338     static EMF::METARECORD* new_polypolygon16 ( DATASTREAM& ds );
01339     static EMF::METARECORD* new_polybezier ( DATASTREAM& ds );
01340     static EMF::METARECORD* new_polybezier16 ( DATASTREAM& ds );
01341     static EMF::METARECORD* new_polybezierto ( DATASTREAM& ds );
01342     static EMF::METARECORD* new_polybezierto16 ( DATASTREAM& ds );
01343     static EMF::METARECORD* new_polylineto ( DATASTREAM& ds );

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01378     static EMF::METARECORD* new_polylinetol6 ( DATASTREAM& ds );
01380     static EMF::METARECORD* new_exttextouta ( DATASTREAM& ds );
01382     static EMF::METARECORD* new_exttextoutw ( DATASTREAM& ds );
01384     static EMF::METARECORD* new_setpixelv ( DATASTREAM& ds );
01386     static EMF::METARECORD* new_createpen ( DATASTREAM& ds );
01388     static EMF::METARECORD* new_extcreatepen ( DATASTREAM& ds );
01390     static EMF::METARECORD* new_createbrushindirect ( DATASTREAM& ds );
01392     static EMF::METARECORD* new_extcreatefontindirectw ( DATASTREAM& ds );
01394     static EMF::METARECORD* new_fillpath ( DATASTREAM& ds );
01396     static EMF::METARECORD* new_strokepath ( DATASTREAM& ds );
01398     static EMF::METARECORD* new_strokeandfillpath ( DATASTREAM& ds );
01400     static EMF::METARECORD* new_beginpath ( DATASTREAM& ds );
01402     static EMF::METARECORD* new_endpath ( DATASTREAM& ds );
01404     static EMF::METARECORD* new_closefigure ( DATASTREAM& ds );
01406     static EMF::METARECORD* new_savedc ( DATASTREAM& ds );
01408     static EMF::METARECORD* new_restoredc ( DATASTREAM& ds );
01410     static EMF::METARECORD* new_setmetargn ( DATASTREAM& ds );
01412     static EMF::METARECORD* new_setmiterlimit ( DATASTREAM& ds );
01413 };
01414
01415 extern GLOBALOBJECTS globalObjects;
01416
01418
01424 class ENHMETAHEADER : public METARECORD, public ::ENHMETAHEADER {
01425
01426     LPWSTR description_w{ nullptr };
01427     int description_size{ 0 };
01428
01429 public:
01436     ENHMETAHEADER ( LPCWSTR description = 0 )
01437         : description_w( 0 ), description_size( 0 )
01438     {
01439         iType = EMR_HEADER;
01440         nSize = sizeof( ::ENHMETAHEADER );
01441
01442         // Compute the bounds
01443         RECTL default_bounds = { 0, 0, 0, 0 };
01444         rclBounds = default_bounds;
01445         RECTL default_frame = { 0, 0, 0, 0 };
01446         rclFrame = default_frame;
01447         dSignature = ENHMETA_SIGNATURE;
01448         nVersion = 0x10000;
01449         nBytes = nSize;
01450         nRecords = 1;
01451         nHandles = 0;
01452         sReserved = 0;
01453         nDescription = 0;
01454         offDescription = 0;
01455         nPalEntries = 0;
01456         szlDevice.cx = XMAX_PIXELS;
01457         szlDevice.cy = YMAX_PIXELS;
01458         szlMillimeters.cx = XMAX_MM;
01459         szlMillimeters.cy = YMAX_MM;
01460         //
01461         cbPixelFormat = 0;
01462         offPixelFormat = 0;
01463         bOpenGL = FALSE;
01464         //
01465 #if 1
01466         szlMicrometers.cx = 1000 * szlMillimeters.cx;
01467         szlMicrometers.cy = 1000 * szlMillimeters.cy;
01468 #endif
01469         if ( description ) {
01470             // Count the number of characters in the description
01471             int description_count = 0, nulls = 0;
01472             LPCWSTR description_p = description;
01473             while ( nulls < 3 ) {
01474                 description_count++;
01475                 if ( (*description_p++) == 0 ) nulls++;
01476             }
01477
01478             // Make sure that the TOTAL record length will be a multiple of 4
01479
01480             int record_size = ROUND_TO_LONG( sizeof( ::ENHMETAHEADER ) +
01481                 sizeof( WCHAR ) * description_count );
01482             description_size =
01483                 (record_size - sizeof( ::ENHMETAHEADER )) / sizeof( WCHAR );
01484
01485             std::unique_ptr<WCHAR[]>
01486                 description_tmp( new WCHAR[ description_size ] );
01487
01488             description_w = description_tmp.release();
01489
01490             memset( description_w, 0, sizeof(WCHAR) * description_size );
01491
01492             for ( int i=0; i<description_count; i++ )
01493                 description_w[i] = *description++;

```

```

01494
01495     nSize = nBytes = record_size;
01496     nDescription = description_count;
01497     offDescription = sizeof( ::ENHMETAHEADER );
01498 }
01499 }
01500
01501 ~ENHMETAHEADER ( )
01502 {
01503     if ( description_w & delete[] description_w;
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 bool unserialize ( DATASTREAM ds )
01518 {
01519     ds >> iType >> nSize
01520     >> rclBounds >> rclFrame
01521     >> dSignature >> nVersion >> nBytes >> nRecords >> nHandles >> sReserved
01522     >> nDescription >> offDescription >> nPalEntries
01523     >> szlDevice >> szlMillimeters;
01524
01525     // Some elements of the metafile header were added at later dates
01526
01527 #define OffsetOf( a, b ) ((unsigned int)((char*)&(((::ENHMETAHEADER*)a)->b)) - \
01528 (char*)&(((::ENHMETAHEADER*)a)))
01529     if ( OffsetOf( this, szlMicrometers ) <= offDescription )
01530     ds >> cbPixelFormat >> offPixelFormat >> bOpenGL;
01531 #undef OffsetOf
01532     if ( sizeof(::ENHMETAHEADER) <= offDescription )
01533     ds >> szlMicrometers;
01534
01535     // Should now probably check that the offset is correct...
01536
01537     int description_size_to_read = ( nSize - offDescription ) / sizeof(WCHAR);
01538
01539     if ( description_size_to_read < (int)nDescription ) {
01540         throw std::runtime_error( "record size inconsistent with description size" );
01541     }
01542
01543     description_size = max( 2, description_size_to_read );
01544
01545     std::unique_ptr<WCHAR[]> buffer( new WCHAR[description_size] );
01546     WCHARSTR description( buffer.get(), description_size_to_read );
01547
01548     ds >> description;
01549
01550     description_w = buffer.release();
01551
01552     // Make sure it's terminated properly.
01553     description_w[description_size-1] = 0;
01554     description_w[description_size-2] = 0;
01555
01556     return true;
01557 }
01558 int size ( void ) const { return nSize; }
01559 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01560 {
01561     // Actually handled by the destination device context.
01562     EMF_UNUSED(source);
01563     EMF_UNUSED(dc);
01564 }
01565 #ifdef ENABLE_EDITING
01566 void edit ( void ) const
01567 {
01568     #if defined(__LP64__)
01569         const char* FMT0 = "\tiType\t\t\t: %d\n";
01570         const char* FMT1 = "\tnSize\t\t\t: %d\n";
01571         const char* FMT2 = "\tnBytes\t\t\t: %d\n";
01572         const char* FMT3 = "\tnRecords\t\t\t: %d\n";
01573         const char* FMT4 = "\tnDescription\t\t\t: %d\n";
01574         const char* FMT5 = "\toffDescription\t\t\t: %d\n";
01575         const char* FMT6 = "\tnPalEntries\t\t\t: %d\n";
01576         const char* FMT7 = "\tcbPixelFormat\t\t\t: %d\n";
01577         const char* FMT8 = "\toffPixelFormat\t\t\t: %d\n";
01578         const char* FMT9 = "\tbOpenGL\t\t\t: %d\n";
01579     #else
01580

```

```

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: %ld\n";
01607     const char* FMT5 = "\toffDescription\t\t: %ld\n";
01608     const char* FMT6 = "\tnPalEntries\t\t: %ld\n";
01609     const char* FMT7 = "\tcbPixelFormat\t\t: %ld\n";
01610     const char* FMT8 = "\toffPixelFormat\t\t: %ld\n";
01611     const char* FMT9 = "\tbOpenGL\t\t\t: %ld\n";
01612 #endif
01613     printf( "HEADER*\n" );
01614     printf( FMT0, iType );
01615     printf( FMT1, nSize );
01616     edit_rectl( "rclBounds\t", rclBounds );
01617     edit_rectl( "rclFrame\t", rclFrame );
01618     printf( "\tdSignature\t\t: %.4s\n", (const char*)&dSignature );
01619     printf( "\tnVersion\t\t: 0x%x\n", (unsigned int)nVersion );
01620     printf( FMT2, nBytes );
01621     printf( FMT3, nRecords );
01622     printf( "\tnHandles\t\t: %d\n", nHandles );
01623     printf( FMT4, nDescription );
01624     printf( FMT5, offDescription );
01625     printf( FMT6, nPalEntries );
01626     edit_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     #if 1
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
01661             last_w = w;
01662         }
01663         printf( "\n" );
01664     }
01665 #endif /* ENABLE_EDITING */
01666 };
01667
01668 class EMREOF : public METARECORD, ::EMREOF {
01669 public:
01670     EMREOF ( void )
01671     {
01672         emr.iType = EMR_EOF;
01673         emr.nSize = sizeof( ::EMREOF );
01674         nPalEntries = 0;
01675         offPalEntries = 0;
01676         nSizeLast = 0;
01677     }
01678
01679     EMREOF ( DATASTREAM& ds )
01680     {
01681         ds » emr » nPalEntries » offPalEntries » nSizeLast;
01682     }
01683
01684     bool serialize ( DATASTREAM ds )

```

```

01704     {
01705         ds << emr << nPalEntries << offPalEntries << nSizeLast;
01706         return true;
01707     }
01711     int size ( void ) const { return emr.nSize; }
01717     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01718     {
01719         // Actually handled by the destination device context.
01720         EMF_UNUSED(source);
01721         EMF_UNUSED(dc);
01722     }
01723 #ifdef ENABLE_EDITING
01727     void edit ( void ) const
01728     {
01729         printf( "EOF*\n" );
01730     }
01731 #endif /* ENABLE_EDITING */
01732 };
01733
01735
01740     class EMRSETVIEWPORTORGEX : public METARECORD, ::EMRSETVIEWPORTORGEX {
01741     public:
01746         EMRSETVIEWPORTORGEX ( INT x, INT y )
01747         {
01748             emr.iType = EMR_SETVIEWPORTORGEX;
01749             emr.nSize = sizeof( ::EMRSETVIEWPORTORGEX );
01750             ptlOrigin.x = x;
01751             ptlOrigin.y = y;
01752         }
01757         EMRSETVIEWPORTORGEX ( DATASTREAM& ds )
01758         {
01759             ds >> emr >> ptlOrigin;
01760         }
01764         bool serialize ( DATASTREAM ds )
01765         {
01766             ds << emr << ptlOrigin;
01767             return true;
01768         }
01772         int size ( void ) const { return emr.nSize; }
01778         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01779         {
01780             EMF_UNUSED(source);
01781             SetViewportOrgEx( dc, ptlOrigin.x, ptlOrigin.y, 0 );
01782         }
01783 #ifdef ENABLE_EDITING
01787         void edit ( void ) const
01788         {
01789             printf( "SETVIEWPORTORGEX*\n" );
01790             edit_pointl( "ptlOrigin", ptlOrigin );
01791         }
01792 #endif /* ENABLE_EDITING */
01793 };
01794
01796
01803     class EMRSETWINDOWORGEX : public METARECORD, ::EMRSETWINDOWORGEX {
01804     public:
01809         EMRSETWINDOWORGEX ( INT x, INT y )
01810         {
01811             emr.iType = EMR_SETWINDOWORGEX;
01812             emr.nSize = sizeof( ::EMRSETWINDOWORGEX );
01813             ptlOrigin.x = x;
01814             ptlOrigin.y = y;
01815         }
01820         EMRSETWINDOWORGEX ( DATASTREAM& ds )
01821         {
01822             ds >> emr >> ptlOrigin;
01823         }
01827         bool serialize ( DATASTREAM ds )
01828         {
01829             ds << emr << ptlOrigin;
01830             return true;
01831         }
01835         int size ( void ) const { return emr.nSize; }
01841         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
01842         {
01843             EMF_UNUSED(source);
01844             SetWindowOrgEx( dc, ptlOrigin.x, ptlOrigin.y, 0 );
01845         }
01846 #ifdef ENABLE_EDITING
01850         void edit ( void ) const
01851         {
01852             printf( "SETWINDOWORGEX*\n" );
01853             edit_pointl( "ptlOrigin", ptlOrigin );
01854         }
01855 #endif /* ENABLE_EDITING */
01856 };
01857

```

```

01859
01864 class 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 #ifndef 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 #ifndef 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( "*SCALEVIEWPORTEXTX*\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 EMRSETWINDOWEXTX : public METARECORD, ::EMRSETWINDOWEXTX {
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_size( "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
02139
02145     class EMRMODIFYWORLDTRANSFORM : public METARECORD, ::EMRMODIFYWORLDTRANSFORM {
02146     public:
02152         EMRMODIFYWORLDTRANSFORM ( const XFORM* transform, DWORD mode )
02153         {
02154             emr.iType = EMR_MODIFYWORLDTRANSFORM;

```

```

02155     emr.nSize = sizeof( ::EMRMODIFYWORLDTRANSFORM );
02156     xform = *transform;
02157     iMode = mode;
02158 }
02163 EMRMODIFYWORLDTRANSFORM ( DATASTREAM& ds )
02164 {
02165     ds » emr » xform » iMode;
02166 }
02170 bool serialize ( DATASTREAM ds )
02171 {
02172     ds « emr « xform « iMode;
02173     return true;
02174 }
02178 int size ( void ) const { return emr.nSize; }
02184 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02185 {
02186     EMF_UNUSED(source);
02187     ModifyWorldTransform( dc, &xform, iMode );
02188 }
02189 #ifndef ENABLE_EDITING
02193 void edit ( void ) const
02194 {
02195     #if defined(__LP64__)
02196         const char* FMT = "unknown(%d)\n";
02197     #else
02198         const char* FMT = "unknown(%ld)\n";
02199     #endif /* __x86_64__ */
02200     printf( "*MODIFYWORLDTRANSFORM*\n" );
02201     edit_xform( "xform", xform );
02202     printf( "\tiMode\t\t: " );
02203     switch ( iMode ) {
02204     case MWT_IDENTITY: printf( "MWT_IDENTITY\n" ); break;
02205     case MWT_LEFTMULTIPLY: printf( "MWT_LEFTMULTIPLY\n" ); break;
02206     case MWT_RIGHTMULTIPLY: printf( "MWT_RIGHTMULTIPLY\n" ); break;
02207     default: printf( FMT, iMode );
02208     }
02209 }
02210 #endif /* ENABLE_EDITING */
02211 };
02212
02214
02220 class EMRSETWORLDTRANSFORM : public METARECORD, ::EMRSETWORLDTRANSFORM {
02221 public:
02225     EMRSETWORLDTRANSFORM ( const XFORM* transform )
02226     {
02227         emr.iType = EMR_SETWORLDTRANSFORM;
02228         emr.nSize = sizeof( ::EMRSETWORLDTRANSFORM );
02229         xform = *transform;
02230     }
02235     EMRSETWORLDTRANSFORM ( DATASTREAM& ds )
02236     {
02237         ds » emr » xform;
02238     }
02242     bool serialize ( DATASTREAM ds )
02243     {
02244         ds « emr « xform;
02245         return true;
02246     }
02250     int size ( void ) const { return emr.nSize; }
02256     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02257     {
02258         EMF_UNUSED(source);
02259         SetWorldTransform( dc, &xform );
02260     }
02261 #ifndef ENABLE_EDITING
02265     void edit ( void ) const
02266     {
02267         printf( "*SETWORLDTRANSFORM*\n" );
02268         edit_xform( "xform", xform );
02269     }
02270 #endif /* ENABLE_EDITING */
02271 };
02272
02274
02277 class EMRSETTEXTALIGN : public METARECORD, ::EMRSETTEXTALIGN {
02278 public:
02282     EMRSETTEXTALIGN ( UINT mode )
02283     {
02284         emr.iType = EMR_SETTEXTALIGN;
02285         emr.nSize = sizeof( ::EMRSETTEXTALIGN );
02286         iMode = mode;
02287     }
02292     EMRSETTEXTALIGN ( DATASTREAM& ds )
02293     {
02294         ds » emr » iMode;
02295     }
02299     bool serialize ( DATASTREAM ds )

```



```

02300     {
02301         ds « emr « iMode;
02302         return true;
02303     }
02307     int size ( void ) const { return emr.nSize; }
02313     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02314     {
02315         EMF_UNUSED(source);
02316         SetTextAlign( dc, iMode );
02317     }
02318 #ifndef 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 #ifndef 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 }
02431 EMRSETBKCOLOR ( DATASTREAM& ds )
02432 {
02433     ds » emr » crColor;
02434 }
02442 bool serialize ( DATASTREAM ds )
02443 {
02444     ds « emr « crColor;
02445     return true;
02446 }
02450 int size ( void ) const { return emr.nSize; }
02456 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02457 {
02458     EMF_UNUSED(source);
02459     SetBkColor( dc, crColor );
02460 }
02461 #ifdef ENABLE_EDITING
02465 void edit ( void ) const
02466 {
02467     printf( "SETBKCOLOR*\n" );
02468     edit_color( "crColor", crColor );
02469 }
02470 #endif /* ENABLE_EDITING */
02471 };
02472
02474
02478 class EMRSETBKMODE : public METARECORD, ::EMRSETBKMODE {
02479 public:
02483     EMRSETBKMODE ( DWORD mode )
02484     {
02485         emr.iType = EMR_SETBKMODE;
02486         emr.nSize = sizeof( ::EMRSETBKMODE );
02487         iMode = mode;
02488     }
02493     EMRSETBKMODE ( DATASTREAM& ds )
02494     {
02495         ds » emr » iMode;
02496     }
02500 bool serialize ( DATASTREAM ds )
02501 {
02502     ds « emr « iMode;
02503     return true;
02504 }
02508 int size ( void ) const { return emr.nSize; }
02514 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02515 {
02516     EMF_UNUSED(source);
02517     SetBkMode( dc, iMode );
02518 }
02519 #ifdef ENABLE_EDITING
02523 void edit ( void ) const
02524 {
02525     #if defined(__LP64__)
02526         const char* FMT = "unknown(%d)\n";
02527     #else
02528         const char* FMT = "unknown(%ld)\n";
02529     #endif /* __x86_64__ */
02530     printf( "SETBKMODE*\n" );
02531     printf( "\tiMode\t: " );
02532     switch ( iMode ) {
02533     case TRANSPARENT: printf( "TRANSPARENT\n" ); break;
02534     case OPAQUE: printf( "OPAQUE\n" ); break;
02535     default: printf( FMT, iMode );
02536     }
02537 }
02538 #endif /* ENABLE_EDITING */
02539 };
02540
02542
02545 class EMRSETPOLYFILLMODE : public METARECORD, ::EMRSETPOLYFILLMODE {
02546 public:
02550     EMRSETPOLYFILLMODE ( DWORD mode )
02551     {
02552         emr.iType = EMR_SETPOLYFILLMODE;
02553         emr.nSize = sizeof( ::EMRSETPOLYFILLMODE );
02554         iMode = mode;
02555     }
02560     EMRSETPOLYFILLMODE ( DATASTREAM& ds )
02561     {
02562         ds » emr » iMode;
02563     }
02567 bool serialize ( DATASTREAM ds )
02568 {
02569     ds « emr « iMode;
02570     return true;

```

```

02571     }
02575     int size ( void ) const { return emr.nSize; }
02581     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02582     {
02583         EMF_UNUSED(source);
02584         SetPolyFillMode( dc, iMode );
02585     }
02586 #ifdef ENABLE_EDITING
02590     void edit ( void ) const
02591     {
02592 #if defined(__LP64__)
02593         const char* FMT = "unknown(%d)\n";
02594 #else
02595         const char* FMT = "unknown(%ld)\n";
02596 #endif /* __x86_64__ */
02597         printf( "*SETPOLYFILLMODE*\n" );
02598         printf( "\tiMode: " );
02599         switch ( iMode ) {
02600             case ALTERNATE: printf( "ALTERNATE\n" ); break;
02601             case WINDING: printf( "WINDING\n" ); break;
02602             default: printf( FMT, iMode );
02603         }
02604     }
02605 #endif /* ENABLE_EDITING */
02606 };
02607
02609
02613     class EMRSETMAPMODE : public METARECORD, ::EMRSETMAPMODE {
02614     public:
02618         EMRSETMAPMODE ( DWORD mode )
02619         {
02620             emr.iType = EMR_SETMAPMODE;
02621             emr.nSize = sizeof( ::EMRSETMAPMODE );
02622             iMode = mode;
02623         }
02628         EMRSETMAPMODE ( DATASTREAM& ds )
02629         {
02630             ds >> emr >> iMode;
02631         }
02635         bool serialize ( DATASTREAM ds )
02636         {
02637             ds << emr << iMode;
02638             return true;
02639         }
02643         int size ( void ) const { return emr.nSize; }
02649         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02650         {
02651             EMF_UNUSED(source);
02652             SetMapMode( dc, iMode );
02653         }
02654 #ifdef ENABLE_EDITING
02658         void edit ( void ) const
02659         {
02660 #if defined(__LP64__)
02661             const char* FMT = "unknown(%d)\n";
02662 #else
02663             const char* FMT = "unknown(%ld)\n";
02664 #endif /* __x86_64__ */
02665             printf( "*SETMAPMODE*\n" );
02666             printf( "\tiMode\t: " );
02667             switch ( iMode ) {
02668                 case MM_TEXT: printf( "MM_TEXT\n" ); break;
02669                 case MM_LOMETRIC: printf( "MM_LOMETRIC\n" ); break;
02670                 case MM_HIMETRIC: printf( "MM_HIMETRIC\n" ); break;
02671                 case MM_LOENGLISH: printf( "MM_LOENGLISH\n" ); break;
02672                 case MM_HIENGLISH: printf( "MM_HIENGLISH\n" ); break;
02673                 case MM_TWIPS: printf( "MM_TWIPS\n" ); break;
02674                 case MM_ISOTROPIC: printf( "MM_ISOTROPIC\n" ); break;
02675                 case MM_ANISOTROPIC: printf( "MM_ANISOTROPIC\n" ); break;
02676                 default: printf( FMT, iMode );
02677             }
02678         }
02679 #endif /* ENABLE_EDITING */
02680 };
02681
02683
02686     class EMRSELECTOBJECT : public METARECORD, ::EMRSELECTOBJECT {
02687     public:
02691         EMRSELECTOBJECT ( HGDI OBJ object )
02692         {
02693             emr.iType = EMR_SELECTOBJECT;
02694             emr.nSize = sizeof( ::EMRSELECTOBJECT );
02695             ihObject = object;
02696         }
02701         EMRSELECTOBJECT ( DATASTREAM& ds )
02702         {
02703             ds >> emr >> ihObject;

```

```

02704     }
02708     bool serialize ( DATASTREAM ds )
02709     {
02710         ds « emr « ihObject;
02711         return true;
02712     }
02716     int size ( void ) const { return emr.nSize; }
02722     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
02723 #ifdef ENABLE_EDITING
02727     void edit ( void ) const
02728     {
02729 #if defined(__LP64__)
02730     const char* FMT = "\\tihObject\\t: 0x%x\\n";
02731 #else
02732     const char* FMT = "\\tihObject\\t: 0x%lx\\n";
02733 #endif /* __x86_64__ */
02734     printf( "*SELECTOBJECT*\\n" );
02735     printf( FMT, ihObject );
02736     }
02737 #endif /* ENABLE_EDITING */
02738 };
02739
02741
02744     class EMRDELETEOBJECT : public METARECORD, ::EMRDELETEOBJECT {
02745     public:
02749         EMRDELETEOBJECT ( HGDI OBJ object )
02750         {
02751             emr.iType = EMR_DELETEOBJECT;
02752             emr.nSize = sizeof( ::EMRDELETEOBJECT );
02753             ihObject = object;
02754         }
02759         EMRDELETEOBJECT ( DATASTREAM& ds )
02760         {
02761             ds » emr » ihObject;
02762         }
02766         bool serialize ( DATASTREAM ds )
02767         {
02768             ds « emr « ihObject;
02769             return true;
02770         }
02774         int size ( void ) const { return emr.nSize; }
02780         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
02781 #ifdef ENABLE_EDITING
02785         void edit ( void ) const
02786         {
02787 #if defined(__LP64__)
02788         const char* FMT = "\\tihObject\\t: 0x%x\\n";
02789 #else
02790         const char* FMT = "\\tihObject\\t: 0x%lx\\n";
02791 #endif /* __x86_64__ */
02792         printf( "*DELETEOBJECT*\\n" );
02793         printf( FMT, ihObject );
02794         }
02795 #endif /* ENABLE_EDITING */
02796 };
02797
02799
02802     class EMRMOVETOEX : public METARECORD, ::EMRMOVETOEX {
02803     public:
02808         EMRMOVETOEX ( INT x, INT y )
02809         {
02810             emr.iType = EMR_MOVETOEX;
02811             emr.nSize = sizeof( ::EMRMOVETOEX );
02812             ptl.x = x;
02813             ptl.y = y;
02814         }
02819         EMRMOVETOEX ( DATASTREAM& ds )
02820         {
02821             ds » emr » ptl;
02822         }
02826         bool serialize ( DATASTREAM ds )
02827         {
02828             ds « emr « ptl;
02829             return true;
02830         }
02834         int size ( void ) const { return emr.nSize; }
02840         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02841         {
02842             EMF_UNUSED(source);
02843             MoveToEx( dc, ptl.x, ptl.y, 0 );
02844         }
02845 #ifdef ENABLE_EDITING
02849         void edit ( void ) const
02850         {
02851             printf( "*MOVETOEX*\\n" );
02852             edit_pointl( "ptl", ptl );
02853         }

```

```

02854 #endif /* ENABLE_EDITING */
02855 };
02856
02857
02861 class EMRLINETO : public METARECORD, ::EMRLINETO {
02862 public:
02863     EMRLINETO ( INT x, INT y )
02864     {
02865         emr.iType = EMR_LINETO;
02866         emr.nSize = sizeof( ::EMRLINETO );
02867         ptl.x = x;
02868         ptl.y = y;
02869     }
02870     EMRLINETO ( DATASTREAM& ds )
02871     {
02872         ds » emr » ptl;
02873     }
02874     bool serialize ( DATASTREAM ds )
02875     {
02876         ds « emr « ptl;
02877         return true;
02878     }
02879     int size ( void ) const { return emr.nSize; }
02880     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02881     {
02882         EMF_UNUSED(source);
02883         LineTo( dc, ptl.x, ptl.y );
02884     }
02885 #ifdef ENABLE_EDITING
02886     void edit ( void ) const
02887     {
02888         printf( "*LINETO*\n" );
02889         edit_pointl( "ptl", ptl );
02890     }
02891 #endif /* ENABLE_EDITING */
02892 };
02893
02897 class EMRARC : public METARECORD, ::EMRARC {
02898 public:
02899     EMRARC ( INT left, INT top, INT right, INT bottom, INT xstart,
02900             INT ystart, INT xend, INT yend )
02901     {
02902         emr.iType = EMR_ARC;
02903         emr.nSize = sizeof( ::EMRARC );
02904         rclBox.left = left;
02905         rclBox.right = right;
02906         rclBox.bottom = bottom;
02907         rclBox.top = top;
02908         ptlStart.x = xstart;
02909         ptlStart.y = ystart;
02910         ptlEnd.x = xend;
02911         ptlEnd.y = yend;
02912     }
02913     EMRARC ( DATASTREAM& ds )
02914     {
02915         ds » emr » rclBox » ptlStart » ptlEnd;
02916     }
02917     bool serialize ( DATASTREAM ds )
02918     {
02919         ds « emr « rclBox « ptlStart « ptlEnd;
02920         return true;
02921     }
02922     int size ( void ) const { return emr.nSize; }
02923     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
02924     {
02925         EMF_UNUSED(source);
02926         Arc( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom,
02927             ptlStart.x, ptlStart.y, ptlEnd.x, ptlEnd.y );
02928     }
02929 #ifdef ENABLE_EDITING
02930     void edit ( void ) const
02931     {
02932         printf( "*ARC*\n" );
02933         edit_rectl( "rclBox\t", rclBox );
02934         edit_pointl( "ptlStart", ptlStart );
02935         edit_pointl( "ptlEnd\t", ptlEnd );
02936     }
02937 #endif /* ENABLE_EDITING */
02938 };
02939
02943 class EMRARCTO : public METARECORD, ::EMRARCTO {
02944 public:
02945     EMRARCTO ( INT left, INT top, INT right, INT bottom, INT xstart,
02946             INT ystart, INT xend, INT yend )
02947     {

```

```

03012     emr.iType = EMR_ARCTO;
03013     emr.nSize = sizeof( ::EMRARCTO );
03014     rclBox.left = left;
03015     rclBox.right = right;
03016     rclBox.bottom = bottom;
03017     rclBox.top = top;
03018     ptlStart.x = xstart;
03019     ptlStart.y = ystart;
03020     ptlEnd.x = xend;
03021     ptlEnd.y = yend;
03022 }
03027 EMRARCTO ( DATASTREAM& ds )
03028 {
03029     ds » emr » rclBox » ptlStart » ptlEnd;
03030 }
03034 bool serialize ( DATASTREAM ds )
03035 {
03036     ds « emr « rclBox « ptlStart « ptlEnd;
03037     return true;
03038 }
03042 int size ( void ) const { return emr.nSize; }
03048 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03049 {
03050     EMF_UNUSED(source);
03051     ArcTo( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom,
03052         ptlStart.x, ptlStart.y, ptlEnd.x, ptlEnd.y );
03053 }
03054 #ifdef ENABLE_EDITING
03058 void edit ( void ) const
03059 {
03060     printf( "ARCTO*\n" );
03061     edit_rectl( "rclBox\t", rclBox );
03062     edit_pointl( "ptlStart", ptlStart );
03063     edit_pointl( "ptlEnd\t", ptlEnd );
03064 }
03065 #endif /* ENABLE_EDITING */
03066 };
03067
03069
03072 class EMRRECTANGLE : public METARECORD, ::EMRRECTANGLE {
03073 public:
03080     EMRRECTANGLE ( INT left, INT top, INT right, INT bottom )
03081     {
03082         emr.iType = EMR_RECTANGLE;
03083         emr.nSize = sizeof( ::EMRRECTANGLE );
03084         rclBox.left = left;
03085         rclBox.right = right;
03086         rclBox.bottom = bottom;
03087         rclBox.top = top;
03088     }
03093     EMRRECTANGLE ( DATASTREAM& ds )
03094     {
03095         ds » emr » rclBox;
03096     }
03100     bool serialize ( DATASTREAM ds )
03101     {
03102         ds « emr « rclBox;
03103         return true;
03104     }
03108     int size ( void ) const { return emr.nSize; }
03114     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03115     {
03116         EMF_UNUSED(source);
03117         Rectangle( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom );
03118     }
03119 #ifdef ENABLE_EDITING
03123     void edit ( void ) const
03124     {
03125         printf( "RECTANGLE*\n" );
03126         edit_rectl( "rclBox", rclBox );
03127     }
03128 #endif /* ENABLE_EDITING */
03129 };
03130
03132
03135 class EMRELLIPSE : public METARECORD, ::EMRELLIPSE {
03136 public:
03144     EMRELLIPSE ( INT left, INT top, INT right, INT bottom )
03145     {
03146         emr.iType = EMR_ELLIPSE;
03147         emr.nSize = sizeof( ::EMRELLIPSE );
03148         rclBox.left = left;
03149         rclBox.right = right;
03150         rclBox.bottom = bottom;
03151         rclBox.top = top;
03152     }
03157     EMRELLIPSE ( DATASTREAM& ds )

```

```

03158     {
03159         ds » emr » rclBox;
03160     }
03164     bool serialize ( DATASTREAM ds )
03165     {
03166         ds « emr « rclBox;
03167         return true;
03168     }
03172     int size ( void ) const { return emr.nSize; }
03178     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03179     {
03180         EMF_UNUSED(source);
03181         Ellipse( dc, rclBox.left, rclBox.top, rclBox.right, rclBox.bottom );
03182     }
03183 #ifndef 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 EMPOLYLINE : public METARECORD, ::EMPOLYLINE {
03200     POINTL* lpoints{nullptr};
03201     public:
03207         EMPOLYLINE ( 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( ::EMPOLYLINE ) + 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         ~EMPOLYLINE ( )
03230         {
03231             if ( lpoints ) delete[] lpoints;
03232         }
03237         EMPOLYLINE ( DATASTREAM& ds )
03238         {
03239             ds » emr » rclBounds » cptl;
03240
03241             if ( emr.nSize - (sizeof(::EMPOLYLINE)-sizeof(POINTL)) <
03242                 sizeof(POINTL) * cptl ) {
03243                 throw std::runtime_error( "Invalid record size" );
03244             }
03245
03246             std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
03247             POINTLARRAY points( buffer.get(), cptl );
03248
03249             ds » points;
03250
03251             lpoints = buffer.release();
03252         }
03256         bool serialize ( DATASTREAM ds )
03257         {
03258             ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
03259             return true;
03260         }
03264         int size ( void ) const { return emr.nSize; }
03270         void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03271         {
03272             EMF_UNUSED(source);
03273             // According to the wine windef.h header, POINT and POINTL are equivalent
03274             Polyline( dc, (POINT*)lpoints, cptl );
03275         }
03276 #ifndef 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 (cpts - 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 (cpts - 1) below is to account for aptl, which isn't written out
03334         emr.nSize = sizeof( ::EMRPOLYLINE16 ) + sizeof( POINT16 ) * ( cpts - 1 );
03335
03336         lpoints = new POINT16[cpts];
03337
03338         for (int i=0; i<n; i++) {
03339             lpoints[i].x = points[i].x;
03340             lpoints[i].y = points[i].y;
03341         }
03342
03343         rclBounds = *bounds;
03344     }
03348     ~EMRPOLYLINE16 ( )
03349     {
03350         if ( lpoints ) delete[] lpoints;
03351     }
03356     EMRPOLYLINE16 ( DATASTREAM& ds )
03357     {
03358         ds » emr » rclBounds » cpts;
03359
03360         if ( emr.nSize - (sizeof(::EMRPOLYLINE16)-sizeof(POINT16) ) <
03361             sizeof(POINT16) * cpts ) {
03362             throw std::runtime_error( "Invalid record size" );
03363         }
03364
03365         std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
03366
03367         POINT16ARRAY points( buffer.get(), cpts );
03368
03369         ds » points;
03370
03371         lpoints = buffer.release();
03372     }
03376     bool serialize ( DATASTREAM ds )
03377     {
03378         ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
03379         return true;
03380     }
03384     int size ( void ) const { return emr.nSize; }
03390     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03391     {
03392         EMF_UNUSED(source);
03393         // According to the wine windef.h header, POINT and POINTL are equivalent
03394         Polyline16( dc, lpoints, cpts );
03395     }
03396 #ifdef ENABLE_EDITING
03400     void edit ( void ) const
03401     {
03402         printf( "%POLYLINE16*\n" );
03403         edit_rectl( "rclBounds", rclBounds );
03404         edit_point16array( "\t", cpts, lpoints );
03405     }
03406 #endif /* ENABLE_EDITING */
03407 };
03408
03410

```



```

03413 class EMRPOLYGON : public METARECORD, ::EMRPOLYGON {
03414     POINTL* lpoints{ nullptr };
03415 public:
03421     EMRPOLYGON ( const RECTL* bounds, const POINT* points, INT n )
03422     {
03423         cptl = n;
03424         aptl[0].x = 0;           // Really unused
03425         aptl[0].y = 0;
03426
03427         emr.iType = EMR_POLYGON;
03428         // The (cptl-1) below is to account for aptl, which isn't written out
03429         emr.nSize = sizeof( ::EMRPOLYGON ) + sizeof( POINTL ) * (cptl-1);
03430
03431         lpoints = new POINTL[cptl];
03432
03433         for (int i=0; i<n; i++) {
03434             lpoints[i].x = points[i].x;
03435             lpoints[i].y = points[i].y;
03436         }
03437
03438         rclBounds = *bounds;
03439     }
03444     EMRPOLYGON ( DATASTREAM& ds )
03445     {
03446         ds » emr » rclBounds » cptl;
03447
03448         if ( emr.nSize - (sizeof(::EMRPOLYGON) - sizeof(POINTL)) <
03449             cptl * sizeof(POINTL) ) {
03450             throw std::runtime_error( "Invalid record size" );
03451         }
03452
03453         std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
03454
03455         POINTLARRAY points( buffer.get(), cptl );
03456
03457         ds » points;
03458
03459         lpoints = buffer.release();
03460     }
03464     ~EMRPOLYGON ( )
03465     {
03466         if ( lpoints ) delete[] lpoints;
03467     }
03471     bool serialize ( DATASTREAM ds )
03472     {
03473         ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
03474         return true;
03475     }
03479     int size ( void ) const { return emr.nSize; }
03485     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03486     {
03487         EMF_UNUSED(source);
03488         // According to the wine windef.h header, POINT and POINTL are equivalent
03489         Polygon( dc, (POINT*)lpoints, cptl );
03490     }
03491 #ifdef ENABLE_EDITING
03495     void edit ( void ) const
03496     {
03497         printf( "*POLYGON*\n" );
03498         edit_rectl( "rclBounds", rclBounds );
03499         edit_pointlarray( "\t", cptl, lpoints );
03500     }
03501 #endif /* ENABLE_EDITING */
03502 };
03503
03505
03508 class EMRPOLYGON16 : public METARECORD, ::EMRPOLYGON16 {
03509     POINT16* lpoints{ nullptr };
03510 public:
03516     EMRPOLYGON16 ( const RECTL* bounds, const POINT* points, INT16 n )
03517     {
03518         cpts = n;
03519         apts[0].x = 0;           // Really unused
03520         apts[0].y = 0;
03521
03522         emr.iType = EMR_POLYGON16;
03523         // The (cptl-1) below is to account for aptl, which isn't written out
03524         emr.nSize = sizeof( ::EMRPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1);
03525
03526         lpoints = new POINT16[cpts];
03527
03528         for (int i=0; i<n; i++) {
03529             lpoints[i].x = points[i].x;
03530             lpoints[i].y = points[i].y;
03531         }
03532
03533         rclBounds = *bounds;

```

```

03534     }
03541     EMRPOLYGON16 ( const RECTL* bounds, const POINT16* points, INT16 n )
03542     {
03543         cpts = n;
03544         apts[0].x = 0;           // Really unused
03545         apts[0].y = 0;
03546
03547         emr.iType = EMR_POLYGON16;
03548         // The (cptl-1) below is to account for aptl, which isn't written out
03549         emr.nSize = sizeof( ::EMRPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1);
03550
03551         lpoints = new POINT16[cpts];
03552
03553         for (int i=0; i<n; i++) {
03554             lpoints[i].x = points[i].x;
03555             lpoints[i].y = points[i].y;
03556         }
03557
03558         rclBounds = *bounds;
03559     }
03564     EMRPOLYGON16 ( DATASTREAM& ds )
03565     {
03566         ds » emr » rclBounds » cpts;
03567
03568         if ( emr.nSize - (sizeof(::EMRPOLYGON16) - sizeof(POINT16)) <
03569             cpts * sizeof(POINT16) ) {
03570             throw std::runtime_error( "Invalid record size " );
03571         }
03572
03573         std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
03574
03575         POINT16ARRAY points( buffer.get(), cpts );
03576
03577         ds » points;
03578
03579         lpoints = buffer.release();
03580     }
03584     ~EMRPOLYGON16 ( )
03585     {
03586         if ( lpoints ) delete[] lpoints;
03587     }
03591     bool serialize ( DATASTREAM ds )
03592     {
03593         ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
03594         return true;
03595     }
03599     int size ( void ) const { return emr.nSize; }
03605     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
03606     {
03607         EMF_UNUSED(source);
03608         // According to the wine windef.h header, POINT and POINTL are equivalent
03609         Polygon16( dc, lpoints, cpts );
03610     }
03611 #ifdef ENABLE_EDITING
03615     void edit ( void ) const
03616     {
03617         printf( "*POLYGON16*\n" );
03618         edit_rectl( "rclBounds", rclBounds );
03619         edit_point16array( "\t", cpts, lpoints );
03620     }
03621 #endif /* ENABLE_EDITING */
03622 };
03623
03625
03628     class EMRPOLYPOLYGON : public METARECORD, ::EMRPOLYPOLYGON {
03629     public:
03630         DWORD* lcounts{ nullptr };
03631         POINTL* lpoints{ nullptr };
03632     public:
03633         EMRPOLYPOLYGON ( const RECTL* bounds, const POINT* points, const INT* counts,
03634             UINT polygons )
03635         {
03636             nPolys = polygons;
03637             // Count the number of points in points
03638             int n = 0;
03639             for ( unsigned int i = 0; i < nPolys; i++ )
03640                 n += counts[i];
03641
03642             cptl = n;
03643             aPolyCounts[0] = 0; // Really unused
03644             aptl[0].x = 0;
03645             aptl[0].y = 0;
03646
03647             emr.iType = EMR_POLYPOLYGON;
03648             // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03649             // aren't directly written out
03650             emr.nSize = sizeof( ::EMRPOLYPOLYGON ) + sizeof( POINTL ) * (cptl-1)
03651                 + 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 most 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 }
03732 #ifdef ENABLE_EDITING
03733 void edit ( void ) const
03734 {
03735     #if defined(__LP64__)
03736         const char* FMT0 = "\tnPolys\t\t: %d\n";
03737         const char* FMT1 = "\tcptl\t\t: %d\n";
03738         const char* FMT2 = "%d\n";
03739         const char* FMT3 = "\t\t\t\t %d\n";
03740         const char* FMT4 = "%d, %d\n";
03741         const char* FMT5 = "\t\t\t\t %d, %d\n";
03742     #else
03743         const char* FMT0 = "\tnPolys\t\t: %ld\n";
03744     #endif
03745 }

```

```

03765     const char* FMT1 = "\tcptl\t\t: %ld\n";
03766     const char* FMT2 = "%ld\n";
03767     const char* FMT3 = "\t\t\t\t\t %ld\n";
03768     const char* FMT4 = "%ld, %ld\n";
03769     const char* FMT5 = "\t\t\t\t\t %ld, %ld\n";
03770 #endif /* __x86_64__ */
03771     printf( "*POLYPOLYGON*\n" );
03772     edit_rectl( "rclBounds", rclBounds );
03773     printf( FMT0, nPolys );
03774     printf( FMT1, cptl );
03775     printf( "\taPolyCounts\t: " );
03776     if ( nPolys > 0 )
03777     printf( FMT2, lcounts[0] );
03778     else
03779     puts( "" );
03780     for ( unsigned int i = 1; i < nPolys; i++ )
03781     printf( FMT3, lcounts[i] );
03782     printf( "\tapts\t\t: " );
03783     if ( cptl > 0 )
03784     printf( FMT4, lpoints[0].x, lpoints[0].y );
03785     else
03786     puts( "" );
03787     for ( unsigned int i = 1; i < cptl; i++ )
03788     printf( FMT5, lpoints[i].x, lpoints[i].y );
03789     }
03790 #endif /* ENABLE_EDITING */
03791 };
03792
03793
03794
03797 class EMRPOLYPOLYGON16 : public METARECORD, ::EMRPOLYPOLYGON16 {
03798     DWORD* lcounts{ nullptr };
03799     POINT16* lpoints{ nullptr };
03800 public:
03807     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT* points,
03808                       const INT* counts, UINT polygons )
03809     {
03810         nPolys = polygons;
03811         // Count the number of points in points
03812         int n = 0;
03813         for ( unsigned int i = 0; i < nPolys; i++ )
03814             n += counts[i];
03815
03816         cpts = n;
03817         aPolyCounts[0] = 0;    // Really unused
03818         apts[0].x = 0;
03819         apts[0].y = 0;
03820
03821         emr.iType = EMR_POLYPOLYGON16;
03822         // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03823         // aren't directly written out
03824         emr.nSize = sizeof( ::EMRPOLYPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1)
03825         + sizeof( DWORD ) * (nPolys-1);
03826
03827         lcounts = new DWORD[nPolys];
03828
03829         for ( unsigned int i = 0; i < nPolys; i++ )
03830             lcounts[i] = counts[i];
03831
03832         lpoints = new POINT16[cpts];
03833
03834         for (int i=0; i<n; i++) {
03835             lpoints[i].x = points[i].x;
03836             lpoints[i].y = points[i].y;
03837         }
03838
03839         rclBounds = *bounds;
03840     }
03841
03848     EMRPOLYPOLYGON16 ( const RECTL* bounds, const POINT16* points,
03849                       const INT* counts, UINT16 polygons )
03850     {
03851         nPolys = polygons;
03852         // Count the number of points in points
03853         int n = 0;
03854         for ( unsigned int i = 0; i < nPolys; i++ )
03855             n += counts[i];
03856
03857         cpts = n;
03858         aPolyCounts[0] = 0;    // Really unused
03859         apts[0].x = 0;
03860         apts[0].y = 0;
03861
03862         emr.iType = EMR_POLYPOLYGON16;
03863         // The (#-1)'s below are to account for aPolyCounts[0] and aptl[0], which
03864         // aren't directly written out
03865         emr.nSize = sizeof( ::EMRPOLYPOLYGON16 ) + sizeof( POINT16 ) * (cpts-1)
03866         + sizeof( DWORD ) * (nPolys-1);
03867

```

```

03868     lcounts = new DWORD[nPolys];
03869
03870     for ( unsigned int i = 0; i < nPolys; i++ )
03871     lcounts[i] = counts[i];
03872
03873     lpoints = new POINT16[cpts];
03874
03875     for (int i=0; i<n; i++) {
03876     lpoints[i].x = points[i].x;
03877     lpoints[i].y = points[i].y;
03878     }
03879
03880     rclBounds = *bounds;
03881 }
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 most 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 {
03944     #if defined(__LP64__)
03945         const char* FMT0 = "\tnPolys\t\t: %d\n";
03946         const char* FMT1 = "\tcptl\t\t: %d\n";
03947         const char* FMT2 = "%d\n";
03948         const char* FMT3 = "\t\t\t %d\n";
03949     #else
03950         const char* FMT0 = "\tnPolys\t\t: %ld\n";
03951         const char* FMT1 = "\tcptl\t\t: %ld\n";
03952         const char* FMT2 = "%ld\n";
03953         const char* FMT3 = "\t\t\t %ld\n";
03954     #endif /* __x86_64__ */
03955 }

```

```

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, cptl );
04079     }
04080 #ifndef ENABLE_EDITING
04084     void edit ( void ) const
04085     {
04086         printf( "*POLYBEZIER*\n" );
04087         edit_rectl( "rclBounds", rclBounds );
04088         edit_pointlarray( "\t", cptl, lpoints );
04089     }
04090 #endif /* ENABLE_EDITING */
04091 };

```

```

04092
04093
04094
04097 class EMRPOLYBEZIER16 : public METARECORD, ::EMRPOLYBEZIER16 {
04098     POINT16* lpoints{ nullptr };
04099 public:
04105     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT16* points, INT n )
04106     {
04107         cpts = n;
04108         apts[0].x = 0;           // Really unused
04109         apts[0].y = 0;
04110
04111         emr.iType = EMR_POLYBEZIER16;
04112         // The (cptl-1) below is to account for aptl, which isn't written out
04113         emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04114
04115         lpoints = new POINT16[cpts];
04116
04117         for (int i=0; i<n; i++) {
04118             lpoints[i].x = points[i].x;
04119             lpoints[i].y = points[i].y;
04120         }
04121
04122         rclBounds = *bounds;
04123     }
04130     EMRPOLYBEZIER16 ( const RECTL* bounds, const POINT* points, INT n )
04131     {
04132         cpts = n;
04133         apts[0].x = 0;           // Really unused
04134         apts[0].y = 0;
04135
04136         emr.iType = EMR_POLYBEZIER16;
04137         // The (cptl-1) below is to account for aptl, which isn't written out
04138         emr.nSize = sizeof( ::EMRPOLYBEZIER16 ) + sizeof( POINT16 ) * (cpts-1);
04139
04140         lpoints = new POINT16[cpts];
04141
04142         for (int i=0; i<n; i++) {
04143             lpoints[i].x = points[i].x;
04144             lpoints[i].y = points[i].y;
04145         }
04146
04147         rclBounds = *bounds;
04148     }
04153     EMRPOLYBEZIER16 ( DATASTREAM& ds )
04154     {
04155         ds » emr » rclBounds » cpts;
04156
04157         if ( emr.nSize - (sizeof( ::EMRPOLYBEZIER16 ) - sizeof(POINT16)) <
04158             sizeof( POINT16 ) * cpts ) {
04159             throw std::runtime_error( "Invalid record size" );
04160         }
04161
04162         std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04163
04164         POINT16ARRAY points( buffer.get(), cpts );
04165
04166         ds » points;
04167
04168         lpoints = buffer.release();
04169     }
04173     ~EMRPOLYBEZIER16 ( )
04174     {
04175         if ( lpoints ) delete[] lpoints;
04176     }
04180     bool serialize ( DATASTREAM ds )
04181     {
04182         ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04183         return true;
04184     }
04188     int size ( void ) const { return emr.nSize; }
04194     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04195     {
04196         EMF_UNUSED(source);
04197         // According to the wine windef.h header, POINT and POINTL are equivalent
04198         PolyBezier16( dc, lpoints, cpts );
04199     }
04200 #ifdef ENABLE_EDITING
04204     void edit ( void ) const
04205     {
04206         printf( "%POLYBEZIER16*\n" );
04207         edit_rectl( "rclBounds", rclBounds );
04208         edit_point16array( "\t", cpts, lpoints );
04209     }
04210 #endif /* ENABLE_EDITING */
04211 };
04212
04213
04214

```

```

04217 class EMPOLYBEZIERTO : public METARECORD, ::EMRPOLYBEZIER {
04218     POINTL* lpoints{ nullptr };
04219 public:
04220     EMPOLYBEZIERTO ( const RECTL* bounds, const POINT* points, INT n )
04221     {
04222         cptl = n;
04223         aptl[0].x = 0;           // Really unused
04224         aptl[0].y = 0;
04225
04226         emr.iType = EMR_POLYBEZIERTO;
04227         // The (cptl-1) below is to account for aptl, which isn't written out
04228         emr.nSize = sizeof( ::EMRPOLYBEZIERTO ) + sizeof( POINTL ) * (cptl-1);
04229
04230         lpoints = new POINTL[cptl];
04231
04232         for (int i=0; i<n; i++) {
04233             lpoints[i].x = points[i].x;
04234             lpoints[i].y = points[i].y;
04235         }
04236
04237         rclBounds = *bounds;
04238     }
04239     EMPOLYBEZIERTO ( DATASTREAM& ds )
04240     {
04241         ds » emr » rclBounds » cptl;
04242
04243         if ( emr.nSize - (sizeof( ::EMRPOLYBEZIERTO ) - sizeof(POINTL)) <
04244             sizeof( POINTL ) * cptl ) {
04245             throw std::runtime_error( "Invalid record size" );
04246         }
04247
04248         std::unique_ptr<POINTL[]> buffer( new POINTL[cptl] );
04249
04250         POINTLARRAY points( buffer.get(), cptl );
04251
04252         ds » points;
04253
04254         lpoints = buffer.release();
04255     }
04256     ~EMPOLYBEZIERTO ( )
04257     {
04258         if ( lpoints ) delete[] lpoints;
04259     }
04260     bool serialize ( DATASTREAM ds )
04261     {
04262         ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
04263         return true;
04264     }
04265     int size ( void ) const { return emr.nSize; }
04266     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04267     {
04268         EMF_UNUSED(source);
04269         // According to the wine windef.h header, POINT and POINTL are equivalent
04270         PolyBezierTo( dc, (POINT*)lpoints, cptl );
04271     }
04272 #ifdef ENABLE_EDITING
04273     void edit ( void ) const
04274     {
04275         printf( "*POLYBEZIERTO*\n" );
04276         edit_rectl( "rclBounds", rclBounds );
04277         edit_pointlarray( "\t", cptl, lpoints );
04278     }
04279 #endif /* ENABLE_EDITING */
04280 };
04281
04282 class EMPOLYBEZIERTO16 : public METARECORD, ::EMRPOLYBEZIER16 {
04283     POINT16* lpoints{ nullptr };
04284 public:
04285     EMPOLYBEZIERTO16 ( const RECTL* bounds, const POINT16* points, INT n )
04286     {
04287         cpts = n;
04288         apts[0].x = 0;           // Really unused
04289         apts[0].y = 0;
04290
04291         emr.iType = EMR_POLYBEZIERTO16;
04292         // The (cptl-1) below is to account for aptl, which isn't written out
04293         emr.nSize = sizeof( ::EMRPOLYBEZIERTO16 ) + sizeof( POINT16 ) * (cpts-1);
04294
04295         lpoints = new POINT16[cpts];
04296
04297         for (int i=0; i<n; i++) {
04298             lpoints[i].x = points[i].x;
04299             lpoints[i].y = points[i].y;
04300         }
04301
04302         rclBounds = *bounds;

```



```

04338     }
04345     EMPOLYBEZIERTO16 ( const RECTL* bounds, const POINT* points, INT n )
04346     {
04347         cpts = n;
04348         apts[0].x = 0;           // Really unused
04349         apts[0].y = 0;
04350
04351         emr.iType = EMR_POLYBEZIERTO16;
04352         // The (cptl-1) below is to account for aptl, which isn't written out
04353         emr.nSize = sizeof( ::EMPOLYBEZIERTO16 ) + sizeof( POINT16 ) * (cpts-1);
04354
04355         lpoints = new POINT16[cpts];
04356
04357         for (int i=0; i<n; i++) {
04358             lpoints[i].x = points[i].x;
04359             lpoints[i].y = points[i].y;
04360         }
04361
04362         rclBounds = *bounds;
04363     }
04368     EMPOLYBEZIERTO16 ( DATASTREAM& ds )
04369     {
04370         ds » emr » rclBounds » cpts;
04371
04372         if ( emr.nSize - (sizeof( ::EMPOLYBEZIERTO16 ) - sizeof(POINT16)) <
04373             sizeof( POINT16 ) * cpts ) {
04374             throw std::runtime_error( "Invalid record size " );
04375         }
04376
04377         std::unique_ptr<POINT16[]> buffer( new POINT16[cpts] );
04378
04379         POINT16ARRAY points( buffer.get(), cpts );
04380
04381         ds » points;
04382
04383         lpoints = buffer.release();
04384     }
04388     ~EMPOLYBEZIERTO16 ( )
04389     {
04390         if ( lpoints ) delete[] lpoints;
04391     }
04395     bool serialize ( DATASTREAM ds )
04396     {
04397         ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04398         return true;
04399     }
04403     int size ( void ) const { return emr.nSize; }
04409     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04410     {
04411         EMF_UNUSED(source);
04412         // According to the wine windef.h header, POINT and POINTL are equivalent
04413         PolyBezierTo16( dc, lpoints, cpts );
04414     }
04415 #ifdef ENABLE_EDITING
04419     void edit ( void ) const
04420     {
04421         printf( "*POLYBEZIERTO16*\n" );
04422         edit_rectl( "rclBounds", rclBounds );
04423         edit_point16array( "\t", cpts, lpoints );
04424     }
04425 #endif /* ENABLE_EDITING */
04426 };
04427
04429
04432     class EMPOLYLINETO : public METARECORD, ::EMPOLYLINETO {
04433     POINTL* lpoints{ nullptr };
04434     public:
04440         EMPOLYLINETO ( const RECTL* bounds, const POINT* points, INT n )
04441         {
04442             cptl = n;
04443             aptl[0].x = 0;
04444             aptl[0].y = 0;
04445
04446             emr.iType = EMR_POLYLINETO;
04447             // The (cptl-1) below is to account for aptl, which isn't written out
04448             emr.nSize = sizeof( ::EMPOLYLINETO ) + 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         EMPOLYLINETO ( 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     }
04480 ~EMRPOLYLINETO ( )
04481 {
04482     if ( lpoints ) delete[] lpoints;
04483 }
04484 bool serialize ( DATASTREAM ds )
04485 {
04486     ds « emr « rclBounds « cptl « POINTLARRAY( lpoints, cptl );
04487     return true;
04488 }
04489 int size ( void ) const { return emr.nSize; }
04490 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04491 {
04492     EMF_UNUSED(source);
04493     // According to the wine windef.h header, POINT and POINTL are equivalent
04494     PolylineTo( dc, (POINT*)lpoints, cptl );
04495 }
04496 #ifdef ENABLE_EDITING
04497 void edit ( void ) const
04498 {
04499     printf( "*POLYLINETO*\n" );
04500     edit_rectl( "rclBounds", rclBounds );
04501     edit_pointlarray( "\t", cptl, lpoints );
04502 }
04503 #endif /* ENABLE_EDITING */
04504 };
04505
04506 class EMRPOLYLINETO16 : public METARECORD, ::EMRPOLYLINETO16 {
04507     POINT16* lpoints{ nullptr };
04508 public:
04509     EMRPOLYLINETO16 ( const RECTL* bounds, const POINT16* points, INT n )
04510     {
04511         cpts = n;
04512         apts[0].x = 0;
04513         apts[0].y = 0;
04514
04515         emr.iType = EMR_POLYLINETO16;
04516         // The (cptl-1) below is to account for aptl, which isn't written out
04517         emr.nSize = sizeof( ::EMRPOLYLINETO16 ) + sizeof( POINT16 ) * (cpts-1);
04518
04519         lpoints = new POINT16[cpts];
04520
04521         for (int i=0; i<n; i++) {
04522             lpoints[i].x = points[i].x;
04523             lpoints[i].y = points[i].y;
04524         }
04525
04526         rclBounds = *bounds;
04527     }
04528     EMRPOLYLINETO16 ( const RECTL* bounds, const POINT* points, INT n )
04529     {
04530         cpts = n;
04531         apts[0].x = 0;
04532         apts[0].y = 0;
04533
04534         emr.iType = EMR_POLYLINETO16;
04535         // The (cptl-1) below is to account for aptl, which isn't written out
04536         emr.nSize = sizeof( ::EMRPOLYLINETO16 ) + sizeof( POINT16 ) * (cpts-1);
04537
04538         lpoints = new POINT16[cpts];
04539
04540         for (int i=0; i<n; i++) {
04541             lpoints[i].x = points[i].x;
04542             lpoints[i].y = points[i].y;
04543         }
04544
04545         rclBounds = *bounds;
04546     }
04547     EMRPOLYLINETO16 ( DATASTREAM& ds )
04548     {
04549         ds » emr » rclBounds » cpts;

```

```

04586
04587     if ( emr.nSize - (sizeof( ::EMRPOLYLINE016 ) - 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 }
04600 ~EMRPOLYLINE016 ( )
04601 {
04602     if ( lpoints ) delete[] lpoints;
04603 }
04604 bool serialize ( DATASTREAM ds )
04605 {
04606     ds « emr « rclBounds « cpts « POINT16ARRAY( lpoints, cpts );
04607     return true;
04608 }
04609 int size ( void ) const { return emr.nSize; }
04610 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04611 {
04612     EMF_UNUSED(source);
04613     // According to the wine windef.h header, POINT and POINTL are equivalent
04614     PolylineTo16( dc, lpoints, cpts );
04615 }
04616 #ifdef ENABLE_EDITING
04617 void edit ( void ) const
04618 {
04619     printf( "POLYLINE016*\n" );
04620     edit_rectl( "rclBounds", rclBounds );
04621     edit_point16array( "\t", cpts, lpoints );
04622 }
04623 #endif /* ENABLE_EDITING */
04624 };
04625
04626 class EMREXTTEXTOUTA : public METARECORD, ::EMREXTTEXTOUTA {
04627     PSTR string_a{ nullptr };
04628     int string_size;
04629
04630     INT* dx_i{ nullptr };
04631 public:
04632     EMREXTTEXTOUTA ( const RECTL* bounds, DWORD graphicsMode, FLOAT xScale,
04633                     FLOAT yScale, const PEMRTEXT text, LPCSTR string,
04634                     const INT* dx )
04635     {
04636         emr.iType = EMR_EXTTEXTOUTA;
04637         emr.nSize = sizeof( ::EMREXTTEXTOUTA );
04638
04639         rclBounds = *bounds;
04640
04641         iGraphicsMode = graphicsMode;
04642         exScale = xScale;
04643         eyScale = yScale;
04644
04645         emrtext = *text;
04646
04647         string_size = ROUND_TO_LONG( emrtext.nChars );
04648
04649         string_a = new CHAR[ string_size ];
04650
04651         memset( string_a, 0, sizeof(CHAR) * string_size );
04652
04653         for ( unsigned int i=0; i<emrtext.nChars; i++ )
04654             string_a[i] = *string++;
04655
04656         emrtext.offString = emr.nSize;
04657         emr.nSize += string_size * sizeof(CHAR);
04658     }
04659 #if 0
04660     /*
04661     Test only - Problem: Windows requires this dx to be set - at least from 2K on
04662     but to calculate real dx values is hard
04663     For pstoeedit - this is "fixed" now by estimating dx in pstoeedit
04664     */
04665     if ( !dx ) {
04666         int * dxn = new int [string_size];
04667         for ( unsigned int i=0; i < string_size; i++) dxn[i] = 10;
04668         dx = dxn;
04669     }
04670 #endif
04671     if ( dx ) {

```

```

04704
04705     dx_i = new INT[ emrtext.nChars ];
04706
04707     for ( unsigned int i=0; i<emrtext.nChars; i++ )
04708         dx_i[i] = *dx++;
04709
04710     emrtext.offDx = emr.nSize;
04711     emr.nSize += emrtext.nChars * sizeof(INT);
04712 }
04713 else {
04714     emrtext.offDx = 0;
04715     dx_i = 0;
04716 }
04717
04722 EMREXTTEXTOUTA ( DATASTREAM& ds )
04723 {
04724     ds » emr » rclBounds » iGraphicsMode » exScale » eyScale » emrtext;
04725
04726     if ( emrtext.nChars > 0 and emrtext.offString == 0 ) {
04727         throw std::runtime_error( "Invalid text specification" );
04728     }
04729
04730     if ( emrtext.nChars > emr.nSize - emrtext.offString ) {
04731         throw std::runtime_error( "Invalid text specification" );
04732     }
04733
04734     std::unique_ptr<char[]> cbuffer;
04735     std::unique_ptr<INT[]> ibuffer;
04736
04737     if ( emrtext.offString != 0 ) {
04738         string_size = ROUND_TO_LONG( emrtext.nChars );
04739
04740         cbuffer.reset( new char[string_size] );
04741
04742         memset( cbuffer.get(), 0, sizeof(CHAR) * string_size );
04743
04744         CHARSTR string( cbuffer.get(), string_size );
04745
04746         ds » string;
04747     }
04748
04749     if ( emrtext.offDx ) {
04750         ibuffer.reset( new INT[emrtext.nChars] );
04751
04752         INTARRAY dx_is( ibuffer.get(), emrtext.nChars );
04753
04754         ds » dx_is;
04755     }
04756
04757     string_a = cbuffer.release();
04758     dx_i = ibuffer.release();
04759 }
04764 ~EMREXTTEXTOUTA ( )
04765 {
04766     if ( string_a ) delete[] string_a;
04767     if ( dx_i ) delete[] dx_i;
04768 }
04772 bool serialize ( DATASTREAM ds )
04773 {
04774     ds « emr « rclBounds « iGraphicsMode « exScale « eyScale
04775     « emrtext « CHARSTR( string_a, string_size );
04776     if ( dx_i )
04777         ds « INTARRAY( dx_i, emrtext.nChars );
04778     return true;
04779 }
04783 int size ( void ) const { return emr.nSize; }
04789 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
04790 {
04791     EMF_UNUSED(source);
04792     RECT rect;
04793     rect.left = emrtext.rcl.left;
04794     rect.top = emrtext.rcl.top;
04795     rect.right = emrtext.rcl.right;
04796     rect.bottom = emrtext.rcl.bottom;
04797
04798     ExtTextOutA( dc, emrtext.ptlReference.x, emrtext.ptlReference.y,
04799         emrtext.fOptions, &rect, string_a, emrtext.nChars,
04800         dx_i );
04801 }
04802 #ifdef ENABLE_EDITING
04806 void edit ( void ) const
04807 {
04808     #if defined(__LP64__)
04809     const char* FMT0 = "unknown(%d)\n";
04810     const char* FMT1 = "\tptlReference\t: (%d,%d)\n";
04811     const char* FMT2 = "\tnChars\t\t: %d\n";
04812     const char* FMT3 = "\toffString\t: %d\n";

```

```

04813     const char* FMT4 = "\\toffDx\\t\\t: %d\\n";
04814 #else
04815     const char* FMT0 = "unknown(%ld)\\n";
04816     const char* FMT1 = "\\tptlReference\\t: (%ld,%ld)\\n";
04817     const char* FMT2 = "\\tnChars\\t\\t: %ld\\n";
04818     const char* FMT3 = "\\toffString\\t: %ld\\n";
04819     const char* FMT4 = "\\toffDx\\t\\t: %ld\\n";
04820 #endif /* __x86_64__ */
04821     printf( "EMREXTTEXTOUTA\\n" );
04822     edit_rectl( "rclBounds", rclBounds );
04823     printf( "\\tiGraphicsMode\\t: " );
04824     switch ( iGraphicsMode ) {
04825     case GM_COMPATIBLE: printf( "GM_COMPATIBLE\\n" ); break;
04826     case GM_ADVANCED: printf( "GM_ADVANCED\\n" ); break;
04827     default: printf( FMT0, iGraphicsMode );
04828     }
04829     printf( "\\texScale\\t\\t: %f\\n", exScale );
04830     printf( "\\teyScale\\t\\t: %f\\n", eyScale );
04831     printf( FMT1, emrtext.ptlReference.x, emrtext.ptlReference.y );
04832     printf( FMT2, emrtext.nChars );
04833     printf( FMT3, emrtext.offString );
04834     printf( "\\tfOptions\\t: " );
04835     if ( emrtext.fOptions == 0 )
04836     printf( "None" );
04837     else {
04838     if ( emrtext.fOptions & ETO_GRAYED ) {
04839     printf( "ETO_GRAYED" );
04840     if ( emrtext.fOptions & ~ETO_GRAYED )
04841     printf( " | " );
04842     }
04843     if ( emrtext.fOptions & ETO_OPAQUE ) {
04844     printf( "ETO_OPAQUE" );
04845     if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE) )
04846     printf( " | " );
04847     }
04848     if ( emrtext.fOptions & ETO_CLIPPED ) {
04849     printf( "ETO_CLIPPED" );
04850     if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED) )
04851     printf( " | " );
04852     }
04853     if ( emrtext.fOptions & ETO_GLYPH_INDEX ) {
04854     printf( "ETO_GLYPH_INDEX" );
04855     if ( emrtext.fOptions &
04856     ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX) )
04857     printf( " | " );
04858     }
04859     if ( emrtext.fOptions & ETO_RTLREADING ) {
04860     printf( "ETO_RTLREADING" );
04861     if ( emrtext.fOptions &
04862     ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX |
04863     ETO_RTLREADING) )
04864     printf( " | " );
04865     }
04866     if ( emrtext.fOptions & ETO_IGNORELANGUAGE )
04867     printf( "ETO_IGNORELANGUAGE" );
04868     }
04869     printf( "\\n" );
04870     edit_rectl( "rcl\\t", emrtext.rcl );
04871     printf( FMT4, emrtext.offDx );
04872     printf( "\\tString:\\n\\t\\t" );
04873     if ( emrtext.nChars > 0 ) {
04874     for ( DWORD i = 0; i < emrtext.nChars; ++i ) {
04875     putchar( string_a[i] );
04876     }
04877     }
04878     else {
04879     printf( "<empty>" );
04880     }
04881     putchar( '\\n' );
04882     if ( emrtext.offDx != 0 ) {
04883     printf( "\\tOffsets:\\n\\t\\t" );
04884     for ( unsigned int i = 0; i < emrtext.nChars; i++ )
04885     printf( "%d ", dx_i[i] );
04886     printf( "\\n" );
04887     }
04888     }
04889 #endif /* ENABLE_EDITING */
04890 };
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,

```

```

04914         const INT* dx )
04915     {
04916         emr.iType = EMR_EXTTEXTOUTW;
04917         emr.nSize = sizeof( ::EMREXTTEXTOUTW );
04918
04919         rclBounds = *bounds;
04920
04921         iGraphicsMode = graphicsMode;
04922         exScale = xScale;
04923         eyScale = yScale;
04924
04925         emrtext = *text;
04926
04927         string_size = ROUND_TO_LONG( emrtext.nChars );
04928
04929         string_a = new WCHAR[ string_size ];
04930
04931         memset( string_a, 0, sizeof(WCHAR) * string_size );
04932
04933         for ( unsigned int i=0; i<emrtext.nChars; i++ )
04934             string_a[i] = *string++;
04935
04936         emrtext.offString = emr.nSize;
04937         emr.nSize += string_size * sizeof(WCHAR);
04938     #if 0
04939     /*
04940     Test only - Problem: Windows requires this dx to be set - at least from 2K on
04941     but to calculate real dx values is hard
04942     For pstoeedit - this is "fixed" now by estimating dx in pstoeedit
04943     */
04944         if ( !dx ) {
04945             int * dxn = new int [string_size];
04946             for (unsigned int i=0; i < string_size; i++) dxn[i] = 10;
04947             dx = dxn;
04948         }
04949     #endif
04950
04951         if ( dx ) {
04952
04953             dx_i = new INT[ emrtext.nChars ];
04954
04955             for ( unsigned int i=0; i<emrtext.nChars; i++ )
04956                 dx_i[i] = *dx++;
04957
04958             emrtext.offDx = emr.nSize;
04959             emr.nSize += emrtext.nChars * sizeof(INT);
04960         }
04961         else {
04962             emrtext.offDx = 0;
04963             dx_i = 0;
04964         }
04965     }
04970     EMREXTTEXTOUTW ( DATASTREAM& ds )
04971     {
04972         ds » emr » rclBounds » iGraphicsMode » exScale » eyScale » emrtext;
04973
04974         if ( emrtext.nChars > 0 and emrtext.offString == 0 ) {
04975             throw std::runtime_error( "Invalid text specification" );
04976         }
04977
04978         if ( emrtext.nChars > emr.nSize - emrtext.offString ) {
04979             throw std::runtime_error( "Invalid text specification" );
04980         }
04981
04982         std::unique_ptr<WCHAR[]> cbuffer;
04983         std::unique_ptr<INT[]> ibuffer;
04984
04985         if ( emrtext.offString != 0 ) { // So, what is the point of this check?
04986             string_size = ROUND_TO_LONG( emrtext.nChars );
04987
04988             cbuffer.reset( new WCHAR[string_size] );
04989
04990             memset( cbuffer.get(), 0, sizeof(WCHAR) * string_size );
04991
04992             WCHARSTR string( cbuffer.get(), string_size );
04993
04994             ds » string;
04995         }
04996
04997         if ( emrtext.offDx ) {
04998             ibuffer.reset( new INT[ emrtext.nChars ] );
04999
05000             INTARRAY dx_is( ibuffer.get(), emrtext.nChars );
05001
05002             ds » dx_is;
05003         }
05004

```

```

05005     string_a = cbuffer.release();
05006     dx_i      = ibuffer.release();
05007 }
05012 ~EMREXTTEXTOUTW ( )
05013 {
05014     if ( string_a ) delete[] string_a;
05015     if ( dx_i ) delete[] dx_i;
05016 }
05020 bool serialize ( DATASTREAM ds )
05021 {
05022     ds « emr « rclBounds « iGraphicsMode « exScale « eyScale
05023     « emrtext « WCHARSTR( string_a, string_size );
05024     if ( dx_i )
05025     ds « INTARRAY( dx_i, emrtext.nChars );
05026     return true;
05027 }
05031 int size ( void ) const { return emr.nSize; }
05037 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05038 {
05039     EMF_UNUSED(source);
05040     RECT rect;
05041     rect.left = emrtext.rcl.left;
05042     rect.top = emrtext.rcl.top;
05043     rect.right = emrtext.rcl.right;
05044     rect.bottom = emrtext.rcl.bottom;
05045
05046     ExtTextOutW( dc, emrtext.ptlReference.x, emrtext.ptlReference.y,
05047                 emrtext.fOptions, &rect, string_a, emrtext.nChars,
05048                 dx_i );
05049 }
05050 #ifdef ENABLE_EDITING
05054 void edit ( void ) const
05055 {
05056     #if defined(__LP64__)
05057         const char* FMT0 = "unknown(%d)\n";
05058         const char* FMT1 = "\tptlReference\t: (%d,%d)\n";
05059         const char* FMT2 = "\tnChars\t\t: %d\n";
05060         const char* FMT3 = "\toffString\t: %d\n";
05061         const char* FMT4 = "\toffDx\t\t: %d\n";
05062     #else
05063         const char* FMT0 = "unknown(%ld)\n";
05064         const char* FMT1 = "\tptlReference\t: (%ld,%ld)\n";
05065         const char* FMT2 = "\tnChars\t\t: %ld\n";
05066         const char* FMT3 = "\toffString\t: %ld\n";
05067         const char* FMT4 = "\toffDx\t\t: %ld\n";
05068     #endif /* __x86_64__ */
05069     printf( "*EXTTEXTOUTW*\n" );
05070     edit_rectl( "rclBounds", rclBounds );
05071     printf( "\tiGraphicsMode\t: " );
05072     switch ( iGraphicsMode ) {
05073     case GM_COMPATIBLE: printf( "GM_COMPATIBLE\n" ); break;
05074     case GM_ADVANCED: printf( "GM_ADVANCED\n" ); break;
05075     default: printf( FMT0, iGraphicsMode );
05076     }
05077     printf( "\texScale\t\t: %f\n", exScale );
05078     printf( "\teyScale\t\t: %f\n", eyScale );
05079     printf( FMT1, emrtext.ptlReference.x, emrtext.ptlReference.y );
05080     printf( FMT2, emrtext.nChars );
05081     printf( FMT3, emrtext.offString );
05082     printf( "\tfOptions\t: " );
05083     if ( emrtext.fOptions == 0 )
05084     printf( "None" );
05085     else {
05086     if ( emrtext.fOptions & ETO_GRAYED ) {
05087         printf( "ETO_GRAYED" );
05088         if ( emrtext.fOptions & ~ETO_GRAYED )
05089             printf( " | " );
05090     }
05091     if ( emrtext.fOptions & ETO_OPAQUE ) {
05092         printf( "ETO_OPAQUE" );
05093         if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE) )
05094             printf( " | " );
05095     }
05096     if ( emrtext.fOptions & ETO_CLIPPED ) {
05097         printf( "ETO_CLIPPED" );
05098         if ( emrtext.fOptions & ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED) )
05099             printf( " | " );
05100     }
05101     if ( emrtext.fOptions & ETO_GLYPH_INDEX ) {
05102         printf( "ETO_GLYPH_INDEX" );
05103         if ( emrtext.fOptions &
05104             ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX) )
05105             printf( " | " );
05106     }
05107     if ( emrtext.fOptions & ETO_RTLREADING ) {
05108         printf( "ETO_RTLREADING" );
05109         if ( emrtext.fOptions &

```

```

05110         ~(ETO_GRAYED | ETO_OPAQUE | ETO_CLIPPED | ETO_GLYPH_INDEX |
05111         ETO_RTLREADING) )
05112         printf( " | " );
05113     }
05114     if ( emrtext.fOptions & ETO_IGNORELANGUAGE )
05115         printf( "ETO_IGNORELANGUAGE" );
05116     }
05117     printf( "\n" );
05118     edit_rectl( "rcl\t", emrtext.rcl );
05119     printf( FMT4, emrtext.offDx );
05120
05121     if ( emrtext.nChars > 0 ) {
05122         // iconv_open arguments are TO, FROM (not the other way around).
05123         iconv_t cvt = iconv_open( "UTF-8", "UTF-16LE" );
05124         std::vector<char> utf8_buffer( emrtext.nChars );
05125         // Cannot predict the space necessary to hold the converted
05126         // string. So, we loop until conversion is complete.
05127         size_t size = emrtext.nChars;
05128         size_t in_bytes_left = emrtext.nChars * sizeof(*string_a);
05129         size_t converted = 0;
05130         char* in_buffer = (char*)string_a;
05131         while ( 1 ) {
05132             char* out_buffer = &utf8_buffer[converted];
05133             size_t out_bytes_left = size - converted;
05134
05135             size_t n = iconv( cvt, &in_buffer, &in_bytes_left,
05136                             &out_buffer, &out_bytes_left );
05137
05138             converted = size - out_bytes_left;
05139
05140             if ( n == (size_t)-1 ) {
05141                 if ( errno == E2BIG ) {
05142                     size_t new_size = 2 * utf8_buffer.size();
05143                     utf8_buffer.resize( new_size );
05144                     size = utf8_buffer.size();
05145                 }
05146                 else {
05147                     // Real conversion error.
05148                     break;
05149                 }
05150             }
05151             else {
05152                 break;
05153             }
05154         }
05155
05156         iconv_close( cvt );
05157
05158         if ( converted == utf8_buffer.size() )
05159             utf8_buffer.push_back( '\0' );
05160         else
05161             utf8_buffer[converted] = '\0';
05162
05163         printf( "\tString:\n\t\t%s\n", utf8_buffer.data() );
05164     }
05165     else {
05166         puts( "\tString:\n\t\t<empty>\n" );
05167     }
05168
05169     if ( emrtext.offDx != 0 and emrtext.nChars > 0 ) {
05170         printf( "\tOffsets:\n\t\t" );
05171         for ( unsigned int i = 0; i < emrtext.nChars; i++ )
05172             printf( "%d ", dx_i[i] );
05173         printf( "\n" );
05174     }
05175     }
05176 #endif /* ENABLE_EDITING */
05177 };
05178
05180
05183 class EMRSETPIXELV : public METARECORD, ::EMRSETPIXELV {
05184 public:
05190     EMRSETPIXELV ( INT x, INT y, COLORREF color )
05191     {
05192         emr.iType = EMR_SETPIXELV;
05193         emr.nSize = sizeof( ::EMRSETPIXELV );
05194         ptlPixel.x = x;
05195         ptlPixel.y = y;
05196         crColor = color;
05197     }
05202     EMRSETPIXELV ( DATASTREAM& ds )
05203     {
05204         ds » emr » ptlPixel » crColor;
05205     }
05209     bool serialize ( DATASTREAM ds )
05210     {
05211         ds « emr « ptlPixel « crColor;

```



```

05212         return true;
05213     }
05217     int size ( void ) const { return emr.nSize; }
05223     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05224     {
05225         EMF_UNUSED(source);
05226         SetPixel( dc, ptlPixel.x, ptlPixel.y, crColor );
05227     }
05228 #ifdef ENABLE_EDITING
05232     void edit ( void ) const
05233     {
05234         printf( "*SETPIXELV*\n" );
05235         edit_pointl( "ptlPixel", ptlPixel );
05236         edit_color( "crColor\t", crColor );
05237     }
05238 #endif /* ENABLE_EDITING */
05239 };
05240
05241 class PEN;
05242 class EXTPEN;
05243 class BRUSH;
05244 class FONT;
05245 class PALETTE;
05246
05248
05251 class EMRCREATEPEN : public METARECORD, public ::EMRCREATEPEN
05252 {
05253 public:
05258     EMRCREATEPEN ( PEN* pen, HGDIOBJ handle );
05263     EMRCREATEPEN ( DATASTREAM& ds );
05267     bool serialize ( DATASTREAM ds )
05268     {
05269         ds << emr << ihPen << lopn;
05270         return true;
05271     }
05275     int size ( void ) const { return emr.nSize; }
05281     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05282 #ifdef ENABLE_EDITING
05286     void edit ( void ) const
05287     {
05288 #if defined(__LP64__)
05289         const char* FMT0 = "\tihPen\t\t: 0x%x\n";
05290         const char* FMT1 = "\tlopn.lopnWidth\t: %d, %d\n";
05291 #else
05292         const char* FMT0 = "\tihPen\t\t: 0x%lx\n";
05293         const char* FMT1 = "\tlopn.lopnWidth\t: %ld, %ld\n";
05294 #endif /* __x86_64__ */
05295         printf( "*CREATEPEN*\n" );
05296         printf( FMT0, ihPen );
05297         edit_pen_style( "lopn.lopnStyle", lopn.lopnStyle );
05298         printf( FMT1, lopn.lopnWidth.x, lopn.lopnWidth.y );
05299         edit_color( "lopn.lopnColor", lopn.lopnColor );
05300     }
05301 #endif /* ENABLE_EDITING */
05302 };
05303
05305
05309 class EMREXTCREATEPEN : public METARECORD, public ::EMREXTCREATEPEN
05310 {
05311 public:
05316     EMREXTCREATEPEN ( EXTPEN* pen, HGDIOBJ handle );
05321     EMREXTCREATEPEN ( DATASTREAM& ds );
05325     bool serialize ( DATASTREAM ds )
05326     {
05327         ds << emr << ihPen << offBmi << cbBmi << offBits << cbBits << elp;
05328         return true;
05329     }
05333     int size ( void ) const { return emr.nSize; }
05339     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;
05340 #ifdef ENABLE_EDITING
05344     void edit ( void ) const
05345     {
05346 #if defined(__LP64__)
05347         const char* FMT0 = "\tihPen\t\t\t: 0x%x\n";
05348         const char* FMT1 = "\toffBmi\t\t\t: %d\n";
05349         const char* FMT2 = "\tcbBmi\t\t\t: %d\n";
05350         const char* FMT3 = "\toffBits\t\t\t: %d\n";
05351         const char* FMT4 = "\tcbBits\t\t\t: %d\n";
05352         const char* FMT5 = "\telp.elpWidth\t\t: %d\n";
05353         const char* FMT6 = "\telp.elpNumEntries\t: %d\n";
05354 #else
05355         const char* FMT0 = "\tihPen\t\t\t: 0x%lx\n";
05356         const char* FMT1 = "\toffBmi\t\t\t: %ld\n";
05357         const char* FMT2 = "\tcbBmi\t\t\t: %ld\n";
05358         const char* FMT3 = "\toffBits\t\t\t: %ld\n";
05359         const char* FMT4 = "\tcbBits\t\t\t: %ld\n";
05360         const char* FMT5 = "\telp.elpWidth\t\t: %ld\n";

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```

05361     const char* FMT6 = "\\telp.elpNumEntries\\t: %ld\\n";
05362 #endif /* __x86_64__ */
05363     printf( "EMT_CREATEPEN\\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 EMR_CREATEBRUSHINDIRECT : public METARECORD, public ::EMR_CREATEBRUSHINDIRECT
05384 {
05385 public:
05390     EMR_CREATEBRUSHINDIRECT ( BRUSH* brush, HGDI OBJ handle );
05395     EMR_CREATEBRUSHINDIRECT ( 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( "EMT_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 EMR_EXT_CREATEFONTINDIRECTW : public METARECORD, public ::EMR_EXT_CREATEFONTINDIRECTW
05439 {
05440 public:
05445     EMR_EXT_CREATEFONTINDIRECTW ( FONT* font, HGDI OBJ handle );
05450     EMR_EXT_CREATEFONTINDIRECTW ( 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";

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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: %d\\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: %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
05572
05573
05574 class EMRCREATEPALETTE : public METARECORD, public ::EMRCREATEPALETTE
05575 {
05576 public:
05577     EMRCREATEPALETTE ( PALETTE* palette, HGDIOBJ handle );
05578     EMRCREATEPALETTE ( DATASTREAM& ds );
05579     bool serialize ( DATASTREAM ds )
05580     {
05581         ds << emr << ihPal << lgpl;
05582         return true;
05583     }
05584     int size ( void ) const { return emr.nSize; }
05585     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const;

```

```

05607 #ifdef ENABLE_EDITING
05611     void edit ( void ) const
05612     {
05613         printf( "*CREATEPALETTE* (not really handled by libEMF)\n" );
05614     }
05615 #endif /* ENABLE_EDITING */
05616 };
05617
05619
05622 class EMRFILLPATH : public METARECORD, ::EMRFILLPATH {
05623 public:
05627     EMRFILLPATH ( const RECTL* bounds )
05628     {
05629         emr.iType = EMR_FILLPATH;
05630         emr.nSize = sizeof( ::EMRFILLPATH );
05631         rclBounds = *bounds;
05632     }
05637     EMRFILLPATH ( DATASTREAM& ds )
05638     {
05639         ds » emr » rclBounds;
05640     }
05644     bool serialize ( DATASTREAM ds )
05645     {
05646         ds « emr « rclBounds;
05647         return true;
05648     }
05652     int size ( void ) const { return emr.nSize; }
05658     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05659     {
05660         EMF_UNUSED(source);
05661         FillPath( dc );
05662     }
05663 #ifdef ENABLE_EDITING
05667     void edit ( void ) const
05668     {
05669         printf( "*FILLPATH*\n" );
05670         edit_rectl( "rclBounds", rclBounds );
05671     }
05672 #endif /* ENABLE_EDITING */
05673 };
05675
05678 class EMRSTROKEPATH : public METARECORD, ::EMRSTROKEPATH {
05679 public:
05683     EMRSTROKEPATH ( const RECTL* bounds )
05684     {
05685         emr.iType = EMR_STROKEPATH;
05686         emr.nSize = sizeof( ::EMRSTROKEPATH );
05687         rclBounds = *bounds;
05688     }
05693     EMRSTROKEPATH ( DATASTREAM& ds )
05694     {
05695         ds » emr » rclBounds;
05696     }
05700     bool serialize ( DATASTREAM ds )
05701     {
05702         ds « emr « rclBounds;
05703         return true;
05704     }
05708     int size ( void ) const { return emr.nSize; }
05714     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05715     {
05716         EMF_UNUSED(source);
05717         StrokePath( dc );
05718     }
05719 #ifdef ENABLE_EDITING
05723     void edit ( void ) const
05724     {
05725         printf( "*STROKEPATH*\n" );
05726         edit_rectl( "rclBounds", rclBounds );
05727     }
05728 #endif /* ENABLE_EDITING */
05729 };
05731
05734 class EMRSTROKEANDFILLPATH : public METARECORD, ::EMRSTROKEANDFILLPATH {
05735 public:
05739     EMRSTROKEANDFILLPATH ( const RECTL* bounds )
05740     {
05741         emr.iType = EMR_STROKEANDFILLPATH;
05742         emr.nSize = sizeof( ::EMRSTROKEANDFILLPATH );
05743         rclBounds = *bounds;
05744     }
05749     EMRSTROKEANDFILLPATH ( DATASTREAM& ds )
05750     {
05751         ds » emr » rclBounds;
05752     }
05756     bool serialize ( DATASTREAM ds )
05757     {

```

```

05758         ds << emr << rclBounds;
05759         return true;
05760     }
05764     int size ( void ) const { return emr.nSize; }
05770     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05771     {
05772         EMF_UNUSED(source);
05773         StrokeAndFillPath( dc );
05774     }
05775 #ifdef ENABLE_EDITING
05779     void edit ( void ) const
05780     {
05781         printf( "*STROKEANDFILLPATH*\n" );
05782         edit_rectl( "rclBounds", rclBounds );
05783     }
05784 #endif /* ENABLE_EDITING */
05785 };
05787
05790 class EMRBEGINPATH : public METARECORD, ::EMRBEGINPATH {
05791 public:
05795     EMRBEGINPATH ( void )
05796     {
05797         emr.iType = EMR_BEGINPATH;
05798         emr.nSize = sizeof( ::EMRBEGINPATH );
05799     }
05804     EMRBEGINPATH ( DATASTREAM& ds )
05805     {
05806         ds >> emr;
05807     }
05811     bool serialize ( DATASTREAM ds )
05812     {
05813         ds << emr;
05814         return true;
05815     }
05819     int size ( void ) const { return emr.nSize; }
05825     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05826     {
05827         EMF_UNUSED(source);
05828         BeginPath( dc );
05829     }
05830 #ifdef ENABLE_EDITING
05834     void edit ( void ) const
05835     {
05836         printf( "*BEGINPATH*\n" );
05837     }
05838 #endif /* ENABLE_EDITING */
05839 };
05841
05844 class EMRENDPATH : public METARECORD, ::EMRENDPATH {
05845 public:
05849     EMRENDPATH ( void )
05850     {
05851         emr.iType = EMR_ENDPATH;
05852         emr.nSize = sizeof( ::EMRENDPATH );
05853     }
05858     EMRENDPATH ( DATASTREAM& ds )
05859     {
05860         ds >> emr;
05861     }
05865     bool serialize ( DATASTREAM ds )
05866     {
05867         ds << emr;
05868         return true;
05869     }
05873     int size ( void ) const { return emr.nSize; }
05879     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05880     {
05881         EMF_UNUSED(source);
05882         EndPath( dc );
05883     }
05884 #ifdef ENABLE_EDITING
05888     void edit ( void ) const
05889     {
05890         printf( "*ENDPATH*\n" );
05891     }
05892 #endif /* ENABLE_EDITING */
05893 };
05895
05898 class EMRCLOSEFIGURE : public METARECORD, ::EMRCLOSEFIGURE {
05899 public:
05903     EMRCLOSEFIGURE ( void )
05904     {
05905         emr.iType = EMR_CLOSEFIGURE;
05906         emr.nSize = sizeof( ::EMRCLOSEFIGURE );
05907     }
05912     EMRCLOSEFIGURE ( DATASTREAM& ds )
05913     {

```

```

05914     ds » emr;
05915 }
05919 bool serialize ( DATASTREAM ds )
05920 {
05921     ds « emr;
05922     return true;
05923 }
05927 int size ( void ) const { return emr.nSize; }
05933 void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05934 {
05935     EMF_UNUSED(source);
05936     CloseFigure( dc );
05937 }
05938 #ifndef ENABLE_EDITING
05942 void edit ( void ) const
05943 {
05944     printf( " *CLOSEFIGURE*\n" );
05945 }
05946 #endif /* ENABLE_EDITING */
05947 };
05949
05953 class EMRSAVEDC : public METARECORD, ::EMRSAVEDC {
05954 public:
05958     EMRSAVEDC ( void )
05959     {
05960         emr.iType = EMR_SAVEDC;
05961         emr.nSize = sizeof( ::EMRSAVEDC );
05962     }
05967     EMRSAVEDC ( DATASTREAM& ds )
05968     {
05969         ds » emr;
05970     }
05974     bool serialize ( DATASTREAM ds )
05975     {
05976         ds « emr;
05977         return true;
05978     }
05982     int size ( void ) const { return emr.nSize; }
05988     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
05989     {
05990         EMF_UNUSED(source);
05991         SaveDC( dc );
05992     }
05993 #ifndef ENABLE_EDITING
05997     void edit ( void ) const
05998     {
05999         printf( " *SAVEDC*\n" );
06000     }
06001 #endif /* ENABLE_EDITING */
06002 };
06004
06007 class EMRRESTOREDC : public METARECORD, ::EMRRESTOREDC {
06008 public:
06012     EMRRESTOREDC ( INT n )
06013     {
06014         emr.iType = EMR_RESTOREDC;
06015         emr.nSize = sizeof( ::EMRRESTOREDC );
06016         iRelative = n;
06017     }
06022     EMRRESTOREDC ( DATASTREAM& ds )
06023     {
06024         ds » emr » iRelative;
06025     }
06029     bool serialize ( DATASTREAM ds )
06030     {
06031         ds « emr « iRelative;
06032         return true;
06033     }
06037     int size ( void ) const { return emr.nSize; }
06043     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06044     {
06045         EMF_UNUSED(source);
06046         RestoreDC( dc, iRelative );
06047     }
06048 #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 };

```

```

06065
06066 class EMRSETMETARGN : public METARECORD, ::EMRSETMETARGN {
06067 public:
06073     EMRSETMETARGN ( void )
06074     {
06075         emr.iType = EMR_SETMETARGN;
06076         emr.nSize = sizeof( ::EMRSETMETARGN );
06077     }
06082     EMRSETMETARGN ( DATASTREAM& ds )
06083     {
06084         ds » emr;
06085     }
06089     bool serialize ( DATASTREAM ds )
06090     {
06091         ds « emr;
06092         return true;
06093     }
06097     int size ( void ) const { return emr.nSize; }
06103     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06104     {
06105         EMF_UNUSED(source);
06106         SetMetaRgn( dc );
06107     }
06108 #ifdef ENABLE_EDITING
06112     void edit ( void ) const
06113     {
06114         printf( "*SETMETARGN*\n" );
06115     }
06116 #endif /* ENABLE_EDITING */
06117 };
06118
06120
06123 class PEN : public GRAPHICSOBJECT, public LOGPEN {
06124 public:
06128     PEN ( const LOGPEN* lpen )
06129     {
06130         lopnStyle = lpen->lopnStyle;
06131         lopnWidth = lpen->lopnWidth;
06132         lopnColor = lpen->lopnColor;
06133     }
06137     OBJECTTYPE getType ( void ) const { return O_PEN; }
06144     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06145     {
06146         contexts[dc] = emf_handle;
06147         return new EMRCREATEPEN( this, emf_handle );
06148     }
06149 };
06150
06152
06155 class EXTPEN : public GRAPHICSOBJECT, public EXTLOGPEN {
06156 public:
06160     EXTPEN ( const EXTLOGPEN* lpen )
06161     {
06162         elpPenStyle = lpen->elpPenStyle;
06163         elpWidth = lpen->elpWidth;
06164         elpBrushStyle = lpen->elpBrushStyle;
06165         elpColor = lpen->elpColor;
06166         elpHatch = lpen->elpHatch;
06167         elpNumEntries = 0;
06168         elpStyleEntry[0] = 0;
06169     }
06173     OBJECTTYPE getType ( void ) const { return O_EXTPEN; }
06180     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06181     {
06182         contexts[dc] = emf_handle;
06183         return new EMREXTCREATEPEN( this, emf_handle );
06184     }
06185 };
06186
06188
06191 class BRUSH : public GRAPHICSOBJECT, public LOGBRUSH {
06192 public:
06196     BRUSH ( const LOGBRUSH* lbrush )
06197     {
06198         lbStyle = lbrush->lbStyle;
06199         lbColor = lbrush->lbColor;
06200         lbHatch = lbrush->lbHatch;
06201     }
06205     OBJECTTYPE getType ( void ) const { return O_BRUSH; }
06212     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06213     {
06214         contexts[dc] = emf_handle;
06215         return new EMRCREATEBRUSHINDIRECT( this, emf_handle );
06216     }
06217 };
06218
06220

```

```

06223 class FONT : public GRAPHICSOBJECT, public EXTLOGFONTW {
06224 public:
06228     FONT ( const LOGFONTW* lfont )
06229     {
06230         this->elfLogFont = *lfont;
06231         // There are a lot more entries in the EXTLOGFONTW structure than
06232         // the API has values for, so we invent them here
06233         memset( &elfFullName, 0, sizeof elfFullName );
06234         memset( &elfStyle, 0, sizeof elfStyle );
06235         elfVersion = ELF_VERSION;
06236         elfStyleSize = 0;
06237         elfMatch = 0;
06238         elfReserved = 0;
06239         memset( &elfVendorId, 0, sizeof elfVendorId );
06240         elfCulture = ELF_CULTURE_LATIN;
06241         memset( &elfPanose, 1, sizeof(PANOSE) );
06242     }
06246     OBJECTTYPE getType ( void ) const { return O_FONT; }
06253     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06254     {
06255         contexts[dc] = emf_handle;
06256         return new EMREXTCREATEFONTINDIRECTW( this, emf_handle );
06257     }
06258 };
06259
06261
06264 class PALETTE : public GRAPHICSOBJECT, public LOGPALETTE {
06265 public:
06269     PALETTE ( const LOGPALETTE* lpalette )
06270     {
06271         EMF_UNUSED(lpalette);
06272         palVersion = 0;
06273         palNumEntries = 0;
06274         PALETTEENTRY zero_entry = { 0, 0, 0, 0 };
06275         palPalEntry[0] = zero_entry;
06276     }
06280     OBJECTTYPE getType ( void ) const { return O_PALETTE; }
06287     METARECORD* newEMR ( HDC dc, HGDIOBJ emf_handle )
06288     {
06289         contexts[dc] = emf_handle;
06290         return new EMRCREATEPALETTE( this, emf_handle );
06291     }
06292 };
06293
06295
06298 class EMRSETMITERLIMIT : public METARECORD, ::EMRSETMITERLIMIT {
06299 public:
06303     EMRSETMITERLIMIT ( FLOAT limit )
06304     {
06305         emr.iType = EMR_SETMITERLIMIT;
06306         emr.nSize = sizeof( ::EMRSETMITERLIMIT );
06307         eMiterLimit = limit;
06308     }
06313     EMRSETMITERLIMIT ( DATASTREAM& ds )
06314     {
06315         int miter_limit;
06316         ds » emr » miter_limit;
06317         eMiterLimit = float(miter_limit);
06318     }
06322     bool serialize ( DATASTREAM ds )
06323     {
06324         ds « emr « (int)eMiterLimit;
06325         return true;
06326     }
06330     int size ( void ) const { return emr.nSize; }
06336     void execute ( METAFILEDEVICECONTEXT* source, HDC dc ) const
06337     {
06338         EMF_UNUSED(source);
06339         SetMiterLimit( dc, eMiterLimit, 0 );
06340     }
06341 #ifdef ENABLE_EDITING
06345     void edit ( void ) const
06346     {
06347         printf( "SETMITERLIMIT*\n" );
06348         printf( "\teMiterLimit\t: %f\n", eMiterLimit );
06349     }
06350 #endif /* ENABLE_EDITING */
06351 };
06352
06354
06360 class METAFILEDEVICECONTEXT : public OBJECT {
06368     void init ( const RECT* size, LPCWSTR description_w ) {
06369
06370         // Evidently, metafile handles are numbered from 1, so don't
06371         // ever use 0.
06372
06373         handles.push_back( true );

```



```

06374
06375 // Keep some of our graphics state in a header record
06376
06377 header = new ENHMETAHEADER ( description_w );
06378 records.push_back( header );
06379
06380 // Compute the size and position of the metafile on the "page"
06381
06382 if ( size ) {
06383     update_frame = false;
06384
06385     header->rclFrame.left = size->left;
06386     header->rclFrame.top = size->top;
06387     header->rclFrame.right = size->right;
06388     header->rclFrame.bottom = size->bottom;
06389
06390     header->rclBounds.left =
06391         size->left * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06392     header->rclBounds.top =
06393         size->top * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06394     header->rclBounds.right =
06395         size->right * header->szlDevice.cx / ( header->szlMillimeters.cx * 100 );
06396     header->rclBounds.bottom =
06397         size->bottom * header->szlDevice.cy / ( header->szlMillimeters.cy * 100 );
06398     }
06399     else {
06400         update_frame = true;
06401
06402         header->rclBounds.left = -10;
06403         header->rclBounds.top = -10;
06404         header->rclBounds.right = 10;
06405         header->rclBounds.bottom = 10;
06406
06407         header->rclFrame.left = (LONG)floor( (float)header->rclBounds.left *
06408             header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06409         header->rclFrame.top = (LONG)floor( (float)header->rclBounds.top *
06410             header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06411         header->rclFrame.right = (LONG)ceil( (float)header->rclBounds.right *
06412             header->szlMillimeters.cx * 100 / header->szlDevice.cx );
06413         header->rclFrame.bottom = (LONG)ceil( (float)header->rclBounds.bottom *
06414             header->szlMillimeters.cy * 100 / header->szlDevice.cy );
06415     }
06416
06417 // Some default graphics state (are they really, though?)
06418
06419 SIZEL default_resolution = { RESOLUTION, RESOLUTION };
06420 resolution = default_resolution;
06421 SIZEL default_viewport_ext = { 1, 1 };
06422 viewport_ext = default_viewport_ext;
06423 POINT default_viewport_org = { 0, 0 };
06424 viewport_org = default_viewport_org;
06425 SIZEL default_window_ext = { 1, 1 };
06426 window_ext = default_window_ext;
06427 POINT default_window_org = { 0, 0 };
06428 window_org = default_window_org;
06429
06430 min_device_point = viewport_org;
06431 max_device_point = viewport_org;
06432
06433 pen = (PEN*)globalObjects.find( BLACK_PEN | ENHMETA_STOCK_OBJECT );
06434 brush = (BRUSH*)globalObjects.find( BLACK_BRUSH | ENHMETA_STOCK_OBJECT );
06435 font = (FONT*)globalObjects.find( DEVICE_DEFAULT_FONT | ENHMETA_STOCK_OBJECT );
06436 palette = (PALETTE*)globalObjects.find( DEFAULT_PALETTE | ENHMETA_STOCK_OBJECT );
06437
06438 text_alignment = TA_BASELINE;
06439 text_color = RGB(0,0,0);
06440 bk_color = RGB(0xff,0xff,0xff);
06441 bk_mode = OPAQUE;
06442 polyfill_mode = ALTERNATE;
06443 map_mode = MM_TEXT;
06444 miter_limit = 10.f;
06445
06446 handle = globalObjects.add( this );
06447 }
06448
06449 public:
06450     ::FILE* fp;
06451     DATASTREAM ds;
06452     ENHMETAHEADER* header;
06453     std::vector< EMF::METARECORD* > records;
06454
06455 // Keep a small set of graphics state information
06456 SIZEL resolution;
06457 SIZEL viewport_ext;
06458 POINT viewport_org;
06459 SIZEL window_ext;
06460 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 */

```


Index

- ~EMREXTTEXTOUTA
 - EMF::EMREXTTEXTOUTA, [61](#)
- ~EMREXTTEXTOUTW
 - EMF::EMREXTTEXTOUTW, [63](#)
- ~EMRPOLYBEZIER
 - EMF::EMRPOLYBEZIER, [74](#)
- ~EMRPOLYBEZIER16
 - EMF::EMRPOLYBEZIER16, [77](#)
- ~EMRPOLYBEZIERTO
 - EMF::EMRPOLYBEZIERTO, [79](#)
- ~EMRPOLYBEZIERTO16
 - EMF::EMRPOLYBEZIERTO16, [81](#)
- ~EMRPOLYGON
 - EMF::EMRPOLYGON, [84](#)
- ~EMRPOLYGON16
 - EMF::EMRPOLYGON16, [86](#)
- ~EMRPOLYLINE
 - EMF::EMRPOLYLINE, [88](#)
- ~EMRPOLYLINE16
 - EMF::EMRPOLYLINE16, [91](#)
- ~EMRPOLYLINETO
 - EMF::EMRPOLYLINETO, [93](#)
- ~EMRPOLYLINETO16
 - EMF::EMRPOLYLINETO16, [96](#)
- ~EMRPOLYPOLYGON
 - EMF::EMRPOLYPOLYGON, [98](#)
- ~EMRPOLYPOLYGON16
 - EMF::EMRPOLYPOLYGON16, [102](#)
- ~ENHMETAHEADER
 - EMF::ENHMETAHEADER, [149](#)
- ~METAFILEDEVICECONTEXT
 - EMF::METAFILEDEVICECONTEXT, [163](#)
- ~METARECORD
 - EMF::METARECORD, [167](#)
- add
 - EMF::GLOBALOBJECTS, [156](#)
- appendHandle
 - EMF::METAFILEDEVICECONTEXT, [163](#)
- appendRecord
 - EMF::METAFILEDEVICECONTEXT, [163](#)
- basetsd.h, [178](#)
- begin
 - EMF::GLOBALOBJECTS, [157](#)
- BRUSH
 - EMF::BRUSH, [8](#)
- BYTEARRAY
 - EMF::BYTEARRAY, [10](#)
- CHARSTR
 - EMF::CHARSTR, [11](#)
- clearHandle
 - EMF::METAFILEDEVICECONTEXT, [164](#)
- contexts
 - EMF::GRAPHICSOBJECT, [159](#)
- DATASTREAM
 - EMF::DATASTREAM, [12](#)
- deleteMetafile
 - EMF::METAFILEDEVICECONTEXT, [164](#)
- ds
 - EMF::METAFILEDEVICECONTEXT, [165](#)
- DWORDARRAY
 - EMF::DWORDARRAY, [31](#)
- emf.h, [177](#)
- EMF::BRUSH, [7](#)
 - BRUSH, [8](#)
 - getType, [9](#)
 - newEMR, [9](#)
- EMF::BYTEARRAY, [9](#)
 - BYTEARRAY, [10](#)
- EMF::CHARSTR, [10](#)
 - CHARSTR, [11](#)
- EMF::DATASTREAM, [11](#)
 - DATASTREAM, [12](#)
 - operator<<, [13–15](#), [17–21](#)
 - operator>>, [21–23](#), [25–30](#)
 - setStream, [30](#)
- EMF::DWORDARRAY, [30](#)
 - DWORDARRAY, [31](#)
- EMF::EMRARC, [31](#)
 - EMRARC, [32](#)
 - execute, [33](#)
 - serialize, [33](#)
 - size, [33](#)
- EMF::EMRARCTO, [34](#)
 - EMRARCTO, [34](#), [35](#)
 - execute, [35](#)
 - serialize, [35](#)
 - size, [36](#)
- EMF::EMRBEGINPATH, [36](#)
 - EMRBEGINPATH, [37](#)
 - execute, [37](#)
 - serialize, [37](#)
 - size, [38](#)
- EMF::EMRCLOSEFIGURE, [38](#)
 - EMRCLOSEFIGURE, [39](#)
 - execute, [39](#)
 - serialize, [39](#)
 - size, [40](#)
- EMF::EMRCREATEBRUSHINDIRECT, [40](#)
 - EMRCREATEBRUSHINDIRECT, [41](#)
 - execute, [41](#)
 - serialize, [42](#)
 - size, [42](#)
- EMF::EMRCREATEPALETTE, [42](#)
 - EMRCREATEPALETTE, [43](#)
 - execute, [44](#)
 - serialize, [44](#)
 - size, [44](#)

- EMF::EMRCREATEPEN, 44
 - EMRCREATEPEN, 45
 - execute, 46
 - serialize, 46
 - size, 46
- EMF::EMRDELETEOBJECT, 47
 - EMRDELETEOBJECT, 47
 - execute, 48
 - serialize, 48
 - size, 48
- EMF::EMRELLIPSE, 49
 - EMRELLIPSE, 49, 50
 - execute, 50
 - serialize, 50
 - size, 50
- EMF::EMRENDPATH, 51
 - EMRENDPATH, 52
 - execute, 52
 - serialize, 52
 - size, 53
- EMF::EMREOF, 53
 - EMREOF, 54
 - execute, 54
 - serialize, 54
 - size, 55
- EMF::EMREXTCREATEFONTINDIRECTW, 55
 - EMREXTCREATEFONTINDIRECTW, 56
 - execute, 56
 - serialize, 57
 - size, 57
- EMF::EMREXTCREATEPEN, 57
 - EMREXTCREATEPEN, 58
 - execute, 59
 - serialize, 59
 - size, 59
- EMF::EMREXTTEXTOUTA, 60
 - ~EMREXTTEXTOUTA, 61
 - EMREXTTEXTOUTA, 60, 61
 - execute, 61
 - serialize, 61
 - size, 62
- EMF::EMREXTTEXTOUTW, 62
 - ~EMREXTTEXTOUTW, 63
 - EMREXTTEXTOUTW, 63
 - execute, 64
 - serialize, 64
 - size, 64
- EMF::EMRFILLPATH, 65
 - EMRFILLPATH, 65
 - execute, 66
 - serialize, 66
 - size, 66
- EMF::EMRLINETO, 67
 - EMRLINETO, 67
 - execute, 68
 - serialize, 68
 - size, 68
- EMF::EMRMODIFYWORLDTRANSFORM, 69
 - EMRMODIFYWORLDTRANSFORM, 69, 70
 - execute, 70
 - serialize, 70
 - size, 70
- EMF::EMRMOVETOEX, 71
 - EMRMOVETOEX, 71
 - execute, 72
 - serialize, 72
 - size, 72
- EMF::EMRPOLYBEZIER, 73
 - ~EMRPOLYBEZIER, 74
 - EMRPOLYBEZIER, 73, 74
 - execute, 74
 - serialize, 74
 - size, 75
- EMF::EMRPOLYBEZIER16, 75
 - ~EMRPOLYBEZIER16, 77
 - EMRPOLYBEZIER16, 76
 - execute, 77
 - serialize, 77
 - size, 77
- EMF::EMRPOLYBEZIERTO, 78
 - ~EMRPOLYBEZIERTO, 79
 - EMRPOLYBEZIERTO, 78, 79
 - execute, 79
 - serialize, 79
 - size, 80
- EMF::EMRPOLYBEZIERTO16, 80
 - ~EMRPOLYBEZIERTO16, 81
 - EMRPOLYBEZIERTO16, 81
 - execute, 82
 - serialize, 82
 - size, 82
- EMF::EMRPOLYGON, 83
 - ~EMRPOLYGON, 84
 - EMRPOLYGON, 83, 84
 - execute, 84
 - serialize, 84
 - size, 84
- EMF::EMRPOLYGON16, 85
 - ~EMRPOLYGON16, 86
 - EMRPOLYGON16, 85, 86
 - execute, 86
 - serialize, 87
 - size, 87
- EMF::EMRPOLYLINE, 87
 - ~EMRPOLYLINE, 88
 - EMRPOLYLINE, 88
 - execute, 89
 - serialize, 89
 - size, 89
- EMF::EMRPOLYLINE16, 90
 - ~EMRPOLYLINE16, 91
 - EMRPOLYLINE16, 90, 91
 - execute, 91
 - serialize, 92
 - size, 92
- EMF::EMRPOLYLINETO, 92

- ~EMRPOLYLINETO, 93
- EMRPOLYLINETO, 93
- execute, 94
- serialize, 94
- size, 94
- EMF::EMRPOLYLINETO16, 94
 - ~EMRPOLYLINETO16, 96
 - EMRPOLYLINETO16, 95, 96
 - execute, 96
 - serialize, 96
 - size, 97
- EMF::EMRPOLYPOLYGON, 97
 - ~EMRPOLYPOLYGON, 98
 - EMRPOLYPOLYGON, 98
 - execute, 98
 - serialize, 99
 - size, 99
- EMF::EMRPOLYPOLYGON16, 99
 - ~EMRPOLYPOLYGON16, 102
 - EMRPOLYPOLYGON16, 100, 102
 - execute, 102
 - serialize, 102
 - size, 103
- EMF::EMRRECTANGLE, 103
 - EMRRECTANGLE, 104
 - execute, 104
 - serialize, 105
 - size, 105
- EMF::EMRRESTOREDC, 105
 - EMRRESTOREDC, 106
 - execute, 106
 - serialize, 107
 - size, 107
- EMF::EMRSAVEDC, 107
 - EMRSAVEDC, 108
 - execute, 108
 - serialize, 109
 - size, 109
- EMF::EMRSCALEVIEWPORTEXT, 109
 - EMRSCALEVIEWPORTEXT, 110
 - execute, 111
 - serialize, 111
 - size, 111
- EMF::EMRSCALEWINDOWEXT, 111
 - EMRSCALEWINDOWEXT, 112
 - execute, 113
 - serialize, 113
 - size, 113
- EMF::EMRSELECTOBJECT, 113
 - EMRSELECTOBJECT, 114
 - execute, 115
 - serialize, 115
 - size, 115
- EMF::EMRSETBKCOLOR, 116
 - EMRSETBKCOLOR, 116
 - execute, 117
 - serialize, 117
 - size, 117
- EMF::EMRSETBKMODE, 118
 - EMRSETBKMODE, 118
 - execute, 119
 - serialize, 119
 - size, 119
- EMF::EMRSETMAPMODE, 120
 - EMRSETMAPMODE, 120
 - execute, 121
 - serialize, 121
 - size, 121
- EMF::EMRSETMETARGN, 122
 - EMRSETMETARGN, 122
 - execute, 123
 - serialize, 123
 - size, 123
- EMF::EMRSETMITERLIMIT, 124
 - EMRSETMITERLIMIT, 124
 - execute, 125
 - serialize, 125
 - size, 125
- EMF::EMRSETPIXELV, 126
 - EMRSETPIXELV, 126, 127
 - execute, 127
 - serialize, 127
 - size, 127
- EMF::EMRSETPOLYFILLMODE, 128
 - EMRSETPOLYFILLMODE, 128
 - execute, 129
 - serialize, 129
 - size, 129
- EMF::EMRSETTEXTALIGN, 130
 - EMRSETTEXTALIGN, 130
 - execute, 131
 - serialize, 131
 - size, 131
- EMF::EMRSETTEXTCOLOR, 132
 - EMRSETTEXTCOLOR, 132
 - execute, 133
 - serialize, 133
 - size, 133
- EMF::EMRSETVIEWPORTEXT, 134
 - EMRSETVIEWPORTEXT, 134, 135
 - execute, 135
 - serialize, 135
 - size, 135
- EMF::EMRSETVIEWPORTORGEX, 136
 - EMRSETVIEWPORTORGEX, 136, 137
 - execute, 137
 - serialize, 137
 - size, 137
- EMF::EMRSETWINDOWEXT, 138
 - EMRSETWINDOWEXT, 138, 139
 - execute, 139
 - serialize, 139
 - size, 139
- EMF::EMRSETWINDOWORGEX, 140
 - EMRSETWINDOWORGEX, 140, 141
 - execute, 141

- serialize, 141
- size, 141
- EMF::EMRSETWORLDTRANSFORM, 142
 - EMRSETWORLDTRANSFORM, 142
 - execute, 143
 - serialize, 143
 - size, 143
- EMF::EMRSTROKEANDFILLPATH, 144
 - EMRSTROKEANDFILLPATH, 144
 - execute, 145
 - serialize, 145
 - size, 145
- EMF::EMRSTROKEPATH, 146
 - EMRSTROKEPATH, 146
 - execute, 147
 - serialize, 147
 - size, 147
- EMF::ENHMETAHEADER, 148
 - ~ENHMETAHEADER, 149
 - ENHMETAHEADER, 148
 - execute, 149
 - serialize, 149
 - size, 149
 - unserialize, 150
- EMF::EXTPEN, 150
 - EXTPEN, 151
 - getType, 151
 - newEMR, 151
- EMF::FONT, 152
 - FONT, 153
 - getType, 153
 - newEMR, 153
- EMF::GLOBALOBJECTS, 154
 - add, 156
 - begin, 157
 - end, 157
 - find, 157
 - newRecord, 157
 - remove, 158
- EMF::GRAPHICSOBJECT, 158
 - contexts, 159
 - newEMR, 159
- EMF::INTARRAY, 160
 - INTARRAY, 160
- EMF::METAFILEDEVICECONTEXT, 161
 - ~METAFILEDEVICECONTEXT, 163
 - appendHandle, 163
 - appendRecord, 163
 - clearHandle, 164
 - deleteMetafile, 164
 - ds, 165
 - emf_handles, 165
 - fp, 165
 - getType, 164
 - handles, 165
 - header, 165
 - mergePoint, 164
 - METAFILEDEVICECONTEXT, 163
 - nextHandle, 165
 - records, 166
- EMF::METARECORD, 166
 - ~METARECORD, 167
 - execute, 167
 - serialize, 168
 - size, 168
- EMF::OBJECT, 169
 - getType, 169
 - handle, 170
 - OBJECT, 169
- EMF::PADDING, 170
 - PADDING, 170
- EMF::PALETTE, 171
 - getType, 172
 - newEMR, 172
 - PALETTE, 172
- EMF::PEN, 173
 - getType, 174
 - newEMR, 174
 - PEN, 174
- EMF::POINT16ARRAY, 175
 - POINT16ARRAY, 175
- EMF::POINTLARRAY, 176
 - POINTLARRAY, 176
- EMF::WCHARSTR, 176
 - WCHARSTR, 177
- emf_handles
 - EMF::METAFILEDEVICECONTEXT, 165
- EMRARC
 - EMF::EMRARC, 32
- EMRARCTO
 - EMF::EMRARCTO, 34, 35
- EMRBEGINPATH
 - EMF::EMRBEGINPATH, 37
- EMRCLOSEFIGURE
 - EMF::EMRCLOSEFIGURE, 39
- EMRCREATEBRUSHINDIRECT
 - EMF::EMRCREATEBRUSHINDIRECT, 41
- EMRCREATEPALETTE
 - EMF::EMRCREATEPALETTE, 43
- EMRCREATEPEN
 - EMF::EMRCREATEPEN, 45
- EMRDELETEOBJECT
 - EMF::EMRDELETEOBJECT, 47
- EMRELLIPSE
 - EMF::EMRELLIPSE, 49, 50
- EMRENDPATH
 - EMF::EMRENDPATH, 52
- EMREOF
 - EMF::EMREOF, 54
- EMREXTCREATEFONTINDIRECTW
 - EMF::EMREXTCREATEFONTINDIRECTW, 56
- EMREXTCREATEPEN
 - EMF::EMREXTCREATEPEN, 58
- EMREXTTEXTOUTA
 - EMF::EMREXTTEXTOUTA, 60, 61
- EMREXTTEXTOUTW

EMF::EMREXTTEXTOUTW, 63
 EMRFILLPATH
 EMF::EMRFILLPATH, 65
 EMRLINETO
 EMF::EMRLINETO, 67
 EMRMODIFYWORLDTRANSFORM
 EMF::EMRMODIFYWORLDTRANSFORM, 69, 70
 EMRMOVETOEX
 EMF::EMRMOVETOEX, 71
 EMRPOLYBEZIER
 EMF::EMRPOLYBEZIER, 73, 74
 EMRPOLYBEZIER16
 EMF::EMRPOLYBEZIER16, 76
 EMRPOLYBEZIERTO
 EMF::EMRPOLYBEZIERTO, 78, 79
 EMRPOLYBEZIERTO16
 EMF::EMRPOLYBEZIERTO16, 81
 EMRPOLYGON
 EMF::EMRPOLYGON, 83, 84
 EMRPOLYGON16
 EMF::EMRPOLYGON16, 85, 86
 EMRPOLYLINE
 EMF::EMRPOLYLINE, 88
 EMRPOLYLINE16
 EMF::EMRPOLYLINE16, 90, 91
 EMRPOLYLINETO
 EMF::EMRPOLYLINETO, 93
 EMRPOLYLINETO16
 EMF::EMRPOLYLINETO16, 95, 96
 EMRPOLYPOLYGON
 EMF::EMRPOLYPOLYGON, 98
 EMRPOLYPOLYGON16
 EMF::EMRPOLYPOLYGON16, 100, 102
 EMRRECTANGLE
 EMF::EMRRECTANGLE, 104
 EMRRESTOREDC
 EMF::EMRRESTOREDC, 106
 EMRSAVEDC
 EMF::EMRSAVEDC, 108
 EMRSCALEVIEWPORTEXT
 EMF::EMRSCALEVIEWPORTEXT, 110
 EMRSCALEWINDOWEXT
 EMF::EMRSCALEWINDOWEXT, 112
 EMRSELECTOBJECT
 EMF::EMRSELECTOBJECT, 114
 EMRSETBKCOLOR
 EMF::EMRSETBKCOLOR, 116
 EMRSETBKMODE
 EMF::EMRSETBKMODE, 118
 EMRSETMAPMODE
 EMF::EMRSETMAPMODE, 120
 EMRSETMETARGN
 EMF::EMRSETMETARGN, 122
 EMRSETMITERLIMIT
 EMF::EMRSETMITERLIMIT, 124
 EMRSETPIXELV
 EMF::EMRSETPIXELV, 126, 127
 EMRSETPOLYFILLMODE
 EMF::EMRSETPOLYFILLMODE, 128
 EMRSETTEXTALIGN
 EMF::EMRSETTEXTALIGN, 130
 EMRSETTEXTCOLOR
 EMF::EMRSETTEXTCOLOR, 132
 EMRSETVIEWPORTEXT
 EMF::EMRSETVIEWPORTEXT, 134, 135
 EMRSETVIEWPORTORGE
 EMF::EMRSETVIEWPORTORGE, 136, 137
 EMRSETWINDOWEXT
 EMF::EMRSETWINDOWEXT, 138, 139
 EMRSETWINDOWORGE
 EMF::EMRSETWINDOWORGE, 140, 141
 EMRSETWORLDTRANSFORM
 EMF::EMRSETWORLDTRANSFORM, 142
 EMRSTROKEANDFILLPATH
 EMF::EMRSTROKEANDFILLPATH, 144
 EMRSTROKEPATH
 EMF::EMRSTROKEPATH, 146
 end
 EMF::GLOBALOBJECTS, 157
 ENHMETAHEADER
 EMF::ENHMETAHEADER, 148
 execute
 EMF::EMRARC, 33
 EMF::EMRARCTO, 35
 EMF::EMRBEGINPATH, 37
 EMF::EMRCLOSEFIGURE, 39
 EMF::EMRCREATEBRUSHINDIRECT, 41
 EMF::EMRCREATEPALETTE, 44
 EMF::EMRCREATEPEN, 46
 EMF::EMRDELETEOBJECT, 48
 EMF::EMRELLIPSE, 50
 EMF::EMRENDPATH, 52
 EMF::EMREOF, 54
 EMF::EMREXTCREATEFONTINDIRECTW, 56
 EMF::EMREXTCREATEPEN, 59
 EMF::EMREXTTEXTOUTA, 61
 EMF::EMREXTTEXTOUTW, 64
 EMF::EMRFILLPATH, 66
 EMF::EMRLINETO, 68
 EMF::EMRMODIFYWORLDTRANSFORM, 70
 EMF::EMRMOVETOEX, 72
 EMF::EMRPOLYBEZIER, 74
 EMF::EMRPOLYBEZIER16, 77
 EMF::EMRPOLYBEZIERTO, 79
 EMF::EMRPOLYBEZIERTO16, 82
 EMF::EMRPOLYGON, 84
 EMF::EMRPOLYGON16, 86
 EMF::EMRPOLYLINE, 89
 EMF::EMRPOLYLINE16, 91
 EMF::EMRPOLYLINETO, 94
 EMF::EMRPOLYLINETO16, 96
 EMF::EMRPOLYPOLYGON, 98
 EMF::EMRPOLYPOLYGON16, 102
 EMF::EMRRECTANGLE, 104
 EMF::EMRRESTOREDC, 106
 EMF::EMRSAVEDC, 108

- EMF::EMRSCALEVIEWPORTEXTEX, 111
- EMF::EMRSCALEWINDOWEXTTEX, 113
- EMF::EMRSELECTOBJECT, 115
- EMF::EMRSETBKCOLOR, 117
- EMF::EMRSETBKMODE, 119
- EMF::EMRSETMAPMODE, 121
- EMF::EMRSETMETARGN, 123
- EMF::EMRSETMITERLIMIT, 125
- EMF::EMRSETPIXELV, 127
- EMF::EMRSETPOLYFILLMODE, 129
- EMF::EMRSETTEXTALIGN, 131
- EMF::EMRSETTEXTCOLOR, 133
- EMF::EMRSETVIEWPORTEXTEX, 135
- EMF::EMRSETVIEWPORTORGEX, 137
- EMF::EMRSETWINDOWEXTTEX, 139
- EMF::EMRSETWINDOWORGEX, 141
- EMF::EMRSETWORLDTRANSFORM, 143
- EMF::EMRSTROKEANDFILLPATH, 145
- EMF::EMRSTROKEPATH, 147
- EMF::ENHMETAHEADER, 149
- EMF::METARECORD, 167
- EXTPEN
 - EMF::EXTPEN, 151
- find
 - EMF::GLOBALOBJECTS, 157
- FONT
 - EMF::FONT, 153
- fp
 - EMF::METAFILEDEVICECONTEXT, 165
- getType
 - EMF::BRUSH, 9
 - EMF::EXTPEN, 151
 - EMF::FONT, 153
 - EMF::METAFILEDEVICECONTEXT, 164
 - EMF::OBJECT, 169
 - EMF::PALETTE, 172
 - EMF::PEN, 174
- guiddef.h, 180
- handle
 - EMF::OBJECT, 170
- handles
 - EMF::METAFILEDEVICECONTEXT, 165
- header
 - EMF::METAFILEDEVICECONTEXT, 165
- INTARRAY
 - EMF::INTARRAY, 160
- libemf.h, 369
- mergePoint
 - EMF::METAFILEDEVICECONTEXT, 164
- METAFILEDEVICECONTEXT
 - EMF::METAFILEDEVICECONTEXT, 163
- newEMR
 - EMF::BRUSH, 9
- EMF::EXTPEN, 151
- EMF::FONT, 153
- EMF::GRAPHICSOBJECT, 159
- EMF::PALETTE, 172
- EMF::PEN, 174
- newRecord
 - EMF::GLOBALOBJECTS, 157
- nextHandle
 - EMF::METAFILEDEVICECONTEXT, 165
- OBJECT
 - EMF::OBJECT, 169
- operator<<
 - EMF::DATASTREAM, 13–15, 17–21
- operator>>
 - EMF::DATASTREAM, 21–23, 25–30
- PADDING
 - EMF::PADDING, 170
- PALETTE
 - EMF::PALETTE, 172
- PEN
 - EMF::PEN, 174
- POINT16ARRAY
 - EMF::POINT16ARRAY, 175
- POINTLARRAY
 - EMF::POINTLARRAY, 176
- poppack.h, 181
- pshpack2.h, 181
- pshpack4.h, 182
- records
 - EMF::METAFILEDEVICECONTEXT, 166
- remove
 - EMF::GLOBALOBJECTS, 158
- serialize
 - EMF::EMRARC, 33
 - EMF::EMRARCTO, 35
 - EMF::EMRBEGINPATH, 37
 - EMF::EMRCLOSEFIGURE, 39
 - EMF::EMRCREATEBRUSHINDIRECT, 42
 - EMF::EMRCREATEPALETTE, 44
 - EMF::EMRCREATEPEN, 46
 - EMF::EMRDELETEOBJECT, 48
 - EMF::EMRELLIPSE, 50
 - EMF::EMRENDPATH, 52
 - EMF::EMREOF, 54
 - EMF::EMREXTCREATEFONTINDIRECTW, 57
 - EMF::EMREXTCREATEPEN, 59
 - EMF::EMREXTTEXTOUTA, 61
 - EMF::EMREXTTEXTOUTW, 64
 - EMF::EMRFILLPATH, 66
 - EMF::EMRLINETO, 68
 - EMF::EMRMODIFYWORLDTRANSFORM, 70
 - EMF::EMRMOVETOEX, 72
 - EMF::EMRPOLYBEZIER, 74
 - EMF::EMRPOLYBEZIER16, 77
 - EMF::EMRPOLYBEZIERTO, 79

- EMF::EMRPOLYBEZIERTO16, [82](#)
- EMF::EMRPOLYGON, [84](#)
- EMF::EMRPOLYGON16, [87](#)
- EMF::EMRPOLYLINE, [89](#)
- EMF::EMRPOLYLINE16, [92](#)
- EMF::EMRPOLYLINETO, [94](#)
- EMF::EMRPOLYLINETO16, [96](#)
- EMF::EMRPOLYPOLYGON, [99](#)
- EMF::EMRPOLYPOLYGON16, [102](#)
- EMF::EMRRECTANGLE, [105](#)
- EMF::EMRRESTOREDC, [107](#)
- EMF::EMRSAVEDC, [109](#)
- EMF::EMRSCALEVIEWPORTEXTEX, [111](#)
- EMF::EMRSCALEWINDOWEXTX, [113](#)
- EMF::EMRSELECTOBJECT, [115](#)
- EMF::EMRSETBKCOLOR, [117](#)
- EMF::EMRSETBKMODE, [119](#)
- EMF::EMRSETMAPMODE, [121](#)
- EMF::EMRSETMETARGN, [123](#)
- EMF::EMRSETMITERLIMIT, [125](#)
- EMF::EMRSETPIXELV, [127](#)
- EMF::EMRSETPOLYFILLMODE, [129](#)
- EMF::EMRSETTEXTALIGN, [131](#)
- EMF::EMRSETTEXTCOLOR, [133](#)
- EMF::EMRSETVIEWPORTEXTEX, [135](#)
- EMF::EMRSETVIEWPORTORGEX, [137](#)
- EMF::EMRSETWINDOWEXTX, [139](#)
- EMF::EMRSETWINDOWORGEX, [141](#)
- EMF::EMRSETWORLDTRANSFORM, [143](#)
- EMF::EMRSTROKEANDFILLPATH, [145](#)
- EMF::EMRSTROKEPATH, [147](#)
- EMF::ENHMETAHEADER, [149](#)
- EMF::METARECORD, [168](#)
- setStream
 - EMF::DATASTREAM, [30](#)
- size
 - EMF::EMRARC, [33](#)
 - EMF::EMRARCTO, [36](#)
 - EMF::EMRBEGINPATH, [38](#)
 - EMF::EMRCLOSEFIGURE, [40](#)
 - EMF::EMRCREATEBRUSHINDIRECT, [42](#)
 - EMF::EMRCREATEPALETTE, [44](#)
 - EMF::EMRCREATEPEN, [46](#)
 - EMF::EMRDELETEOBJECT, [48](#)
 - EMF::EMRELLIPSE, [50](#)
 - EMF::EMRENDPATH, [53](#)
 - EMF::EMREOF, [55](#)
 - EMF::EMREXTCREATEFONTINDIRECTW, [57](#)
 - EMF::EMREXTCREATEPEN, [59](#)
 - EMF::EMREXTTEXTOUTA, [62](#)
 - EMF::EMREXTTEXTOUTW, [64](#)
 - EMF::EMRFILLPATH, [66](#)
 - EMF::EMRLINETO, [68](#)
 - EMF::EMRMODIFYWORLDTRANSFORM, [70](#)
 - EMF::EMRMOVETOEX, [72](#)
 - EMF::EMRPOLYBEZIER, [75](#)
 - EMF::EMRPOLYBEZIER16, [77](#)
 - EMF::EMRPOLYBEZIERTO, [80](#)
 - EMF::EMRPOLYBEZIERTO16, [82](#)
 - EMF::EMRPOLYGON, [84](#)
 - EMF::EMRPOLYGON16, [87](#)
 - EMF::EMRPOLYLINE, [89](#)
 - EMF::EMRPOLYLINE16, [92](#)
 - EMF::EMRPOLYLINETO, [94](#)
 - EMF::EMRPOLYLINETO16, [97](#)
 - EMF::EMRPOLYPOLYGON, [99](#)
 - EMF::EMRPOLYPOLYGON16, [103](#)
 - EMF::EMRRECTANGLE, [105](#)
 - EMF::EMRRESTOREDC, [107](#)
 - EMF::EMRSAVEDC, [109](#)
 - EMF::EMRSCALEVIEWPORTEXTEX, [111](#)
 - EMF::EMRSCALEWINDOWEXTX, [113](#)
 - EMF::EMRSELECTOBJECT, [115](#)
 - EMF::EMRSETBKCOLOR, [117](#)
 - EMF::EMRSETBKMODE, [119](#)
 - EMF::EMRSETMAPMODE, [121](#)
 - EMF::EMRSETMETARGN, [123](#)
 - EMF::EMRSETMITERLIMIT, [125](#)
 - EMF::EMRSETPIXELV, [127](#)
 - EMF::EMRSETPOLYFILLMODE, [129](#)
 - EMF::EMRSETTEXTALIGN, [131](#)
 - EMF::EMRSETTEXTCOLOR, [133](#)
 - EMF::EMRSETVIEWPORTEXTEX, [135](#)
 - EMF::EMRSETVIEWPORTORGEX, [137](#)
 - EMF::EMRSETWINDOWEXTX, [139](#)
 - EMF::EMRSETWINDOWORGEX, [141](#)
 - EMF::EMRSETWORLDTRANSFORM, [143](#)
 - EMF::EMRSTROKEANDFILLPATH, [145](#)
 - EMF::EMRSTROKEPATH, [147](#)
 - EMF::ENHMETAHEADER, [149](#)
 - EMF::METARECORD, [168](#)
- unserialize
 - EMF::ENHMETAHEADER, [150](#)
- w16.h, [182](#)
- WCHARSTR
 - EMF::WCHARSTR, [177](#)
- winbase.h, [183](#)
- windef.h, [204](#)
- winerror.h, [207](#)
- wingdi.h, [229](#)
- winnt.h, [267](#)
- winuser.h, [321](#)