# Windows 3.1 SDK constants reference

**Alphabetical list**

Application termination
Bitmap support
Button control
Clipboard manager
Clipping support
Color palette support
Color support
Comm port support
Device capabilities
Dialog & control management
Dialog directory support
Drag-and-drop support
Edit control
Exiting Windows
File I/O
Font support
GDI escapes
GDI object support
Help support
Icon support
Keyboard input support
List box control
Main window support
Map modes
Memory management
Menu support

Message box support
Mode control
Mouse cursor support
Mouse input support
Network support
Owner draw control support
Power management support
Printing support
Resource management
Scroll bar support
Sound support
Static control
System information
System menu commands
System metrics
System parameters support
Text support
Window activate
Window class management
Window create/destroy
Window drawing support
Window message support
Window query & enumeration
Window repainting
Window scrolling
Window size/position

# Alphabetical list

Click a letter to display Windows constants.

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

[U]
[V]
[W]
[X]
[Y]
[Z]

# A

```
ABORTDOC                 2
ANSI_CHARSET             0
ANSI_FIXED_FONT          11
ANSI_VAR_FONT            12
ASPECT_FILTERING         0x00000001L
ASPECTX                  40
ASPECTXY                 44
ASPECTY                  42
```

# B

```
BANDINFO                 24
BEGIN_PATH               4096
BI_RGB                   0L
BI_RLE4                  2L
BI_RLE8                  1L
BITSPIXEL                12
BLACK_BRUSH              4
BLACK_PEN                7
BLACKNESS                0x00000042L
BLACKONWHITE             1
BM_GETCHECK              (WM_USER0)
BM_GETSTATE              (WM_USER2)
BM_SETCHECK              (WM_USER1)
BM_SETSTATE              (WM_USER3)
BM_SETSTYLE              (WM_USER4)
BN_CLICKED               0
BN_DISABLE               4
BN_DOUBLECLICKED         5
BN_HILITE                2
BN_PAINT                 1
BN_UNHILITE              3
BS_3STATE                0x00000005L
BS_AUTO3STATE            0x00000006L
BS_AUTOCHECKBOX          0x00000003L
BS_AUTORADIOBUTTON       0x00000009L
BS_CHECKBOX              0x00000002L
BS_DEFPUSHBUTTON         0x00000001L
BS_DIBPATTERN            5
BS_GROUPBOX              0x00000007L
BS_HATCHED               2
BS_HOLLOW                BS_NULL
BS_INDEXED               4
BS_LEFTTEXT              0x00000020L
BS_NULL                  1
BS_OWNERDRAW             0x0000000BL
BS_PATTERN               3
BS_PUSHBUTTON            0x00000000L
BS_RADIOBUTTON           0x00000004L
BS_SOLID                 0
```

| | |
|---|---|
| BS_USERBUTTON | 0x00000008L |

# C

| | |
|---|---|
| CBM_INIT | 0x00000004L |
| CBR_110 | 0xFF10 |
| CBR_1200 | 0xFF13 |
| CBR_128000 | 0xFF23 |
| CBR_14400 | 0xFF17 |
| CBR_19200 | 0xFF18 |
| CBR_2400 | 0xFF14 |
| CBR_256000 | 0xFF27 |
| CBR_300 | 0xFF11 |
| CBR_38400 | 0xFF1B |
| CBR_4800 | 0xFF15 |
| CBR_56000 | 0xFF1F |
| CBR_600 | 0xFF12 |
| CBR_9600 | 0xFF16 |
| CC_CHORD | 0x0004 |
| CC_CIRCLES | 0x0001 |
| CC_ELLIPSES | 0x0008 |
| CC_INTERIORS | 0x0080 |
| CC_NONE | 0x0000 |
| CC_PIE | 0x0002 |
| CC_ROUNDRECT | 0x0100 |
| CC_STYLED | 0x0020 |
| CC_WIDE | 0x0010 |
| CC_WIDESTYLED | 0x0040 |
| CF_BITMAP | 2 |
| CF_DIB | 8 |
| CF_DIF | 5 |
| CF_DSPBITMAP | 0x0082 |
| CF_DSPMETAFILEPICT | 0x0083 |
| CF_DSPTEXT | 0x0081 |
| CF_GDIOBJFIRST | 0x0300 |
| CF_GDIOBJLAST | 0x03FF |
| CF_METAFILEPICT | 3 |
| CF_OEMTEXT | 7 |
| CF_OWNERDISPLAY | 0x0080 |
| CF_PALETTE | 9 |
| CF_PENDATA | 10 |
| CF_PRIVATEFIRST | 0x0200 |
| CF_PRIVATELAST | 0x02FF |
| CF_RIFF | 11 |
| CF_SYLK | 4 |
| CF_TEXT | 1 |
| CF_TIFF | 6 |
| CF_WAVE | 12 |
| CHINESEBIG5_CHARSET | 136 |
| CLIP_CHARACTER_PRECIS | 0x01 |
| CLIP_DEFAULT_PRECIS | 0x00 |
| CLIP_EMBEDDED | 0x80 |
| CLIP_LH_ANGLES | 0x10 |
| CLIP_MASK | 0x0F |
| CLIP_STROKE_PRECIS | 0x02 |
| CLIP_TO_PATH | 4097 |
| CLIP_TT_ALWAYS | 0x20 |
| CLIPCAPS | 36 |
| CLRDTR | 6 |
| CLRRTS | 4 |

```
CN_EVENT                        0x0004
CN_RECEIVE                      0x0001
CN_TRANSMIT                     0x0002
COLOR_ACTIVEBORDER              10
COLOR_ACTIVECAPTION             2
COLOR_APPWORKSPACE              12
COLOR_BACKGROUND                1
COLOR_BTNFACE                   15
COLOR_BTNHIGHLIGHT              20
COLOR_BTNSHADOW                 16
COLOR_BTNTEXT                   18
COLOR_CAPTIONTEXT               9
COLOR_GRAYTEXT                  17
COLOR_HIGHLIGHT                 13
COLOR_HIGHLIGHTTEXT             14
COLOR_INACTIVEBORDER            11
COLOR_INACTIVECAPTION           3
COLOR_INACTIVECAPTIONTEXT       19
COLOR_MENU                      4
COLOR_MENUTEXT                  7
COLOR_SCROLLBAR                 0
COLOR_WINDOW                    5
COLOR_WINDOWFRAME               6
COLOR_WINDOWTEXT                8
COLORONCOLOR                    3
COLORRES                        108
CP_NONE                         0x0000
CP_RECTANGLE                    0x0001
CP_REGION                       0x0002
CS_BYTEALIGNCLIENT              0x1000
CS_BYTEALIGNWINDOW              0x2000
CS_CLASSDC                      0x0040
CS_DBLCLKS                      0x0008
CS_GLOBALCLASS                  0x4000
CS_HREDRAW                      0x0002
CS_KEYCVTWINDOW                 0x0004
CS_NOCLOSE                      0x0200
CS_NOKEYCVT                     0x0100
CS_OWNDC                        0x0020
CS_PARENTDC                     0x0080
CS_SAVEBITS                     0x0800
CS_VREDRAW                      0x0001
CSTF_CTSHOLD                    0x01
CSTF_DSRHOLD                    0x02
CSTF_EOF                        0x20
CSTF_RLSDHOLD                   0x04
CSTF_TXIM                       0x40
CSTF_XOFFHOLD                   0x08
CSTF_XOFFSENT                   0x10
CTLCOLOR_BTN                    3
CTLCOLOR_DLG                    4
CTLCOLOR_EDIT                   1
CTLCOLOR_LISTBOX                2
CTLCOLOR_MSGBOX                 0
CTLCOLOR_SCROLLBAR              5
CTLCOLOR_STATIC                 6
CURVECAPS                       28
CW_USEDEFAULT                   0x8000
```

# D

```
DC_HASDEFID                  0x534B
DCX_CACHE                    0x00000002L
DCX_CLIPCHILDREN             0x00000008L
DCX_CLIPSIBLINGS             0x00000010L
DCX_EXCLUDERGN               0x00000040L
DCX_INTERSECTRGN             0x00000080L
DCX_LOCKWINDOWUPDATE         0x00000400L
DCX_PARENTCLIP               0x00000020L
DCX_USESTYLE                 0x00010000L
DCX_WINDOW                   0x00000001L
DDL_ARCHIVE                  0x0020
DDL_DIRECTORY                0x0010
DDL_DRIVES                   0x4000
DDL_EXCLUSIVE                0x8000
DDL_HIDDEN                   0x0002
DDL_POSTMSGS                 0x2000
DDL_READONLY                 0x0001
DDL_READWRITE                0x0000
DDL_SYSTEM                   0x0004
DEFAULT_CHARSET              1
DEFAULT_PALETTE              15
DEFAULT_PITCH                0x00
DEFAULT_QUALITY              0
DEVICE_DEFAULT_FONT          14
DEVICE_FONTTYPE              0X0002
DEVICEDATA                   19
DIB_PAL_COLORS               1
DIB_RGB_COLORS               0
DKGRAY_BRUSH                 3
DLGC_BUTTON                  0x2000
DLGC_DEFPUSHBUTTON           0x0010
DLGC_HASSETSEL               0x0008
DLGC_RADIOBUTTON             0x0040
DLGC_STATIC                  0x0100
DLGC_UNDEFPUSHBUTTON         0x0020
DLGC_WANTALLKEYS             0x0004
DLGC_WANTARROWS              0x0001
DLGC_WANTCHARS               0x0080
DLGC_WANTMESSAGE             0x0004
DLGC_WANTTAB                 0x0002
DLGWINDOWEXTRA               30
DM_GETDEFID                  (WM_USER0)
DM_SETDEFID                  (WM_USER1)
DRAFT_QUALITY                1
DRAFTMODE                    7
DRAWPATTERNRECT              25
DRIVERVERSION                0
DS_ABSALIGN                  0x01L
DS_LOCALEDIT                 0x20L
DS_MODALFRAME                0x80L
DS_NOIDLEMSG                 0x100L
DS_SETFONT                   0x40L
DS_SYSMODAL                  0x02L
DSTINVERT                    0x00550009L
DT_BOTTOM                    0x0008
DT_CALCRECT                  0x0400
DT_CENTER                    0x0001
```

```
DT_EXPANDTABS              0x0040
DT_EXTERNALLEADING         0x0200
DT_INTERNAL                0x1000
DT_LEFT                    0x0000
DT_NOCLIP                  0x0100
DT_NOPREFIX                0x0800
DT_RIGHT                   0x0002
DT_SINGLELINE              0x0020
DT_TABSTOP                 0x0080
DT_TOP                     0x0000
DT_VCENTER                 0x0004
DT_WORDBREAK               0x0010
DWL_DLGPROC                4
DWL_MSGRESULT              0
DWL_USER                   8
```

## E

```
EM_CANUNDO                 (WM_USER22)
EM_EMPTYUNDOBUFFER         (WM_USER29)
EM_FMTLINES                (WM_USER24)
EM_GETFIRSTVISIBLELINE     (WM_USER30)
EM_GETHANDLE               (WM_USER13)
EM_GETLINE                 (WM_USER20)
EM_GETLINECOUNT            (WM_USER10)
EM_GETMODIFY               (WM_USER8)
EM_GETPASSWORDCHAR         (WM_USER34)
EM_GETRECT                 (WM_USER2)
EM_GETSEL                  (WM_USER0)
EM_GETWORDBREAKPROC        (WM_USER33)
EM_LIMITTEXT               (WM_USER21)
EM_LINEFROMCHAR            (WM_USER25)
EM_LINEINDEX               (WM_USER11)
EM_LINELENGTH              (WM_USER17)
EM_LINESCROLL              (WM_USER6)
EM_REPLACESEL              (WM_USER18)
EM_SETFONT                 (WM_USER19)
EM_SETHANDLE               (WM_USER12)
EM_SETMODIFY               (WM_USER9)
EM_SETPASSWORDCHAR         (WM_USER28)
EM_SETREADONLY             (WM_USER31)
EM_SETRECT                 (WM_USER3)
EM_SETRECTNP               (WM_USER4)
EM_SETSEL                  (WM_USER1)
EM_SETTABSTOPS             (WM_USER27)
EM_SETWORDBREAK            (WM_USER26)
EM_SETWORDBREAKPROC        (WM_USER32)
EM_UNDO                    (WM_USER23)
EN_CHANGE                  0x0300
EN_ERRSPACE                0x0500
EN_HSCROLL                 0x0601
EN_KILLFOCUS               0x0200
EN_MAXTEXT                 0x0501
EN_SETFOCUS                0x0100
EN_UPDATE                  0x0400
EN_VSCROLL                 0x0602
ENABLEDUPLEX               28
ENABLEPAIRKERNING          769
ENABLERELATIVEWIDTHS       768
END_PATH                   4098
```

```
ENDDOC                     11
ENUMPAPERBINS              31
ENUMPAPERMETRICS           34
EPSPRINTING                33
ES_AUTOHSCROLL             0x00000080L
ES_AUTOVSCROLL             0x00000040L
ES_CENTER                  0x00000001L
ES_LEFT                    0x00000000L
ES_LOWERCASE               0x00000010L
ES_MULTILINE               0x00000004L
ES_NOHIDESEL               0x00000100L
ES_OEMCONVERT              0x00000400L
ES_PASSWORD                0x00000020L
ES_READONLY                0x00000800L
ES_RIGHT                   0x00000002L
ES_UPPERCASE               0x00000008L
ES_WANTRETURN              0x00001000L
ESB_DISABLE_BOTH           0x0003
ESB_DISABLE_DOWN           0x0002
ESB_DISABLE_LEFT           0x0001
ESB_DISABLE_RIGHT          0x0002
ESB_DISABLE_UP             0x0001
ESB_ENABLE_BOTH            0x0000
ETO_CLIPPED                0x0004
ETO_GRAYED                 0x0001
ETO_OPAQUE                 0x0002
EV_BREAK                   0x0040
EV_CTS                     0x0008
EV_CTSS                    0x0400
EV_DSR                     0x0010
EV_DSRS                    0x0800
EV_ERR                     0x0080
EV_PERR                    0x0200
EV_RING                    0x0100
EV_RingTe                  0x2000
EV_RINGTE                  EV_RingTe
EV_RLSD                    0x0020
EV_RLSDS                   0x1000
EV_RXCHAR                  0x0001
EV_RXFLAG                  0x0002
EV_TXEMPTY                 0x0004
EVENPARITY                 2
EW_REBOOTSYSTEM            0x43
EW_RESTARTWINDOWS          0x42
EXT_DEVICE_CAPS            4099
EXTTEXTOUT                 512
```

# F

```
FF_DECORATIVE              0x50
FF_DONTCARE                0x00
FF_MODERN                  0x30
FF_ROMAN                   0x10
FF_SCRIPT                  0x40
FF_SWISS                   0x20
FIXED_PITCH                0x01
FLOODFILLBORDER            0
FLOODFILLSURFACE           1
FLUSHOUTPUT                6
FW_BOLD                    700
```

```
FW_DONTCARE                    0
FW_EXTRABOLD                   800
FW_EXTRALIGHT                  200
FW_HEAVY                       900
FW_LIGHT                       300
FW_MEDIUM                      500
FW_NORMAL                      400
FW_SEMIBOLD                    600
FW_THIN                        100
```

## G

```
GCL_MENUNAME                   (-8)
GCL_WNDPROC                    (-24)
GCW_ATOM                       (-32)
GCW_CBCLSEXTRA                 (-20)
GCW_CBWNDEXTRA                 (-18)
GCW_HBRBACKGROUND              (-10)
GCW_HCURSOR                    (-12)
GCW_HICON                      (-14)
GCW_HMODULE                    (-16)
GCW_STYLE                      (-26)
GETBASEIRQ                     10
GETCOLORTABLE                  5
GETEXTENDEDTEXTMETRICS         256
GETEXTENTTABLE                 257
GETFACENAME                    513
GETMAXCOM                      9
GETMAXLPT                      8
GETPAIRKERNTABLE               258
GETPENWIDTH                    16
GETPHYSPAGESIZE                12
GETPRINTINGOFFSET              13
GETSCALINGFACTOR               14
GETSETPAPERBINS                29
GETSETPAPERMETRICS             35
GETSETPRINTORIENT              30
GETSETSCREENPARAMS             3072
GETTECHNOLGY                   20
GETTECHNOLOGY                  20
GETTRACKKERNTABLE              259
GETVECTORBRUSHSIZE             27
GETVECTORPENSIZE               26
GFSR_GDIRESOURCES              0x0001
GFSR_SYSTEMRESOURCES           0x0000
GFSR_USERRESOURCES             0x0002
GGO_BITMAP                     1
GGO_METRICS                    0
GGO_NATIVE                     2
GMEM_DDESHARE                  0x2000
GMEM_DISCARDABLE               0x0100
GMEM_DISCARDED                 0x4000
GMEM_FIXED                     0x0000
GMEM_LOCKCOUNT                 0x00FF
GMEM_MODIFY                    0x0080
GMEM_MOVEABLE                  0x0002
GMEM_NOCOMPACT                 0x0010
GMEM_NODISCARD                 0x0020
GMEM_NOT_BANKED                0x1000
GMEM_NOTIFY                    0x4000
```

```
GMEM_SHARE                      0x2000
GMEM_ZEROINIT                   0x0040
GRAY_BRUSH                      2
GW_CHILD                        5
GW_HWNDFIRST                    0
GW_HWNDLAST                     1
GW_HWNDNEXT                     2
GW_HWNDPREV                     3
GW_OWNER                        4
GWL_EXSTYLE                     (-20)
GWL_STYLE                       (-16)
GWL_WNDPROC                     (-4)
GWW_HINSTANCE                   (-6)
GWW_HWNDPARENT                  (-8)
GWW_ID                          (-12)
```

## H

```
HANGEUL_CHARSET                 129
HELP_COMMAND                    0x0102
HELP_CONTENTS                   0x0003
HELP_CONTEXT                    0x0001
HELP_CONTEXTPOPUP               0x0008
HELP_FORCEFILE                  0x0009
HELP_HELPONHELP                 0x0004
HELP_INDEX                      0x0003
HELP_KEY                        0x0101
HELP_MULTIKEY                   0x0201
HELP_PARTIALKEY                 0x0105
HELP_QUIT                       0x0002
HELP_SETCONTENTS                0x0005
HELP_SETINDEX                   0x0005
HELP_SETWINPOS                  0x0203
HIDE_WINDOW                     0
HOLLOW_BRUSH                    NULL_BRUSH
HORZRES                         8
HORZSIZE                        4
HS_BDIAGONAL                    3
HS_CROSS                        4
HS_DIAGCROSS                    5
HS_FDIAGONAL                    2
HS_HORIZONTAL                   0
HS_VERTICAL                     1
HWND_BOTTOM                     ((HWND)1)
HWND_DESKTOP                    ((HWND)0)
HWND_NOTOPMOST                  ((HWND)-2)
HWND_TOP                        ((HWND)0)
HWND_TOPMOST                    ((HWND)-1)
```

## I - J

```
IDABORT                         3
IDC_ARROW                       MAKEINTRESOURCE(32512)
IDC_CROSS                       MAKEINTRESOURCE(32515)
IDC_IBEAM                       MAKEINTRESOURCE(32513)
IDC_ICON                        MAKEINTRESOURCE(32641)
IDC_SIZE                        MAKEINTRESOURCE(32640)
IDC_SIZENESW                    MAKEINTRESOURCE(32643)
IDC_SIZENS                      MAKEINTRESOURCE(32645)
IDC_SIZENWSE                    MAKEINTRESOURCE(32642)
IDC_SIZEWE                      MAKEINTRESOURCE(32644)
```

```
IDC_UPARROW                  MAKEINTRESOURCE(32516)
IDC_WAIT                     MAKEINTRESOURCE(32514)
IDCANCEL                     2
IDI_APPLICATION              MAKEINTRESOURCE(32512)
IDI_ASTERISK                 MAKEINTRESOURCE(32516)
IDI_EXCLAMATION              MAKEINTRESOURCE(32515)
IDI_HAND                     MAKEINTRESOURCE(32513)
IDI_QUESTION                 MAKEINTRESOURCE(32514)
IDIGNORE                     5
IDNO                         7
IDOK                         1
IDRETRY                      4
IDYES                        6
IGNORE                       0
INFINITE                     0xFFFF
```

## K

```
KF_ALTDOWN                   0x2000
KF_DLGMODE                   0x0800
KF_EXTENDED                  0x0100
KF_MENUMODE                  0x1000
KF_REPEAT                    0x4000
KF_UP                        0x8000
```

## L

```
LB_ADDSTRING                 (WM_USER1)
LB_CTLCODE                   0L
LB_DELETESTRING              (WM_USER3)
LB_DIR                       (WM_USER14)
LB_ERR                       (-1)
LB_ERRSPACE                  (-2)
LB_FINDSTRING                (WM_USER16)
LB_FINDSTRINGEXACT           (WM_USER35)
LB_GETCARETINDEX             (WM_USER32)
LB_GETCOUNT                  (WM_USER12)
LB_GETCURSEL                 (WM_USER9)
LB_GETHORIZONTALEXTENT       (WM_USER20)
LB_GETITEMDATA               (WM_USER26)
LB_GETITEMHEIGHT             (WM_USER34)
LB_GETITEMRECT               (WM_USER25)
LB_GETSEL                    (WM_USER8)
LB_GETSELCOUNT               (WM_USER17)
LB_GETSELITEMS               (WM_USER18)
LB_GETTEXT                   (WM_USER10)
LB_GETTEXTLEN                (WM_USER11)
LB_GETTOPINDEX               (WM_USER15)
LB_INSERTSTRING              (WM_USER2)
LB_OKAY                      0
LB_RESETCONTENT              (WM_USER5)
LB_SELECTSTRING              (WM_USER13)
LB_SELITEMRANGE              (WM_USER28)
LB_SETCARETINDEX             (WM_USER31)
LB_SETCOLUMNWIDTH            (WM_USER22)
LB_SETCURSEL                 (WM_USER7)
LB_SETHORIZONTALEXTENT       (WM_USER21)
LB_SETITEMDATA               (WM_USER27)
LB_SETITEMHEIGHT             (WM_USER33)
LB_SETSEL                    (WM_USER6)
LB_SETTABSTOPS               (WM_USER19)
```

```
LB_SETTOPINDEX             (WM_USER24)
LBN_DBLCLK                 2
LBN_ERRSPACE               (-2)
LBN_KILLFOCUS              5
LBN_SELCANCEL              3
LBN_SELCHANGE              1
LBN_SETFOCUS               4
LBS_DISABLENOSCROLL        0x1000L
LBS_EXTENDEDSEL            0x0800L
LBS_HASSTRINGS             0x0040L
LBS_MULTICOLUMN            0x0200L
LBS_MULTIPLESEL            0x0008L
LBS_NOINTEGRALHEIGHT       0x0100L
LBS_NOREDRAW               0x0004L
LBS_NOTIFY                 0x0001L
LBS_OWNERDRAWFIXED         0x0010L
LBS_OWNERDRAWVARIABLE      0x0020L
LBS_SORT                   0x0002L
LBS_STANDARD               (LBS_NOTIFY | LBS_SORT | WS_VSCROLL | WS_BORDER)
LBS_USETABSTOPS            0x0080L
LBS_WANTKEYBOARDINPUT      0x0400L
LC_INTERIORS              0x0080
LC_MARKER                  0x0004
LC_NONE                    0x0000
LC_POLYLINE                0x0002
LC_POLYMARKER              0x0008
LC_STYLED                  0x0020
LC_WIDE                    0x0010
LC_WIDESTYLED              0x0040
LF_FULLFACESIZE            64
LINECAPS                   30
LMEM_DISCARDABLE           0x0F00
LMEM_FIXED                 0x0000
LMEM_MODIFY                0x0080
LMEM_MOVEABLE              0x0002
LMEM_NOCOMPACT             0x0010
LMEM_NODISCARD             0x0020
LMEM_ZEROINIT              0x0040
LOGPIXELSX                 88
LOGPIXELSY                 90
LPTx                       0x80
LTGRAY_BRUSH               1
```

## M

```
MA_ACTIVATE                1
MA_ACTIVATEANDEAT          2
MA_NOACTIVATE              3
MA_NOACTIVATEANDEAT        4
MARKPARITY                 3
MB_ABORTRETRYIGNORE        0x0002
MB_APPLMODAL               0x0000
MB_DEFBUTTON1              0x0000
MB_DEFBUTTON2              0x0100
MB_DEFBUTTON3              0x0200
MB_DEFMASK                 0x0F00
MB_ICONASTERISK            0x0040
MB_ICONEXCLAMATION         0x0030
MB_ICONHAND                0x0010
MB_ICONINFORMATION         MB_ICONASTERISK
```

| | |
|---|---|
| MB_ICONMASK | 0x00F0 |
| MB_ICONQUESTION | 0x0020 |
| MB_ICONSTOP | MB_ICONHAND |
| MB_NOFOCUS | 0x8000 |
| MB_OK | 0x0000 |
| MB_OKCANCEL | 0x0001 |
| MB_RETRYCANCEL | 0x0005 |
| MB_SYSTEMMODAL | 0x1000 |
| MB_TASKMODAL | 0x2000 |
| MB_TYPEMASK | 0x000F |
| MB_YESNO | 0x0004 |
| MB_YESNOCANCEL | 0x0003 |
| MDITILE_HORIZONTAL | 0x0001 |
| MDITILE_SKIPDISABLED | 0x0002 |
| MDITILE_VERTICAL | 0x0000 |
| MERGECOPY | 0x00C000CAL |
| MERGEPAINT | 0x00BB0226L |
| MF_APPEND | 0x0100 |
| MF_BITMAP | 0x0004 |
| MF_BYCOMMAND | 0x0000 |
| MF_BYPOSITION | 0x0400 |
| MF_CHANGE | 0x0080 |
| MF_CHECKED | 0x0008 |
| MF_DELETE | 0x0200 |
| MF_DISABLED | 0x0002 |
| MF_ENABLED | 0x0000 |
| MF_GRAYED | 0x0001 |
| MF_HELP | 0x4000 |
| MF_HILITE | 0x0080 |
| MF_INSERT | 0x0000 |
| MF_MENUBARBREAK | 0x0020 |
| MF_MENUBREAK | 0x0040 |
| MF_MOUSESELECT | 0x8000 |
| MF_OWNERDRAW | 0x0100 |
| MF_POPUP | 0x0010 |
| MF_REMOVE | 0x1000 |
| MF_SEPARATOR | 0x0800 |
| MF_STRING | 0x0000 |
| MF_SYSMENU | 0x2000 |
| MF_UNCHECKED | 0x0000 |
| MF_UNHILITE | 0x0000 |
| MF_USECHECKBITMAPS | 0x0200 |
| MFCOMMENT | 15 |
| MK_CONTROL | 0x0008 |
| MK_LBUTTON | 0x0001 |
| MK_MBUTTON | 0x0010 |
| MK_RBUTTON | 0x0002 |
| MK_SHIFT | 0x0004 |
| MM_ANISOTROPIC | 8 |
| MM_HIENGLISH | 5 |
| MM_HIMETRIC | 3 |
| MM_ISOTROPIC | 7 |
| MM_LOENGLISH | 4 |
| MM_LOMETRIC | 2 |
| MM_TEXT | 1 |
| MM_TWIPS | 6 |
| MOUSETRAILS | 39 |
| MSGF_DIALOGBOX | 0 |
| MSGF_MAINLOOP | 8 |

```
MSGF_MENU                2
MSGF_MOVE                3
MSGF_NEXTWINDOW          6
MSGF_SCROLLBAR           5
MSGF_SIZE                4
MSGF_USER                4096
```

# N

```
NEWFRAME                 1
NEXTBAND                 3
NOPARITY                 0
NOTSRCCOPY               0x00330008L
NOTSRCERASE              0x001100A6L
NTM_BOLD                 0x00000020L
NTM_ITALIC               0x00000001L
NTM_REGULAR              0x00000040L
NULL_BRUSH               5
NULL_PEN                 8
NUMBRUSHES               16
NUMCOLORS                24
NUMFONTS                 22
NUMMARKERS               20
NUMPENS                  18
NUMRESERVED              106
```

# O

```
OBM_BTNCORNERS           32758
OBM_BTSIZE               32761
OBM_CHECK                32760
OBM_CHECKBOXES           32759
OBM_CLOSE                32754
OBM_COMBO                32738
OBM_DNARROW              32752
OBM_DNARROWD             32742
OBM_DNARROWI             32736
OBM_LFARROW              32750
OBM_LFARROWD             32740
OBM_LFARROWI             32734
OBM_MNARROW              32739
OBM_OLD_CLOSE            32767
OBM_OLD_DNARROW          32764
OBM_OLD_LFARROW          32762
OBM_OLD_REDUCE           32757
OBM_OLD_RESTORE          32755
OBM_OLD_RGARROW          32763
OBM_OLD_UPARROW          32765
OBM_OLD_ZOOM             32756
OBM_REDUCE               32749
OBM_REDUCED              32746
OBM_RESTORE              32747
OBM_RESTORED             32744
OBM_RGARROW              32751
OBM_RGARROWD             32741
OBM_RGARROWI             32735
OBM_SIZE                 32766
OBM_UPARROW              32753
OBM_UPARROWD             32743
OBM_UPARROWI             32737
OBM_ZOOM                 32748
```

| | |
|---|---|
| OBM_ZOOMD | 32745 |
| OCR_CROSS | 32515 |
| OCR_IBEAM | 32513 |
| OCR_ICOCUR | 32647 |
| OCR_ICON | 32641 |
| OCR_NORMAL | 32512 |
| OCR_SIZE | 32640 |
| OCR_SIZEALL | 32646 |
| OCR_SIZENESW | 32643 |
| OCR_SIZENS | 32645 |
| OCR_SIZENWSE | 32642 |
| OCR_SIZEWE | 32644 |
| OCR_UP | 32516 |
| OCR_WAIT | 32514 |
| ODA_DRAWENTIRE | 0x0001 |
| ODA_FOCUS | 0x0004 |
| ODA_SELECT | 0x0002 |
| ODDPARITY | 1 |
| ODS_CHECKED | 0x0008 |
| ODS_DISABLED | 0x0004 |
| ODS_FOCUS | 0x0010 |
| ODS_GRAYED | 0x0002 |
| ODS_SELECTED | 0x0001 |
| ODT_BUTTON | 4 |
| ODT_COMBOBOX | 3 |
| ODT_LISTBOX | 2 |
| ODT_MENU | 1 |
| OEM_CHARSET | 255 |
| OEM_FIXED_FONT | 10 |
| OF_CANCEL | 0x0800 |
| OF_CREATE | 0x1000 |
| OF_DELETE | 0x0200 |
| OF_EXIST | 0x4000 |
| OF_PARSE | 0x0100 |
| OF_PROMPT | 0x2000 |
| OF_READ | 0x0000 |
| OF_READWRITE | 0x0002 |
| OF_REOPEN | 0x8000 |
| OF_SEARCH | 0x0400 |
| OF_SHARE_COMPAT | 0x0000 |
| OF_SHARE_DENY_NONE | 0x0040 |
| OF_SHARE_DENY_READ | 0x0030 |
| OF_SHARE_DENY_WRITE | 0x0020 |
| OF_SHARE_EXCLUSIVE | 0x0010 |
| OF_VERIFY | 0x0400 |
| OF_WRITE | 0x0001 |
| OIC_BANG | 32515 |
| OIC_HAND | 32513 |
| OIC_NOTE | 32516 |
| OIC_QUES | 32514 |
| OIC_SAMPLE | 32512 |
| ONE5STOPBITS | 1 |
| ONESTOPBIT | 0 |
| OPAQUE | 2 |
| OUT_CHARACTER_PRECIS | 2 |
| OUT_DEFAULT_PRECIS | 0 |
| OUT_DEVICE_PRECIS | 5 |
| OUT_RASTER_PRECIS | 6 |
| OUT_STRING_PRECIS | 1 |

```
OUT_STROKE_PRECIS            3
OUT_TT_ONLY_PRECIS           7
OUT_TT_PRECIS                4
```

# P

```
PASSTHROUGH                  19
PATCOPY                      0x00F00021L
PATINVERT                    0x005A0049L
PATPAINT                     0x00FB0A09L
PC_EXPLICIT                  0x02
PC_INTERIORS                 0x0080
PC_NOCOLLAPSE                0x04
PC_NONE                      0x0000
PC_POLYGON                   0x0001
PC_RECTANGLE                 0x0002
PC_RESERVED                  0x01
PC_SCANLINE                  0x0008
PC_STYLED                    0x0020
PC_WIDE                      0x0010
PC_WIDESTYLED                0x0040
PC_WINDPOLYGON               0x0004
PDEVICESIZE                  26
PLANES                       14
PM_NOREMOVE                  0x0000
PM_NOYIELD                   0x0002
PM_REMOVE                    0x0001
POLYGONALCAPS                32
POSTSCRIPT_DATA              37
POSTSCRIPT_IGNORE            38
PR_JOBSTATUS                 0x0000
PROOF_QUALITY                2
PS_DASH                      1
PS_DASHDOT                   3
PS_DASHDOTDOT                4
PS_DOT                       2
PS_INSIDEFRAME               6
PS_NULL                      5
PS_SOLID                     0
PWR_CRITICALRESUME           3
PWR_FAIL                     (-1)
PWR_OK                       1
PWR_SUSPENDREQUEST           1
PWR_SUSPENDRESUME            2
```

# Q

```
QS_ALLINPUT                  0x007f
QS_KEY                       0x0001
QS_MOUSE                     (QS_MOUSEMOVE | QS_MOUSEBUTTON)
QS_MOUSEBUTTON               0x0004
QS_MOUSEMOVE                 0x0002
QS_PAINT                     0x0020
QS_POSTMESSAGE               0x0008
QS_SENDMESSAGE               0x0040
QS_TIMER                     0x0010
QUERYESCSUPPORT              8
```

# R

```
R2_BLACK                     1
R2_COPYPEN                   13
```

| | |
|---|---|
| R2_MASKNOTPEN | 3 |
| R2_MASKPEN | 9 |
| R2_MASKPENNOT | 5 |
| R2_MERGENOTPEN | 12 |
| R2_MERGEPEN | 15 |
| R2_MERGEPENNOT | 14 |
| R2_NOP | 11 |
| R2_NOT | 6 |
| R2_NOTCOPYPEN | 4 |
| R2_NOTMASKPEN | 8 |
| R2_NOTMERGEPEN | 2 |
| R2_NOTXORPEN | 10 |
| R2_WHITE | 16 |
| R2_XORPEN | 7 |
| RASTER_FONTTYPE | 0x0001 |
| RASTERCAPS | 38 |
| RC_BANDING | 0x0002 |
| RC_BIGFONT | 0x0400 |
| RC_BITBLT | 0x0001 |
| RC_BITMAP64 | 0x0008 |
| RC_DEVBITS | 0x8000 |
| RC_DI_BITMAP | 0x0080 |
| RC_DIBTODEV | 0x0200 |
| RC_FLOODFILL | 0x1000 |
| RC_GDI20_OUTPUT | 0x0010 |
| RC_GDI20_STATE | 0x0020 |
| RC_NONE | |
| RC_OP_DX_OUTPUT | 0x4000 |
| RC_PALETTE | 0x0100 |
| RC_SAVEBITMAP | 0x0040 |
| RC_SCALING | 0x0004 |
| RC_STRETCHBLT | 0x0800 |
| RC_STRETCHDIB | 0x2000 |
| RDW_ALLCHILDREN | 0x0080 |
| RDW_ERASE | 0x0004 |
| RDW_ERASENOW | 0x0200 |
| RDW_FRAME | 0x0400 |
| RDW_INTERNALPAINT | 0x0002 |
| RDW_INVALIDATE | 0x0001 |
| RDW_NOCHILDREN | 0x0040 |
| RDW_NOERASE | 0x0020 |
| RDW_NOFRAME | 0x0800 |
| RDW_NOINTERNALPAINT | 0x0010 |
| RDW_UPDATENOW | 0x0100 |
| RDW_VALIDATE | 0x0008 |
| RESETDEV | 7 |
| RESTORE_CTM | 4100 |
| RT_ACCELERATOR | MAKEINTRESOURCE(9) |
| RT_BITMAP | MAKEINTRESOURCE(2) |
| RT_CURSOR | MAKEINTRESOURCE(1) |
| RT_DIALOG | MAKEINTRESOURCE(5) |
| RT_FONT | MAKEINTRESOURCE(8) |
| RT_FONTDIR | MAKEINTRESOURCE(7) |
| RT_GROUP_CURSOR | MAKEINTRESOURCE(12) |
| RT_GROUP_ICON | MAKEINTRESOURCE(14) |
| RT_ICON | MAKEINTRESOURCE(3) |
| RT_MENU | MAKEINTRESOURCE(4) |
| RT_RCDATA | MAKEINTRESOURCE(10) |
| RT_STRING | MAKEINTRESOURCE(6) |

# S

| | |
|---|---|
| S_ALLTHRESHOLD | 2 |
| S_LEGATO | 1 |
| S_NORMAL | 0 |
| S_PERIOD1024 | 1 |
| S_PERIOD2048 | 2 |
| S_PERIOD512 | 0 |
| S_PERIODVOICE | 3 |
| S_QUEUEEMPTY | 0 |
| S_SERBDNT | (-5) |
| S_SERDCC | (-7) |
| S_SERDDR | (-14) |
| S_SERDFQ | (-13) |
| S_SERDLN | (-6) |
| S_SERDMD | (-10) |
| S_SERDPT | (-12) |
| S_SERDSH | (-11) |
| S_SERDSR | (-15) |
| S_SERDST | (-16) |
| S_SERDTP | (-8) |
| S_SERDVL | (-9) |
| S_SERDVNA | (-1) |
| S_SERMACT | (-3) |
| S_SEROFM | (-2) |
| S_SERQFUL | (-4) |
| S_STACCATO | 2 |
| S_THRESHOLD | 1 |
| S_WHITE1024 | 5 |
| S_WHITE2048 | 6 |
| S_WHITE512 | 4 |
| S_WHITEVOICE | 7 |
| SAVE_CTM | 4101 |
| SB_BOTH | 3 |
| SB_BOTTOM | 7 |
| SB_CTL | 2 |
| SB_ENDSCROLL | 8 |
| SB_HORZ | 0 |
| SB_LEFT | 6 |
| SB_LINEDOWN | 1 |
| SB_LINELEFT | 0 |
| SB_LINERIGHT | 1 |
| SB_LINEUP | 0 |
| SB_PAGEDOWN | 3 |
| SB_PAGELEFT | 2 |
| SB_PAGERIGHT | 3 |
| SB_PAGEUP | 2 |
| SB_RIGHT | 7 |
| SB_THUMBPOSITION | 4 |
| SB_THUMBTRACK | 5 |
| SB_TOP | 6 |
| SB_VERT | 1 |
| SBS_BOTTOMALIGN | 0x0004L |
| SBS_HORZ | 0x0000L |
| SBS_LEFTALIGN | 0x0002L |
| SBS_RIGHTALIGN | 0x0004L |
| SBS_SIZEBOX | 0x0008L |
| SBS_SIZEBOXBOTTOMRIGHTALIGN | 0x0004L |
| SBS_SIZEBOXTOPLEFTALIGN | 0x0002L |

```
SBS_TOPALIGN              0x0002L
SBS_VERT                  0x0001L
SC_ARRANGE                0xF110
SC_CLOSE                  0xF060
SC_HOTKEY                 0xF150
SC_HSCROLL                0xF080
SC_KEYMENU                0xF100
SC_MAXIMIZE               0xF030
SC_MINIMIZE               0xF020
SC_MOUSEMENU              0xF090
SC_MOVE                   0xF010
SC_NEXTWINDOW             0xF040
SC_PREVWINDOW             0xF050
SC_RESTORE                0xF120
SC_SCREENSAVE             0xF140
SC_SIZE                   0xF000
SC_TASKLIST               0xF130
SC_VSCROLL                0xF070
SELECTPAPERSOURCE         18
SEM_FAILCRITICALERRORS    0x0001
SEM_NOGPFAULTERRORBOX     0x0002
SEM_NOOPENFILEERRORBOX    0x8000
SET_ARC_DIRECTION         4102
SET_BACKGROUND_COLOR      4103
SET_BOUNDS                4109
SET_CLIP_BOX              4108
SET_POLY_MODE             4104
SET_SCREEN_ANGLE          4105
SET_SPREAD                4106
SETABORTPROC              9
SETALLJUSTVALUES          771
SETCHARSET                772
SETCOLORTABLE             4
SETCOPYCOUNT              17
SETDIBSCALING             32
SETDTR                    5
SETKERNTRACK              770
SETLINECAP                21
SETLINEJOIN               22
SETMITERLIMIT             23
SETRTS                    3
SETXOFF                   1
SETXON                    2
SHIFTJIS_CHARSET          128
SHOW_FULLSCREEN           3
SHOW_ICONWINDOW           2
SHOW_OPENNOACTIVATE       4
SHOW_OPENWINDOW           1
SIZE_MAXHIDE              4
SIZE_MAXIMIZED            2
SIZE_MAXSHOW              3
SIZE_MINIMIZED            1
SIZE_RESTORED             0
SIZEPALETTE               104
SM_CMETRICS               43
SM_CXBORDER               5
SM_CXCURSOR               13
SM_CXDLGFRAME             7
SM_CXDOUBLECLK            36
```

```
SM_CXFRAME                   32
SM_CXFULLSCREEN              16
SM_CXHSCROLL                 21
SM_CXHTHUMB                  10
SM_CXICON                    11
SM_CXICONSPACING             38
SM_CXMIN                     28
SM_CXMINTRACK                34
SM_CXSCREEN                  0
SM_CXSIZE                    30
SM_CXVSCROLL                 2
SM_CYBORDER                  6
SM_CYCAPTION                 4
SM_CYCURSOR                  14
SM_CYDLGFRAME                8
SM_CYDOUBLECLK               37
SM_CYFRAME                   33
SM_CYFULLSCREEN              17
SM_CYHSCROLL                 3
SM_CYICON                    12
SM_CYICONSPACING             39
SM_CYKANJIWINDOW             18
SM_CYMENU                    15
SM_CYMIN                     29
SM_CYMINTRACK                35
SM_CYSCREEN                  1
SM_CYSIZE                    31
SM_CYVSCROLL                 20
SM_CYVTHUMB                  9
SM_DBCSENABLED               42
SM_DEBUG                     22
SM_MENUDROPALIGNMENT         40
SM_MOUSEPRESENT              19
SM_PENWINDOWS                41
SM_RESERVED1                 24
SM_RESERVED2                 25
SM_RESERVED3                 26
SM_RESERVED4                 27
SM_SWAPBUTTON                23
SP_APPABORT                  (-2)
SP_ERROR                     (-1)
SP_NOTREPORTED               0x4000
SP_OUTOFDISK                 (-4)
SP_OUTOFMEMORY               (-5)
SP_USERABORT                 (-3)
SPACEPARITY                  4
SPI_GETBEEP                  1
SPI_GETBORDER                5
SPI_GETFASTTASKSWITCH        35
SPI_GETGRIDGRANULARITY       18
SPI_GETICONTITLELOGFONT      31
SPI_GETICONTITLEWRAP         25
SPI_GETKEYBOARDDELAY         22
SPI_GETKEYBOARDSPEED         10
SPI_GETMENUDROPALIGNMENT     27
SPI_GETMOUSE                 3
SPI_GETSCREENSAVEACTIVE      16
SPI_GETSCREENSAVETIMEOUT     14
SPI_ICONHORIZONTALSPACING    13
```

```
SPI_ICONVERTICALSPACING      24
SPI_LANGDRIVER               12
SPI_SETBEEP                  2
SPI_SETBORDER                6
SPI_SETDESKPATTERN           21
SPI_SETDESKWALLPAPER         20
SPI_SETDOUBLECLICKTIME       32
SPI_SETDOUBLECLKHEIGHT       30
SPI_SETDOUBLECLKWIDTH        29
SPI_SETFASTTASKSWITCH        36
SPI_SETGRIDGRANULARITY       19
SPI_SETICONTITLELOGFONT      34
SPI_SETICONTITLEWRAP         26
SPI_SETKEYBOARDDELAY         23
SPI_SETKEYBOARDSPEED         11
SPI_SETMENUDROPALIGNMENT     28
SPI_SETMOUSE                 4
SPI_SETMOUSEBUTTONSWAP       33
SPI_SETSCREENSAVEACTIVE      17
SPI_SETSCREENSAVETIMEOUT     15
SPIF_SENDWININICHANGE        0x0002
SPIF_UPDATEINIFILE           0x0001
SRCAND                       0x008800C6L
SRCCOPY                      0x00CC0020L
SRCERASE                     0x00440328L
SRCINVERT                    0x00660046L
SRCPAINT                     0x00EE0086L
SS_BLACKFRAME                0x00000007L
SS_BLACKRECT                 0x00000004L
SS_CENTER                    0x00000001L
SS_GRAYFRAME                 0x00000008L
SS_GRAYRECT                  0x00000005L
SS_ICON                      0x00000003L
SS_LEFT                      0x00000000L
SS_LEFTNOWORDWRAP            0x0000000CL
SS_NOPREFIX                  0x00000080L
SS_RIGHT                     0x00000002L
SS_SIMPLE                    0x0000000BL
SS_WHITEFRAME                0x00000009L
SS_WHITERECT                 0x00000006L
STARTDOC                     10
STM_GETICON                  (WM_USER1)
STM_SETICON                  (WM_USER0)
STRETCH_ANDSCANS             1
STRETCH_DELETESCANS          3
STRETCH_ORSCANS              2
STRETCHBLT                   2048
SW_ERASE                     0x0004
SW_HIDE                      0
SW_INVALIDATE                0x0002
SW_MAXIMIZE                  3
SW_MINIMIZE                  6
SW_NORMAL                    1
SW_OTHERMAXIMIZED            2
SW_OTHERRESTORED             4
SW_PARENTCLOSING             1
SW_PARENTOPENING             3
SW_RESTORE                   9
SW_SCROLLCHILDREN            0x0001
```

```
SW_SHOW                    5
SW_SHOWMAXIMIZED           3
SW_SHOWMINIMIZED           2
SW_SHOWMINNOACTIVE         7
SW_SHOWNA                  8
SW_SHOWNOACTIVATE          4
SW_SHOWNORMAL              1
SWP_DEFERERASE             0x2000
SWP_DRAWFRAME              SWP_FRAMECHANGED
SWP_FRAMECHANGED           0x0020
SWP_HIDEWINDOW             0x0080
SWP_NOACTIVATE             0x0010
SWP_NOCOPYBITS             0x0100
SWP_NOMOVE                 0x0002
SWP_NOOWNERZORDER          0x0200
SWP_NOREDRAW               0x0008
SWP_NOREPOSITION           SWP_NOOWNERZORDER
SWP_NOSENDCHANGING         0x0400
SWP_NOSIZE                 0x0001
SWP_NOZORDER               0x0004
SWP_SHOWWINDOW             0x0040
SYMBOL_CHARSET             2
SYSPAL_NOSTATIC            2
SYSPAL_STATIC              1
SYSTEM_FIXED_FONT          16
SYSTEM_FONT                13
```

## T - U

```
TA_BASELINE                0x0018
TA_BOTTOM                  0x0008
TA_CENTER                  0x0006
TA_LEFT                    0x0000
TA_NOUPDATECP              0x0000
TA_RIGHT                   0x0002
TA_TOP                     0x0000
TA_UPDATECP                0x0001
TC_CP_STROKE               0x0004
TC_CR_90                   0x0008
TC_CR_ANY                  0x0010
TC_EA_DOUBLE               0x0200
TC_IA_ABLE                 0x0400
TC_OP_CHARACTER            0x0001
TC_OP_STROKE               0x0002
TC_RA_ABLE                 0x2000
TC_RESERVED                0x8000
TC_SA_CONTIN               0x0100
TC_SA_DOUBLE               0x0040
TC_SA_INTEGER              0x0080
TC_SF_X_YINDEP             0x0020
TC_SO_ABLE                 0x1000
TC_UA_ABLE                 0x0800
TC_VA_ABLE                 0x4000
TECHNOLOGY                 2
TEXTCAPS                   34
TMPF_DEVICE                0x08
TMPF_FIXED_PITCH           0x01
TMPF_TRUETYPE              0x04
TMPF_VECTOR                0x02
TPM_CENTERALIGN            0x0004
```

```
TPM_LEFTALIGN              0x0000
TPM_LEFTBUTTON             0x0000
TPM_RIGHTALIGN             0x0008
TPM_RIGHTBUTTON            0x0002
TRANSFORM_CTM              4107
TRANSPARENT                1
TRUETYPE_FONTTYPE          0x0004
TT_AVAILABLE               0x0001
TT_ENABLED                 0x0002
TT_POLYGON_TYPE            24
TT_PRIM_LINE               1
TT_PRIM_QSPLINE            2
TWOSTOPBITS                2
```

# V

```
VARIABLE_PITCH             0x02
VERTRES                    10
VERTSIZE                   6
VK_ADD                     0x6B
VK_BACK                    0x08
VK_CANCEL                  0x03
VK_CAPITAL                 0x14
VK_CLEAR                   0x0C
VK_CONTROL                 0x11
VK_DECIMAL                 0x6E
VK_DELETE                  0x2E
VK_DIVIDE                  0x6F
VK_DOWN                    0x28
VK_END                     0x23
VK_ESCAPE                  0x1B
VK_EXECUTE                 0x2B
VK_F1                      0x70
VK_F10                     0x79
VK_F11                     0x7A
VK_F12                     0x7B
VK_F13                     0x7C
VK_F14                     0x7D
VK_F15                     0x7E
VK_F16                     0x7F
VK_F17                     0x80
VK_F18                     0x81
VK_F19                     0x82
VK_F2                      0x71
VK_F20                     0x83
VK_F21                     0x84
VK_F22                     0x85
VK_F23                     0x86
VK_F24                     0x87
VK_F3                      0x72
VK_F4                      0x73
VK_F5                      0x74
VK_F6                      0x75
VK_F7                      0x76
VK_F8                      0x77
VK_F9                      0x78
VK_HELP                    0x2F
VK_HOME                    0x24
VK_INSERT                  0x2D
VK_LBUTTON                 0x01
```

```
VK_LEFT                    0x25
VK_MBUTTON                 0x04
VK_MENU                    0x12
VK_MULTIPLY                0x6A
VK_NEXT                    0x22
VK_NUMLOCK                 0x90
VK_NUMPAD0                 0x60
VK_NUMPAD1                 0x61
VK_NUMPAD2                 0x62
VK_NUMPAD3                 0x63
VK_NUMPAD4                 0x64
VK_NUMPAD5                 0x65
VK_NUMPAD6                 0x66
VK_NUMPAD7                 0x67
VK_NUMPAD8                 0x68
VK_NUMPAD9                 0x69
VK_PAUSE                   0x13
VK_PRINT                   0x2A
VK_PRIOR                   0x21
VK_RBUTTON                 0x02
VK_RETURN                  0x0D
VK_RIGHT                   0x27
VK_SCROLL                  0x91
VK_SELECT                  0x29
VK_SEPARATOR               0x6C
VK_SHIFT                   0x10
VK_SNAPSHOT                0x2C
VK_SPACE                   0x20
VK_SUBTRACT                0x6D
VK_TAB                     0x09
VK_UP                      0x26
```

## W - Z

```
WA_ACTIVE                  1
WA_CLICKACTIVE             2
WA_INACTIVE                0
WB_ISDELIMITER             2
WB_LEFT                    0
WB_RIGHT                   1
WC_DIALOG                  (MAKEINTATOM(0x8002))
WF_80x87                   0x0400
WF_CPU086                  0x0040
WF_CPU186                  0x0080
WF_CPU286                  0x0002
WF_CPU386                  0x0004
WF_CPU486                  0x0008
WF_ENHANCED                0x0020
WF_LARGEFRAME              0x0100
WF_PAGING                  0x0800
WF_PMODE                   0x0001
WF_SMALLFRAME              0x0200
WF_STANDARD                0x0010
WF_WIN286                  0x0010
WF_WIN386                  0x0020
WF_WLO                     0x8000
WH_CALLWNDPROC             4
WH_GETMESSAGE              3
WH_KEYBOARD                2
WH_MSGFILTER               (-1)
```

```
WH_SYSMSGFILTER              6
WHITE_BRUSH                  0
WHITE_PEN                    6
WHITENESS                    0x00FF0062L
WHITEONBLACK                 2
WM_ACTIVATE                  0x0006
WM_ACTIVATEAPP               0x001C
WM_ASKCBFORMATNAME           0x030C
WM_CANCELMODE                0x001F
WM_CHANGECBCHAIN             0x030D
WM_CHAR                      0x0102
WM_CHARTOITEM                0x002F
WM_CHILDACTIVATE             0x0022
WM_CLEAR                     0x0303
WM_CLOSE                     0x0010
WM_COALESCE_FIRST            0x0390
WM_COALESCE_LAST             0x039F
WM_COMMAND                   0x0111
WM_COMMNOTIFY                0x0044
WM_COMPACTING                0x0041
WM_COMPAREITEM               0x0039
WM_COPY                      0x0301
WM_CREATE                    0x0001
WM_CTLCOLOR                  0x0019
WM_CUT                       0x0300
WM_DEADCHAR                  0x0103
WM_DELETEITEM                0x002D
WM_DESTROY                   0x0002
WM_DESTROYCLIPBOARD          0x0307
WM_DEVMODECHANGE             0x001B
WM_DRAWCLIPBOARD             0x0308
WM_DRAWITEM                  0x002B
WM_DROPFILES                 0x0233
WM_ENABLE                    0x000A
WM_ENDSESSION                0x0016
WM_ENTERIDLE                 0x0121
WM_ERASEBKGND                0x0014
WM_FONTCHANGE                0x001D
WM_GETDLGCODE                0x0087
WM_GETFONT                   0x0031
WM_GETMINMAXINFO             0x0024
WM_GETTEXT                   0x000D
WM_GETTEXTLENGTH             0x000E
WM_HSCROLL                   0x0114
WM_HSCROLLCLIPBOARD          0x030E
WM_ICONERASEBKGND            0x0027
WM_INITDIALOG                0x0110
WM_INITMENU                  0x0116
WM_INITMENUPOPUP             0x0117
WM_KEYDOWN                   0x0100
WM_KEYFIRST                  0x0100
WM_KEYLAST                   0x0108
WM_KEYUP                     0x0101
WM_KILLFOCUS                 0x0008
WM_LBUTTONDBLCLK             0x0203
WM_LBUTTONDOWN               0x0201
WM_LBUTTONUP                 0x0202
WM_MBUTTONDBLCLK             0x0209
WM_MBUTTONDOWN               0x0207
```

```
WM_MBUTTONUP              0x0208
WM_MDIACTIVATE            0x0222
WM_MDICASCADE             0x0227
WM_MDICREATE              0x0220
WM_MDIDESTROY             0x0221
WM_MDIGETACTIVE           0x0229
WM_MDIICONARRANGE         0x0228
WM_MDIMAXIMIZE            0x0225
WM_MDINEXT                0x0224
WM_MDIRESTORE             0x0223
WM_MDISETMENU             0x0230
WM_MDITILE                0x0226
WM_MENUCHAR               0x0120
WM_MENUSELECT             0x011F
WM_MOUSEACTIVATE          0x0021
WM_MOUSEFIRST             0x0200
WM_MOUSELAST              0x0209
WM_MOUSEMOVE              0x0200
WM_MOVE                   0x0003
WM_NCACTIVATE             0x0086
WM_NCCREATE               0x0081
WM_NCDESTROY              0x0082
WM_NCLBUTTONDBLCLK        0x00A3
WM_NCLBUTTONDOWN          0x00A1
WM_NCLBUTTONUP            0x00A2
WM_NCMBUTTONDBLCLK        0x00A9
WM_NCMBUTTONDOWN          0x00A7
WM_NCMBUTTONUP            0x00A8
WM_NCMOUSEMOVE            0x00A0
WM_NCRBUTTONDBLCLK        0x00A6
WM_NCRBUTTONDOWN          0x00A4
WM_NCRBUTTONUP            0x00A5
WM_NEXTDLGCTL             0x0028
WM_NULL                   0x0000
WM_PAINT                  0x000F
WM_PAINTCLIPBOARD         0x0309
WM_PALETTECHANGED         0x0311
WM_PALETTEISCHANGING      0x0310
WM_PARENTNOTIFY           0x0210
WM_PASTE                  0x0302
WM_PENWINFIRST            0x0380
WM_PENWINLAST             0x038F
WM_POWER                  0x0048
WM_QUERYDRAGICON          0x0037
WM_QUERYENDSESSION        0x0011
WM_QUERYNEWPALETTE        0x030F
WM_QUERYOPEN              0x0013
WM_QUIT                   0x0012
WM_RBUTTONDBLCLK          0x0206
WM_RBUTTONDOWN            0x0204
WM_RBUTTONUP              0x0205
WM_RENDERALLFORMATS       0x0306
WM_RENDERFORMAT           0x0305
WM_SETCURSOR              0x0020
WM_SETFOCUS               0x0007
WM_SETFONT                0x0030
WM_SETREDRAW              0x000B
WM_SETTEXT                0x000C
WM_SHOWWINDOW             0x0018
```

```
WM_SIZE                     0x0005
WM_SIZECLIPBOARD            0x030B
WM_SPOOLERSTATUS            0x002A
WM_SYSCHAR                  0x0106
WM_SYSCOLORCHANGE           0x0015
WM_SYSDEADCHAR              0x0107
WM_SYSKEYDOWN               0x0104
WM_SYSKEYUP                 0x0105
WM_SYSTEMERROR              0x0017
WM_TIMECHANGE               0x001E
WM_UNDO                     0x0304
WM_USER                     0x0400
WM_VKEYTOITEM               0x002E
WM_VSCROLL                  0x0115
WM_VSCROLLCLIPBOARD         0x030A
WM_WINDOWPOSCHANGED         0x0047
WM_WINDOWPOSCHANGING        0x0046
WN_ACCESS_DENIED            0x0007
WN_ALREADY_CONNECTED        0x0034
WN_BAD_LOCALNAME            0x0033
WN_BAD_NETNAME              0x0032
WN_BAD_PASSWORD             0x0006
WN_BAD_POINTER              0x0004
WN_BAD_USER                 0x000A
WN_BAD_VALUE                0x0005
WN_CANCEL                   0x000C
WN_CONNECTION_CLOSED        0x0036
WN_CONTINUE                 0x000D
WN_DEVICE_ERROR             0x0035
WN_FUNCTION_BUSY            0x0008
WN_MORE_DATA                0x0003
WN_NET_ERROR                0x0002
WN_NOT_CONNECTED            0x0030
WN_NOT_SUPPORTED            0x0001
WN_OPEN_FILES               0x0031
WN_OUT_OF_MEMORY            0x000B
WN_SUCCESS                  0x0000
WN_WINDOWS_ERROR            0x0009
WPF_RESTORETOMAXIMIZED      0x0002
WPF_SETMINPOSITION          0x0001
WS_BORDER                   0x00800000L
WS_CAPTION                  0x00C00000L
WS_CHILD                    0x40000000L
WS_CHILDWINDOW              (WS_CHILD)
WS_CLIPCHILDREN             0x02000000L
WS_CLIPSIBLINGS             0x04000000L
WS_DISABLED                 0x08000000L
WS_DLGFRAME                 0x00400000L
WS_EX_ACCEPTFILES           0x00000010L
WS_EX_DLGMODALFRAME         0x00000001L
WS_EX_NOPARENTNOTIFY        0x00000004L
WS_EX_TOPMOST               0x00000008L
WS_EX_TRANSPARENT           0x00000020L
WS_GROUP                    0x00020000L
WS_HSCROLL                  0x00100000L
WS_ICONIC                   WS_MINIMIZE
WS_MAXIMIZE                 0x01000000L
WS_MAXIMIZEBOX              0x00010000L
WS_MINIMIZE                 0x20000000L
```

```
WS_MINIMIZEBOX              0x00020000L
WS_OVERLAPPED               0x00000000L
WS_OVERLAPPEDWINDOW         (WS_OVERLAPPED | WS_CAPTION | WS_SYSMENU |
                            WS_THICKFRAME | WS_MINIMIZEBOX | WS_MAXIMIZEBOX)
WS_POPUP                    0x80000000L
WS_POPUPWINDOW              (WS_POPUP | WS_BORDER | WS_SYSMENU)
WS_SIZEBOX                  WS_THICKFRAME
WS_SYSMENU                  0x00080000L
WS_TABSTOP                  0x00010000L
WS_THICKFRAME               0x00040000L
WS_TILED                    WS_OVERLAPPED
WS_TILEDWINDOW              WS_OVERLAPPEDWINDOW
WS_VISIBLE                  0x10000000L
WS_VSCROLL                  0x00200000L
```

## Application termination

```
WM_QUERYENDSESSION           0x0011
WM_ENDSESSION                0x0016
WM_QUIT                      0x0012
WM_SYSTEMERROR               0x0017
```

# Bitmap support

**Constants for the biCompression field**

```
BI_RGB                      0L
BI_RLE8                     1L
BI_RLE4                     2L
```

**DIB color table identifiers**

```
DIB_RGB_COLORS              0
DIB_PAL_COLORS              1
```

**Constants for CreateDIBitmap**

```
CBM_INIT                    0x00000004L
```

**Binary raster ops**

```
R2_BLACK                    1
R2_NOTMERGEPEN              2
R2_MASKNOTPEN               3
R2_NOTCOPYPEN               4
R2_MASKPENNOT               5
R2_NOT                      6
R2_XORPEN                   7
R2_NOTMASKPEN               8
R2_MASKPEN                  9
R2_NOTXORPEN                10
R2_NOP                      11
R2_MERGENOTPEN              12
R2_COPYPEN                  13
R2_MERGEPENNOT              14
R2_MERGEPEN                 15
R2_WHITE                    16
```

**Ternary raster operations**

```
SRCCOPY                     0x00CC0020L
SRCPAINT                    0x00EE0086L
SRCAND                      0x008800C6L
SRCINVERT                   0x00660046L
SRCERASE                    0x00440328L
NOTSRCCOPY                  0x00330008L
NOTSRCERASE                 0x001100A6L
MERGECOPY                   0x00C000CAL
MERGEPAINT                  0x00BB0226L
PATCOPY                     0x00F00021L
PATPAINT                    0x00FB0A09L
PATINVERT                   0x005A0049L
DSTINVERT                   0x00550009L
BLACKNESS                   0x00000042L
WHITENESS                   0x00FF0062L
```

**StretchBlt() modes**

```
BLACKONWHITE                1
WHITEONBLACK                2
COLORONCOLOR                3
```

**New StretchBlt() modes (simpler names)**

```
STRETCH_ANDSCANS            1
STRETCH_ORSCANS             2
STRETCH_DELETESCANS         3
```

# Button control

**Button control styles**

```
BS_PUSHBUTTON               0x00000000L
BS_DEFPUSHBUTTON            0x00000001L
BS_CHECKBOX                 0x00000002L
BS_AUTOCHECKBOX             0x00000003L
BS_RADIOBUTTON              0x00000004L
BS_3STATE                   0x00000005L
BS_AUTO3STATE               0x00000006L
BS_GROUPBOX                 0x00000007L
BS_USERBUTTON               0x00000008L
BS_AUTORADIOBUTTON          0x00000009L
BS_OWNERDRAW                0x0000000BL
BS_LEFTTEXT                 0x00000020L
```

**Button control messages**

```
BM_GETCHECK                 (WM_USER0)
BM_SETCHECK                 (WM_USER1)
BM_GETSTATE                 (WM_USER2)
BM_SETSTATE                 (WM_USER3)
BM_SETSTYLE                 (WM_USER4)
```

**User button notification codes**

```
BN_CLICKED                  0
BN_PAINT                    1
BN_HILITE                   2
BN_UNHILITE                 3
BN_DISABLE                  4
BN_DOUBLECLICKED            5
```

# Clipboard manager

**Predefined Clipboard formats**

```
CF_TEXT                      1
CF_BITMAP                    2
CF_METAFILEPICT              3
CF_SYLK                      4
CF_DIF                       5
CF_TIFF                      6
CF_OEMTEXT                   7
CF_DIB                       8
CF_PALETTE                   9
CF_PENDATA                   10
CF_RIFF                      11
CF_WAVE                      12
CF_OWNERDISPLAY              0x0080
CF_DSPTEXT                   0x0081
CF_DSPBITMAP                 0x0082
CF_DSPMETAFILEPICT           0x0083
```

**"Private" formats don't get GlobalFree()'d**

```
CF_PRIVATEFIRST              0x0200
CF_PRIVATELAST               0x02FF
```

**"GDIOBJ" formats do get DeleteObject()'d**

```
CF_GDIOBJFIRST               0x0300
CF_GDIOBJLAST                0x03FF
```

**Clipboard command messages**

```
WM_CUT                       0x0300
WM_COPY                      0x0301
WM_PASTE                     0x0302
WM_CLEAR                     0x0303
WM_UNDO                      0x0304
```

**Clipboard owner messages**

```
WM_RENDERFORMAT              0x0305
WM_RENDERALLFORMATS          0x0306
WM_DESTROYCLIPBOARD          0x0307
```

**Clipboard viewer messages**

```
WM_DRAWCLIPBOARD             0x0308
WM_PAINTCLIPBOARD            0x0309
WM_SIZECLIPBOARD             0x030B
WM_VSCROLLCLIPBOARD          0x030A
WM_HSCROLLCLIPBOARD          0x030E
WM_ASKCBFORMATNAME           0x030C
WM_CHANGECBCHAIN             0x030D
```

# Clipping support

```
FLOODFILLBORDER          0
FLOODFILLSURFACE         1
```

# Color palette support

**Palette entry flags**

```
PC_RESERVED                     0x01
PC_EXPLICIT                     0x02
PC_NOCOLLAPSE                   0x04
```

**Get/SetSystemPaletteUse() values**

```
SYSPAL_STATIC                   1
SYSPAL_NOSTATIC                 2
```

**Palette window messages**

```
WM_QUERYNEWPALETTE              0x030F
WM_PALETTEISCHANGING            0x0310
WM_PALETTECHANGED               0x0311
```

## Color support

```
COLOR_SCROLLBAR              0
COLOR_BACKGROUND             1
COLOR_ACTIVECAPTION          2
COLOR_INACTIVECAPTION        3
COLOR_MENU                   4
COLOR_WINDOW                 5
COLOR_WINDOWFRAME            6
COLOR_MENUTEXT               7
COLOR_WINDOWTEXT             8
COLOR_CAPTIONTEXT            9
COLOR_ACTIVEBORDER           10
COLOR_INACTIVEBORDER         11
COLOR_APPWORKSPACE           12
COLOR_HIGHLIGHT              13
COLOR_HIGHLIGHTTEXT          14
COLOR_BTNFACE                15
COLOR_BTNSHADOW              16
COLOR_GRAYTEXT               17
COLOR_BTNTEXT                18
COLOR_INACTIVECAPTIONTEXT    19
COLOR_BTNHIGHLIGHT           20
WM_SYSCOLORCHANGE            0x0015
```

# Comm port support

```
NOPARITY                    0
ODDPARITY                   1
EVENPARITY                  2
MARKPARITY                  3
SPACEPARITY                 4
ONESTOPBIT                  0
ONE5STOPBITS                1
TWOSTOPBITS                 2
IGNORE                      0
INFINITE                    0xFFFF
```

**Events**
```
EV_RXCHAR                   0x0001
EV_RXFLAG                   0x0002
EV_TXEMPTY                  0x0004
EV_CTS                      0x0008
EV_DSR                      0x0010
EV_RLSD                     0x0020
EV_BREAK                    0x0040
EV_ERR                      0x0080
EV_RING                     0x0100
EV_PERR                     0x0200
EV_CTSS                     0x0400
EV_DSRS                     0x0800
EV_RLSDS                    0x1000
EV_RingTe                   0x2000
EV_RINGTE                   EV_RingTe
```

**Escape functions**
```
SETXOFF                     1
SETXON                      2
SETRTS                      3
CLRRTS                      4
SETDTR                      5
CLRDTR                      6
RESETDEV                    7
LPTx                        0x80
```

**New escape functions**
```
GETMAXLPT                   8
GETMAXCOM                   9
GETBASEIRQ                  10
```

**Comm baud rate indices**
```
CBR_110                     0xFF10
CBR_300                     0xFF11
CBR_600                     0xFF12
CBR_1200                    0xFF13
CBR_2400                    0xFF14
CBR_4800                    0xFF15
CBR_9600                    0xFF16
CBR_14400                   0xFF17
CBR_19200                   0xFF18
CBR_38400                   0xFF1B
CBR_56000                   0xFF1F
CBR_128000                  0xFF23
CBR_256000                  0xFF27
```

**Notifications passed in low word of lParam on WM_COMMNOTIFY messages**
```
CN_RECEIVE                  0x0001
CN_TRANSMIT                 0x0002
CN_EVENT                    0x0004
CSTF_CTSHOLD                0x01
CSTF_DSRHOLD                0x02
```

```
CSTF_RLSDHOLD              0x04
CSTF_XOFFHOLD              0x08
CSTF_XOFFSENT             0x10
CSTF_EOF                 0x20
CSTF_TXIM                0x40
WM_COMMNOTIFY            0x0044
```

# Device capabilities

**Device parameters for GetDeviceCaps()**

| | |
|---|---|
| DRIVERVERSION | 0 |
| TECHNOLOGY | 2 |
| HORZSIZE | 4 |
| VERTSIZE | 6 |
| HORZRES | 8 |
| VERTRES | 10 |
| BITSPIXEL | 12 |
| PLANES | 14 |
| NUMBRUSHES | 16 |
| NUMPENS | 18 |
| NUMMARKERS | 20 |
| NUMFONTS | 22 |
| NUMCOLORS | 24 |
| PDEVICESIZE | 26 |
| CURVECAPS | 28 |
| LINECAPS | 30 |
| POLYGONALCAPS | 32 |
| TEXTCAPS | 34 |
| CLIPCAPS | 36 |
| RASTERCAPS | 38 |
| ASPECTX | 40 |
| ASPECTY | 42 |
| ASPECTXY | 44 |
| LOGPIXELSX | 88 |
| LOGPIXELSY | 90 |
| SIZEPALETTE | 104 |
| NUMRESERVED | 106 |
| COLORRES | 108 |

**CURVECAPS**

| | |
|---|---|
| CC_NONE | 0x0000 |
| CC_CIRCLES | 0x0001 |
| CC_PIE | 0x0002 |
| CC_CHORD | 0x0004 |
| CC_ELLIPSES | 0x0008 |
| CC_WIDE | 0x0010 |
| CC_STYLED | 0x0020 |
| CC_WIDESTYLED | 0x0040 |
| CC_INTERIORS | 0x0080 |
| CC_ROUNDRECT | 0x0100 |

**LINECAPS**

| | |
|---|---|
| LC_NONE | 0x0000 |
| LC_POLYLINE | 0x0002 |
| LC_MARKER | 0x0004 |
| LC_POLYMARKER | 0x0008 |
| LC_WIDE | 0x0010 |
| LC_STYLED | 0x0020 |
| LC_WIDESTYLED | 0x0040 |
| LC_INTERIORS | 0x0080 |

**POLYGONALCAPS**

| | |
|---|---|
| PC_NONE | 0x0000 |
| PC_POLYGON | 0x0001 |
| PC_RECTANGLE | 0x0002 |
| PC_WINDPOLYGON | 0x0004 |
| PC_SCANLINE | 0x0008 |
| PC_WIDE | 0x0010 |
| PC_STYLED | 0x0020 |
| PC_WIDESTYLED | 0x0040 |
| PC_INTERIORS | 0x0080 |

## TEXTCAPS

```
TC_OP_CHARACTER          0x0001
TC_OP_STROKE             0x0002
TC_CP_STROKE             0x0004
TC_CR_90                 0x0008
TC_CR_ANY                0x0010
TC_SF_X_YINDEP           0x0020
TC_SA_DOUBLE             0x0040
TC_SA_INTEGER            0x0080
TC_SA_CONTIN             0x0100
TC_EA_DOUBLE             0x0200
TC_IA_ABLE               0x0400
TC_UA_ABLE               0x0800
TC_SO_ABLE               0x1000
TC_RA_ABLE               0x2000
TC_VA_ABLE               0x4000
TC_RESERVED              0x8000
```

## CLIPCAPS

```
CP_NONE                  0x0000
CP_RECTANGLE             0x0001
CP_REGION                0x0002
```

## RASTERCAPS

```
RC_NONE
RC_BITBLT                0x0001
RC_BANDING               0x0002
RC_SCALING               0x0004
RC_BITMAP64              0x0008
RC_GDI20_OUTPUT          0x0010
RC_GDI20_STATE           0x0020
RC_SAVEBITMAP            0x0040
RC_DI_BITMAP             0x0080
RC_PALETTE               0x0100
RC_DIBTODEV              0x0200
RC_BIGFONT               0x0400
RC_STRETCHBLT            0x0800
RC_FLOODFILL             0x1000
RC_STRETCHDIB            0x2000
RC_OP_DX_OUTPUT          0x4000
RC_DEVBITS               0x8000
```

# Dialog and control management

```
WC_DIALOG                     (MAKEINTATOM(0x8002))
DLGWINDOWEXTRA                30
```

**Dialog styles**
```
DS_ABSALIGN                   0x01L
DS_SYSMODAL                   0x02L
DS_LOCALEDIT                  0x20L
DS_SETFONT                    0x40L
DS_MODALFRAME                 0x80L
DS_NOIDLEMSG                  0x100L
```

**Dialog messages**
```
DM_GETDEFID                   (WM_USER0)
DM_SETDEFID                   (WM_USER1)
DC_HASDEFID                   0x534B
```

**Dialog notification messages**
```
WM_INITDIALOG                 0x0110
WM_NEXTDLGCTL                 0x0028
WM_PARENTNOTIFY               0x0210
WM_ENTERIDLE                  0x0121
DWL_MSGRESULT                 0
DWL_DLGPROC                   4
DWL_USER                      8
WM_GETDLGCODE                 0x0087
```

**Dialog codes**
```
DLGC_WANTARROWS               0x0001
DLGC_WANTTAB                  0x0002
DLGC_WANTALLKEYS              0x0004
DLGC_WANTMESSAGE              0x0004
DLGC_HASSETSEL                0x0008
DLGC_DEFPUSHBUTTON            0x0010
DLGC_UNDEFPUSHBUTTON          0x0020
DLGC_RADIOBUTTON              0x0040
DLGC_WANTCHARS                0x0080
DLGC_STATIC                   0x0100
DLGC_BUTTON                   0x2000
WM_CTLCOLOR                   0x0019
```

**WM_CTLCOLOR control IDs**
```
CTLCOLOR_MSGBOX               0
CTLCOLOR_EDIT                 1
CTLCOLOR_LISTBOX              2
CTLCOLOR_BTN                  3
CTLCOLOR_DLG                  4
CTLCOLOR_SCROLLBAR            5
CTLCOLOR_STATIC               6
WM_SETFONT                    0x0030
WM_GETFONT                    0x0031
```

**Standard dialog button IDs**
```
IDOK                          1
IDCANCEL                      2
IDABORT                       3
IDRETRY                       4
IDIGNORE                      5
IDYES                         6
IDNO                          7
```

# Dialog directory support

```
DDL_READWRITE                   0x0000
DDL_READONLY                    0x0001
DDL_HIDDEN                      0x0002
DDL_SYSTEM                      0x0004
DDL_DIRECTORY                   0x0010
DDL_ARCHIVE                     0x0020
DDL_POSTMSGS                    0x2000
DDL_DRIVES                      0x4000
DDL_EXCLUSIVE                   0x8000
```

## Drag-and-drop support

```
WM_QUERYDRAGICON                    0x0037
WM_DROPFILES                        0x0233
```

# Edit control

**Edit control styles**

| | |
|---|---|
| ES_LEFT | 0x00000000L |
| ES_CENTER | 0x00000001L |
| ES_RIGHT | 0x00000002L |
| ES_MULTILINE | 0x00000004L |
| ES_UPPERCASE | 0x00000008L |
| ES_LOWERCASE | 0x00000010L |
| ES_PASSWORD | 0x00000020L |
| ES_AUTOVSCROLL | 0x00000040L |
| ES_AUTOHSCROLL | 0x00000080L |
| ES_NOHIDESEL | 0x00000100L |
| ES_OEMCONVERT | 0x00000400L |
| ES_READONLY | 0x00000800L |
| ES_WANTRETURN | 0x00001000L |

**Edit control messages**

| | |
|---|---|
| EM_GETSEL | (WM_USER0) |
| EM_SETSEL | (WM_USER1) |
| EM_GETRECT | (WM_USER2) |
| EM_SETRECT | (WM_USER3) |
| EM_SETRECTNP | (WM_USER4) |
| EM_LINESCROLL | (WM_USER6) |
| EM_GETMODIFY | (WM_USER8) |
| EM_SETMODIFY | (WM_USER9) |
| EM_GETLINECOUNT | (WM_USER10) |
| EM_LINEINDEX | (WM_USER11) |
| EM_SETHANDLE | (WM_USER12) |
| EM_GETHANDLE | (WM_USER13) |
| EM_LINELENGTH | (WM_USER17) |
| EM_REPLACESEL | (WM_USER18) |
| EM_SETFONT | (WM_USER19) |
| EM_GETLINE | (WM_USER20) |
| EM_LIMITTEXT | (WM_USER21) |
| EM_CANUNDO | (WM_USER22) |
| EM_UNDO | (WM_USER23) |
| EM_FMTLINES | (WM_USER24) |
| EM_LINEFROMCHAR | (WM_USER25) |
| EM_SETWORDBREAK | (WM_USER26) |
| EM_SETTABSTOPS | (WM_USER27) |
| EM_SETPASSWORDCHAR | (WM_USER28) |
| EM_EMPTYUNDOBUFFER | (WM_USER29) |
| EM_GETFIRSTVISIBLELINE | (WM_USER30) |
| EM_SETREADONLY | (WM_USER31) |
| EM_SETWORDBREAKPROC | (WM_USER32) |
| EM_GETWORDBREAKPROC | (WM_USER33) |
| EM_GETPASSWORDCHAR | (WM_USER34) |
| WB_LEFT | 0 |
| WB_RIGHT | 1 |
| WB_ISDELIMITER | 2 |

**Edit control notification codes**

| | |
|---|---|
| EN_SETFOCUS | 0x0100 |
| EN_KILLFOCUS | 0x0200 |
| EN_CHANGE | 0x0300 |
| EN_UPDATE | 0x0400 |
| EN_ERRSPACE | 0x0500 |
| EN_MAXTEXT | 0x0501 |
| EN_HSCROLL | 0x0601 |
| EN_VSCROLL | 0x0602 |

## Exiting Windows

```
EW_RESTARTWINDOWS              0x42
EW_REBOOTSYSTEM                0x43
```

**SetErrorMode() constants**

```
SEM_FAILCRITICALERRORS         0x0001
SEM_NOGPFAULTERRORBOX          0x0002
SEM_NOOPENFILEERRORBOX         0x8000
```

## File I/O

```
OF_READ                    0x0000
OF_WRITE                   0x0001
OF_READWRITE               0x0002
OF_SHARE_COMPAT            0x0000
OF_SHARE_EXCLUSIVE         0x0010
OF_SHARE_DENY_WRITE        0x0020
OF_SHARE_DENY_READ         0x0030
OF_SHARE_DENY_NONE         0x0040
OF_PARSE                   0x0100
OF_DELETE                  0x0200
OF_VERIFY                  0x0400
OF_SEARCH                  0x0400
OF_CANCEL                  0x0800
OF_CREATE                  0x1000
OF_PROMPT                  0x2000
OF_EXIST                   0x4000
OF_REOPEN                  0x8000
```

# Font support

**Weight values**

```
FW_DONTCARE                     0
FW_THIN                         100
FW_EXTRALIGHT                   200
FW_LIGHT                        300
FW_NORMAL                       400
FW_MEDIUM                       500
FW_SEMIBOLD                     600
FW_BOLD                         700
FW_EXTRABOLD                    800
FW_HEAVY                        900
```

**CharSet values**

```
ANSI_CHARSET                    0
DEFAULT_CHARSET                 1
SYMBOL_CHARSET                  2
SHIFTJIS_CHARSET                128
HANGEUL_CHARSET                 129
CHINESEBIG5_CHARSET             136
OEM_CHARSET                     255
```

**OutPrecision values**

```
OUT_DEFAULT_PRECIS              0
OUT_STRING_PRECIS               1
OUT_CHARACTER_PRECIS            2
OUT_STROKE_PRECIS               3
OUT_TT_PRECIS                   4
OUT_DEVICE_PRECIS               5
OUT_RASTER_PRECIS               6
OUT_TT_ONLY_PRECIS              7
```

**ClipPrecision values**

```
CLIP_DEFAULT_PRECIS             0x00
CLIP_CHARACTER_PRECIS           0x01
CLIP_STROKE_PRECIS              0x02
CLIP_MASK                       0x0F
CLIP_LH_ANGLES                  0x10
CLIP_TT_ALWAYS                  0x20
CLIP_EMBEDDED                   0x80
```

**Quality values**

```
DEFAULT_QUALITY                 0
DRAFT_QUALITY                   1
PROOF_QUALITY                   2
```

**PitchAndFamily pitch values (low 4 bits)**

```
DEFAULT_PITCH                   0x00
FIXED_PITCH                     0x01
VARIABLE_PITCH                  0x02
```

**PitchAndFamily family values (high 4 bits)**

```
FF_DONTCARE                     0x00
FF_ROMAN                        0x10
FF_SWISS                        0x20
FF_MODERN                       0x30
FF_SCRIPT                       0x40
FF_DECORATIVE                   0x50
```

**Stock fonts for use with GetStockObject()**

```
OEM_FIXED_FONT                  10
ANSI_FIXED_FONT                 11
ANSI_VAR_FONT                   12
SYSTEM_FONT                     13
DEVICE_DEFAULT_FONT             14
DEFAULT_PALETTE                 15
SYSTEM_FIXED_FONT               16
```

```
ASPECT_FILTERING            0x00000001L
WM_FONTCHANGE               0x001D
```
**tmPitchAndFamily values**
```
TMPF_FIXED_PITCH            0x01
TMPF_VECTOR                 0x02
TMPF_DEVICE                 0x08
TMPF_TRUETYPE               0x04
```
**ntmFlags field flags**
```
NTM_REGULAR                 0x00000040L
NTM_BOLD                    0x00000020L
NTM_ITALIC                  0x00000001L
LF_FULLFACESIZE             64
```
**EnumFonts font type values**
```
RASTER_FONTTYPE             0x0001
DEVICE_FONTTYPE             0X0002
TRUETYPE_FONTTYPE           0x0004
```
**GetGlyphOutline constants**
```
GGO_METRICS                 0
GGO_BITMAP                  1
GGO_NATIVE                  2
TT_POLYGON_TYPE             24
TT_PRIM_LINE                1
TT_PRIM_QSPLINE             2
```
**Bits defined in wFlags of RASTERIZER_STATUS**
```
TT_AVAILABLE                0x0001
TT_ENABLED                  0x0002
```

# GDI escape support

```
NEWFRAME                      1
ABORTDOC                      2
NEXTBAND                      3
SETCOLORTABLE                 4
GETCOLORTABLE                 5
FLUSHOUTPUT                   6
DRAFTMODE                     7
QUERYESCSUPPORT               8
SETABORTPROC                  9
STARTDOC                      10
ENDDOC                        11
GETPHYSPAGESIZE               12
GETPRINTINGOFFSET             13
GETSCALINGFACTOR              14
MFCOMMENT                     15
GETPENWIDTH                   16
SETCOPYCOUNT                  17
SELECTPAPERSOURCE             18
DEVICEDATA                    19
PASSTHROUGH                   19
GETTECHNOLGY                  20
GETTECHNOLOGY                 20
SETLINECAP                    21
SETLINEJOIN                   22
SETMITERLIMIT                 23
BANDINFO                      24
DRAWPATTERNRECT               25
GETVECTORPENSIZE              26
GETVECTORBRUSHSIZE            27
ENABLEDUPLEX                  28
GETSETPAPERBINS               29
GETSETPRINTORIENT             30
ENUMPAPERBINS                 31
SETDIBSCALING                 32
EPSPRINTING                   33
ENUMPAPERMETRICS              34
GETSETPAPERMETRICS            35
POSTSCRIPT_DATA               37
POSTSCRIPT_IGNORE             38
MOUSETRAILS                   39
GETEXTENDEDTEXTMETRICS        256
GETEXTENTTABLE                257
GETPAIRKERNTABLE              258
GETTRACKKERNTABLE             259
EXTTEXTOUT                    512
GETFACENAME                   513
ENABLERELATIVEWIDTHS          768
ENABLEPAIRKERNING             769
SETKERNTRACK                  770
SETALLJUSTVALUES              771
SETCHARSET                    772
STRETCHBLT                    2048
GETSETSCREENPARAMS            3072
BEGIN_PATH                    4096
CLIP_TO_PATH                  4097
END_PATH                      4098
EXT_DEVICE_CAPS               4099
RESTORE_CTM                   4100
SAVE_CTM                      4101
SET_ARC_DIRECTION             4102
SET_BACKGROUND_COLOR          4103
```

```
SET_POLY_MODE              4104
SET_SCREEN_ANGLE           4105
SET_SPREAD                 4106
TRANSFORM_CTM              4107
SET_CLIP_BOX               4108
SET_BOUNDS                 4109
```

# GDI object support

**Pen styles**

```
PS_SOLID                        0
PS_DASH                         1
PS_DOT                          2
PS_DASHDOT                      3
PS_DASHDOTDOT                   4
PS_NULL                         5
PS_INSIDEFRAME                  6
```

**Stock pens for use with GetStockObject();**

```
WHITE_PEN                       6
BLACK_PEN                       7
NULL_PEN                        8
```

**Brush support**

```
BS_SOLID                        0
BS_NULL                         1
BS_HOLLOW                       BS_NULL
BS_HATCHED                      2
BS_PATTERN                      3
BS_INDEXED                      4
BS_DIBPATTERN                   5
```

**Hatch styles**

```
HS_HORIZONTAL                   0
HS_VERTICAL                     1
HS_FDIAGONAL                    2
HS_BDIAGONAL                    3
HS_CROSS                        4
HS_DIAGCROSS                    5
```

**Stock brushes for use with GetStockObject()**

```
WHITE_BRUSH                     0
LTGRAY_BRUSH                    1
GRAY_BRUSH                      2
DKGRAY_BRUSH                    3
BLACK_BRUSH                     4
NULL_BRUSH                      5
HOLLOW_BRUSH                    NULL_BRUSH
```

# Help support

```
HELP_CONTEXT                     0x0001
HELP_QUIT                        0x0002
HELP_INDEX                       0x0003
HELP_CONTENTS                    0x0003
HELP_HELPONHELP                  0x0004
HELP_SETINDEX                    0x0005
HELP_SETCONTENTS                 0x0005
HELP_CONTEXTPOPUP                0x0008
HELP_FORCEFILE                   0x0009
HELP_KEY                         0x0101
HELP_COMMAND                     0x0102
HELP_PARTIALKEY                  0x0105
HELP_MULTIKEY                    0x0201
HELP_SETWINPOS                   0x0203
```

# Icon support

```
IDI_APPLICATION              MAKEINTRESOURCE(32512)
IDI_HAND                     MAKEINTRESOURCE(32513)
IDI_QUESTION                 MAKEINTRESOURCE(32514)
IDI_EXCLAMATION              MAKEINTRESOURCE(32515)
IDI_ASTERISK                 MAKEINTRESOURCE(32516)
```

# Keyboard input support

| | |
|---|---|
| WM_SETFOCUS | 0x0007 |
| WM_KILLFOCUS | 0x0008 |
| WM_KEYDOWN | 0x0100 |
| WM_KEYUP | 0x0101 |
| WM_CHAR | 0x0102 |
| WM_DEADCHAR | 0x0103 |
| WM_SYSKEYDOWN | 0x0104 |
| WM_SYSKEYUP | 0x0105 |
| WM_SYSCHAR | 0x0106 |
| WM_SYSDEADCHAR | 0x0107 |

**Keyboard message range**

| | |
|---|---|
| WM_KEYFIRST | 0x0100 |
| WM_KEYLAST | 0x0108 |
| KF_EXTENDED | 0x0100 |
| KF_DLGMODE | 0x0800 |
| KF_MENUMODE | 0x1000 |
| KF_ALTDOWN | 0x2000 |
| KF_REPEAT | 0x4000 |
| KF_UP | 0x8000 |

**Virtual key codes**

| | |
|---|---|
| VK_LBUTTON | 0x01 |
| VK_RBUTTON | 0x02 |
| VK_CANCEL | 0x03 |
| VK_MBUTTON | 0x04 |
| VK_BACK | 0x08 |
| VK_TAB | 0x09 |
| VK_CLEAR | 0x0C |
| VK_RETURN | 0x0D |
| VK_SHIFT | 0x10 |
| VK_CONTROL | 0x11 |
| VK_MENU | 0x12 |
| VK_PAUSE | 0x13 |
| VK_CAPITAL | 0x14 |
| VK_ESCAPE | 0x1B |
| VK_SPACE | 0x20 |
| VK_PRIOR | 0x21 |
| VK_NEXT | 0x22 |
| VK_END | 0x23 |
| VK_HOME | 0x24 |
| VK_LEFT | 0x25 |
| VK_UP | 0x26 |
| VK_RIGHT | 0x27 |
| VK_DOWN | 0x28 |
| VK_SELECT | 0x29 |
| VK_PRINT | 0x2A |
| VK_EXECUTE | 0x2B |
| VK_SNAPSHOT | 0x2C |
| VK_INSERT | 0x2D |
| VK_DELETE | 0x2E |
| VK_HELP | 0x2F |
| VK_NUMPAD0 | 0x60 |
| VK_NUMPAD1 | 0x61 |
| VK_NUMPAD2 | 0x62 |
| VK_NUMPAD3 | 0x63 |
| VK_NUMPAD4 | 0x64 |
| VK_NUMPAD5 | 0x65 |
| VK_NUMPAD6 | 0x66 |
| VK_NUMPAD7 | 0x67 |
| VK_NUMPAD8 | 0x68 |
| VK_NUMPAD9 | 0x69 |

```
VK_MULTIPLY                   0x6A
VK_ADD                        0x6B
VK_SEPARATOR                  0x6C
VK_SUBTRACT                   0x6D
VK_DECIMAL                    0x6E
VK_DIVIDE                     0x6F
VK_F1                         0x70
VK_F2                         0x71
VK_F3                         0x72
VK_F4                         0x73
VK_F5                         0x74
VK_F6                         0x75
VK_F7                         0x76
VK_F8                         0x77
VK_F9                         0x78
VK_F10                        0x79
VK_F11                        0x7A
VK_F12                        0x7B
VK_F13                        0x7C
VK_F14                        0x7D
VK_F15                        0x7E
VK_F16                        0x7F
VK_F17                        0x80
VK_F18                        0x81
VK_F19                        0x82
VK_F20                        0x83
VK_F21                        0x84
VK_F22                        0x85
VK_F23                        0x86
VK_F24                        0x87
VK_NUMLOCK                    0x90
VK_SCROLL                     0x91
```

**SetWindowsHook() keyboard hook**
```
WH_KEYBOARD                   2
```

# List box control

**List box styles**

| | |
|---|---|
| LBS_NOTIFY | 0x0001L |
| LBS_SORT | 0x0002L |
| LBS_NOREDRAW | 0x0004L |
| LBS_MULTIPLESEL | 0x0008L |
| LBS_OWNERDRAWFIXED | 0x0010L |
| LBS_OWNERDRAWVARIABLE | 0x0020L |
| LBS_HASSTRINGS | 0x0040L |
| LBS_USETABSTOPS | 0x0080L |
| LBS_NOINTEGRALHEIGHT | 0x0100L |
| LBS_MULTICOLUMN | 0x0200L |
| LBS_WANTKEYBOARDINPUT | 0x0400L |
| LBS_EXTENDEDSEL | 0x0800L |
| LBS_DISABLENOSCROLL | 0x1000L |
| LBS_STANDARD | (LBS_NOTIFY \| LBS_SORT \| WS_VSCROLL \| WS_BORDER) |

**List box messages**

| | |
|---|---|
| LB_ADDSTRING | (WM_USER1) |
| LB_INSERTSTRING | (WM_USER2) |
| LB_DELETESTRING | (WM_USER3) |
| LB_RESETCONTENT | (WM_USER5) |
| LB_SETSEL | (WM_USER6) |
| LB_SETCURSEL | (WM_USER7) |
| LB_GETSEL | (WM_USER8) |
| LB_GETCURSEL | (WM_USER9) |
| LB_GETTEXT | (WM_USER10) |
| LB_GETTEXTLEN | (WM_USER11) |
| LB_GETCOUNT | (WM_USER12) |
| LB_SELECTSTRING | (WM_USER13) |
| LB_DIR | (WM_USER14) |
| LB_GETTOPINDEX | (WM_USER15) |
| LB_FINDSTRING | (WM_USER16) |
| LB_GETSELCOUNT | (WM_USER17) |
| LB_GETSELITEMS | (WM_USER18) |
| LB_SETTABSTOPS | (WM_USER19) |
| LB_GETHORIZONTALEXTENT | (WM_USER20) |
| LB_SETHORIZONTALEXTENT | (WM_USER21) |
| LB_SETCOLUMNWIDTH | (WM_USER22) |
| LB_SETTOPINDEX | (WM_USER24) |
| LB_GETITEMRECT | (WM_USER25) |
| LB_GETITEMDATA | (WM_USER26) |
| LB_SETITEMDATA | (WM_USER27) |
| LB_SELITEMRANGE | (WM_USER28) |
| LB_SETCARETINDEX | (WM_USER31) |
| LB_GETCARETINDEX | (WM_USER32) |
| LB_SETITEMHEIGHT | (WM_USER33) |
| LB_GETITEMHEIGHT | (WM_USER34) |
| LB_FINDSTRINGEXACT | (WM_USER35) |

**List box notification codes**

| | |
|---|---|
| LBN_ERRSPACE | (-2) |
| LBN_SELCHANGE | 1 |
| LBN_DBLCLK | 2 |
| LBN_SELCANCEL | 3 |
| LBN_SETFOCUS | 4 |
| LBN_KILLFOCUS | 5 |

**List box notification messages**

| | |
|---|---|
| WM_VKEYTOITEM | 0x002E |
| WM_CHARTOITEM | 0x002F |

**List box message return values**

| | |
|---|---|
| LB_OKAY | 0 |

```
LB_ERR                      (-1)
LB_ERRSPACE                 (-2)
LB_CTLCODE                  0L
```

## Main window support

```
WM_QUERYOPEN                    0x0013
WM_CLOSE                        0x0010
WM_GETMINMAXINFO                0x0024
```

## Map modes

```
MM_TEXT                    1
MM_LOMETRIC                2
MM_HIMETRIC                3
MM_LOENGLISH               4
MM_HIENGLISH               5
MM_TWIPS                   6
MM_ISOTROPIC               7
MM_ANISOTROPIC             8
```

## MDI support

```
WM_MDICREATE              0x0220
WM_MDIDESTROY             0x0221
WM_MDIACTIVATE            0x0222
WM_MDIRESTORE             0x0223
WM_MDINEXT                0x0224
WM_MDIMAXIMIZE            0x0225
WM_MDITILE                0x0226
WM_MDICASCADE             0x0227
WM_MDIICONARRANGE         0x0228
WM_MDIGETACTIVE           0x0229
WM_MDISETMENU             0x0230
MDITILE_VERTICAL          0x0000
MDITILE_HORIZONTAL        0x0001
MDITILE_SKIPDISABLED      0x0002
WM_CHILDACTIVATE          0x0022
```

# Memory management

### Global memory flags

```
GMEM_FIXED                    0x0000
GMEM_MOVEABLE                 0x0002
GMEM_NOCOMPACT                0x0010
GMEM_NODISCARD                0x0020
GMEM_ZEROINIT                 0x0040
GMEM_MODIFY                   0x0080
GMEM_DISCARDABLE              0x0100
GMEM_NOT_BANKED               0x1000
GMEM_SHARE                    0x2000
GMEM_DDESHARE                 0x2000
GMEM_NOTIFY                   0x4000
```

### GlobalFlags return flags

```
GMEM_DISCARDED                0x4000
GMEM_LOCKCOUNT                0x00FF
```

### Low system memory notification message

```
WM_COMPACTING                 0x0041
```

### Local memory flags

```
LMEM_FIXED                    0x0000
LMEM_MOVEABLE                 0x0002
LMEM_NOCOMPACT                0x0010
LMEM_NODISCARD                0x0020
LMEM_ZEROINIT                 0x0040
LMEM_MODIFY                   0x0080
LMEM_DISCARDABLE              0x0F00
```

# Menu support

```
MF_INSERT                      0x0000
MF_CHANGE                      0x0080
MF_APPEND                      0x0100
MF_DELETE                      0x0200
MF_REMOVE                      0x1000
```

**Menu flags for Add/Check/EnableMenuItem()**

```
MF_BYCOMMAND                   0x0000
MF_BYPOSITION                  0x0400
MF_SEPARATOR                   0x0800
MF_ENABLED                     0x0000
MF_GRAYED                      0x0001
MF_DISABLED                    0x0002
MF_UNCHECKED                   0x0000
MF_CHECKED                     0x0008
MF_USECHECKBITMAPS             0x0200
MF_STRING                      0x0000
MF_BITMAP                      0x0004
MF_OWNERDRAW                   0x0100
MF_POPUP                       0x0010
MF_MENUBARBREAK                0x0020
MF_MENUBREAK                   0x0040
MF_UNHILITE                    0x0000
MF_HILITE                      0x0080
MF_SYSMENU                     0x2000
MF_HELP                        0x4000
MF_MOUSESELECT                 0x8000
```

**Flags for TrackPopupMenu**

```
TPM_LEFTBUTTON                 0x0000
TPM_RIGHTBUTTON                0x0002
TPM_LEFTALIGN                  0x0000
TPM_CENTERALIGN                0x0004
TPM_RIGHTALIGN                 0x0008
```

**Menu messages**

```
WM_INITMENU                    0x0116
WM_INITMENUPOPUP               0x0117
WM_MENUSELECT                  0x011F
WM_MENUCHAR                    0x0120
```

**Menu and control command messages**

```
WM_COMMAND                     0x0111
```

# Message box support

```
MB_OK                        0x0000
MB_OKCANCEL                  0x0001
MB_ABORTRETRYIGNORE          0x0002
MB_YESNOCANCEL               0x0003
MB_YESNO                     0x0004
MB_RETRYCANCEL               0x0005
MB_TYPEMASK                  0x000F
MB_ICONHAND                  0x0010
MB_ICONQUESTION              0x0020
MB_ICONEXCLAMATION           0x0030
MB_ICONASTERISK              0x0040
MB_ICONMASK                  0x00F0
MB_ICONINFORMATION           MB_ICONASTERISK
MB_ICONSTOP                  MB_ICONHAND
MB_DEFBUTTON1                0x0000
MB_DEFBUTTON2                0x0100
MB_DEFBUTTON3                0x0200
MB_DEFMASK                   0x0F00
MB_APPLMODAL                 0x0000
MB_SYSTEMMODAL               0x1000
MB_TASKMODAL                 0x2000
MB_NOFOCUS                   0x8000
```

# Mode control

```
WM_CANCELMODE                    0x001F
```

## Mouse cursor support

```
IDC_ARROW                   MAKEINTRESOURCE(32512)
IDC_IBEAM                   MAKEINTRESOURCE(32513)
IDC_WAIT                    MAKEINTRESOURCE(32514)
IDC_CROSS                   MAKEINTRESOURCE(32515)
IDC_UPARROW                 MAKEINTRESOURCE(32516)
IDC_SIZE                    MAKEINTRESOURCE(32640)
IDC_ICON                    MAKEINTRESOURCE(32641)
IDC_SIZENWSE                MAKEINTRESOURCE(32642)
IDC_SIZENESW                MAKEINTRESOURCE(32643)
IDC_SIZEWE                  MAKEINTRESOURCE(32644)
IDC_SIZENS                  MAKEINTRESOURCE(32645)
WM_SETCURSOR                0x0020
```

# Mouse input support

**Mouse input messages**

| | |
|---|---|
| WM_MOUSEMOVE | 0x0200 |
| WM_LBUTTONDOWN | 0x0201 |
| WM_LBUTTONUP | 0x0202 |
| WM_LBUTTONDBLCLK | 0x0203 |
| WM_RBUTTONDOWN | 0x0204 |
| WM_RBUTTONUP | 0x0205 |
| WM_RBUTTONDBLCLK | 0x0206 |
| WM_MBUTTONDOWN | 0x0207 |
| WM_MBUTTONUP | 0x0208 |
| WM_MBUTTONDBLCLK | 0x0209 |

**Mouse input message range**

| | |
|---|---|
| WM_MOUSEFIRST | 0x0200 |
| WM_MOUSELAST | 0x0209 |

**Mouse message wParam key states**

| | |
|---|---|
| MK_LBUTTON | 0x0001 |
| MK_RBUTTON | 0x0002 |
| MK_SHIFT | 0x0004 |
| MK_CONTROL | 0x0008 |
| MK_MBUTTON | 0x0010 |

**Non-client mouse messages**

| | |
|---|---|
| WM_NCMOUSEMOVE | 0x00A0 |
| WM_NCLBUTTONDOWN | 0x00A1 |
| WM_NCLBUTTONUP | 0x00A2 |
| WM_NCLBUTTONDBLCLK | 0x00A3 |
| WM_NCRBUTTONDOWN | 0x00A4 |
| WM_NCRBUTTONUP | 0x00A5 |
| WM_NCRBUTTONDBLCLK | 0x00A6 |
| WM_NCMBUTTONDOWN | 0x00A7 |
| WM_NCMBUTTONUP | 0x00A8 |
| WM_NCMBUTTONDBLCLK | 0x00A9 |

**Mouse click activation support**

| | |
|---|---|
| WM_MOUSEACTIVATE | 0x0021 |

**WM_MOUSEACTIVATE return codes**

| | |
|---|---|
| MA_ACTIVATE | 1 |
| MA_ACTIVATEANDEAT | 2 |
| MA_NOACTIVATE | 3 |
| MA_NOACTIVATEANDEAT | 4 |

# Network support

## Errors

```
WN_SUCCESS                   0x0000
WN_NOT_SUPPORTED             0x0001
WN_NET_ERROR                 0x0002
WN_MORE_DATA                 0x0003
WN_BAD_POINTER               0x0004
WN_BAD_VALUE                 0x0005
WN_BAD_PASSWORD              0x0006
WN_ACCESS_DENIED             0x0007
WN_FUNCTION_BUSY             0x0008
WN_WINDOWS_ERROR             0x0009
WN_BAD_USER                  0x000A
WN_OUT_OF_MEMORY             0x000B
WN_CANCEL                    0x000C
WN_CONTINUE                  0x000D
```

## Connection errors

```
WN_NOT_CONNECTED             0x0030
WN_OPEN_FILES                0x0031
WN_BAD_NETNAME               0x0032
WN_BAD_LOCALNAME             0x0033
WN_ALREADY_CONNECTED         0x0034
WN_DEVICE_ERROR              0x0035
WN_CONNECTION_CLOSED         0x0036
```

# Owner draw control support

**Owner draw control types**

```
ODT_MENU                        1
ODT_LISTBOX                     2
ODT_COMBOBOX                    3
ODT_BUTTON                      4
```

**Owner draw actions**

```
ODA_DRAWENTIRE                  0x0001
ODA_SELECT                      0x0002
ODA_FOCUS                       0x0004
```

**Owner draw state**

```
ODS_SELECTED                    0x0001
ODS_GRAYED                      0x0002
ODS_DISABLED                    0x0004
ODS_CHECKED                     0x0008
ODS_FOCUS                       0x0010
WM_DRAWITEM                     0x002B
WM_DELETEITEM                   0x002D
WM_COMPAREITEM                  0x0039
```

# Power management

```
WM_POWER                      0x0048
PWR_OK                        1
PWR_FAIL                      (-1)
PWR_SUSPENDREQUEST            1
PWR_SUSPENDRESUME             2
PWR_CRITICALRESUME            3
```

# Printing support

```
SP_NOTREPORTED              0x4000
SP_ERROR                    (-1)
SP_APPABORT                 (-2)
SP_USERABORT                (-3)
SP_OUTOFDISK                (-4)
SP_OUTOFMEMORY              (-5)
PR_JOBSTATUS                0x0000
WM_SPOOLERSTATUS            0x002A
```

# Resource management

**Predefined resource types**

| | |
|---|---|
| RT_CURSOR | MAKEINTRESOURCE(1) |
| RT_BITMAP | MAKEINTRESOURCE(2) |
| RT_ICON | MAKEINTRESOURCE(3) |
| RT_MENU | MAKEINTRESOURCE(4) |
| RT_DIALOG | MAKEINTRESOURCE(5) |
| RT_STRING | MAKEINTRESOURCE(6) |
| RT_FONTDIR | MAKEINTRESOURCE(7) |
| RT_FONT | MAKEINTRESOURCE(8) |
| RT_ACCELERATOR | MAKEINTRESOURCE(9) |
| RT_RCDATA | MAKEINTRESOURCE(10) |
| RT_GROUP_CURSOR | MAKEINTRESOURCE(12) |
| RT_GROUP_ICON | MAKEINTRESOURCE(14) |

**OEM resource ordinal numbers**

| | |
|---|---|
| OBM_CLOSE | 32754 |
| OBM_UPARROW | 32753 |
| OBM_DNARROW | 32752 |
| OBM_RGARROW | 32751 |
| OBM_LFARROW | 32750 |
| OBM_REDUCE | 32749 |
| OBM_ZOOM | 32748 |
| OBM_RESTORE | 32747 |
| OBM_REDUCED | 32746 |
| OBM_ZOOMD | 32745 |
| OBM_RESTORED | 32744 |
| OBM_UPARROWD | 32743 |
| OBM_DNARROWD | 32742 |
| OBM_RGARROWD | 32741 |
| OBM_LFARROWD | 32740 |
| OBM_MNARROW | 32739 |
| OBM_COMBO | 32738 |
| OBM_UPARROWI | 32737 |
| OBM_DNARROWI | 32736 |
| OBM_RGARROWI | 32735 |
| OBM_LFARROWI | 32734 |
| OBM_OLD_CLOSE | 32767 |
| OBM_SIZE | 32766 |
| OBM_OLD_UPARROW | 32765 |
| OBM_OLD_DNARROW | 32764 |
| OBM_OLD_RGARROW | 32763 |
| OBM_OLD_LFARROW | 32762 |
| OBM_BTSIZE | 32761 |
| OBM_CHECK | 32760 |
| OBM_CHECKBOXES | 32759 |
| OBM_BTNCORNERS | 32758 |
| OBM_OLD_REDUCE | 32757 |
| OBM_OLD_ZOOM | 32756 |
| OBM_OLD_RESTORE | 32755 |
| OCR_NORMAL | 32512 |
| OCR_IBEAM | 32513 |
| OCR_WAIT | 32514 |
| OCR_CROSS | 32515 |
| OCR_UP | 32516 |
| OCR_SIZE | 32640 |
| OCR_ICON | 32641 |
| OCR_SIZENWSE | 32642 |
| OCR_SIZENESW | 32643 |
| OCR_SIZEWE | 32644 |
| OCR_SIZENS | 32645 |
| OCR_SIZEALL | 32646 |

```
OCR_ICOCUR              32647
OIC_SAMPLE              32512
OIC_HAND                32513
OIC_QUES                32514
OIC_BANG                32515
OIC_NOTE                32516
```

# Scroll bar control

```
SBS_HORZ                        0x0000L
SBS_VERT                        0x0001L
SBS_TOPALIGN                    0x0002L
SBS_LEFTALIGN                   0x0002L
SBS_BOTTOMALIGN                 0x0004L
SBS_RIGHTALIGN                  0x0004L
SBS_SIZEBOXTOPLEFTALIGN         0x0002L
SBS_SIZEBOXBOTTOMRIGHTALIGN     0x0004L
SBS_SIZEBOX                     0x0008L
```

# Scroll bar support

```
WM_HSCROLL                      0x0114
WM_VSCROLL                      0x0115
```

**WM_H/VSCROLL commands**

```
SB_LINEUP                       0
SB_LINELEFT                     0
SB_LINEDOWN                     1
SB_LINERIGHT                    1
SB_PAGEUP                       2
SB_PAGELEFT                     2
SB_PAGEDOWN                     3
SB_PAGERIGHT                    3
SB_THUMBPOSITION                4
SB_THUMBTRACK                   5
SB_TOP                          6
SB_LEFT                         6
SB_BOTTOM                       7
SB_RIGHT                        7
SB_ENDSCROLL                    8
```

**Scroll bar selection constants**

```
SB_HORZ                         0
SB_VERT                         1
SB_CTL                          2
SB_BOTH                         3
```

**EnableScrollBar() flags**

```
ESB_ENABLE_BOTH                 0x0000
ESB_DISABLE_BOTH                0x0003
ESB_DISABLE_LEFT                0x0001
ESB_DISABLE_RIGHT               0x0002
ESB_DISABLE_UP                  0x0001
ESB_DISABLE_DOWN                0x0002
```

# Sound support

**SetSoundNoise() sources**

```
S_PERIOD512                 0
S_PERIOD1024                1
S_PERIOD2048                2
S_PERIODVOICE               3
S_WHITE512                  4
S_WHITE1024                 5
S_WHITE2048                 6
S_WHITEVOICE                7
```

**WaitSoundState() constants**

```
S_QUEUEEMPTY                0
S_THRESHOLD                 1
S_ALLTHRESHOLD              2
```

**Accent modes**

```
S_NORMAL                    0
S_LEGATO                    1
S_STACCATO                  2
```

**Error return values**

```
S_SERDVNA                  (-1)
S_SEROFM                   (-2)
S_SERMACT                  (-3)
S_SERQFUL                  (-4)
S_SERBDNT                  (-5)
S_SERDLN                   (-6)
S_SERDCC                   (-7)
S_SERDTP                   (-8)
S_SERDVL                   (-9)
S_SERDMD                   (-10)
S_SERDSH                   (-11)
S_SERDPT                   (-12)
S_SERDFQ                   (-13)
S_SERDDR                   (-14)
S_SERDSR                   (-15)
S_SERDST                   (-16)
```

# Static control

**Static control styles**

```
SS_LEFT                 0x00000000L
SS_CENTER               0x00000001L
SS_RIGHT                0x00000002L
SS_ICON                 0x00000003L
SS_BLACKRECT            0x00000004L
SS_GRAYRECT             0x00000005L
SS_WHITERECT            0x00000006L
SS_BLACKFRAME           0x00000007L
SS_GRAYFRAME            0x00000008L
SS_WHITEFRAME           0x00000009L
SS_SIMPLE               0x0000000BL
SS_LEFTNOWORDWRAP       0x0000000CL
SS_NOPREFIX             0x00000080L
STM_SETICON             (WM_USER0)
STM_GETICON             (WM_USER1)
```

# System information

```
GFSR_SYSTEMRESOURCES          0x0000
GFSR_GDIRESOURCES             0x0001
GFSR_USERRESOURCES            0x0002
WF_80x87                      0x0400
WF_CPU086                     0x0040
WF_CPU186                     0x0080
WF_CPU286                     0x0002
WF_CPU386                     0x0004
WF_CPU486                     0x0008
WF_ENHANCED                   0x0020
WF_LARGEFRAME                 0x0100
WF_PAGING                     0x0800
WF_PMODE                      0x0001
WF_SMALLFRAME                 0x0200
WF_STANDARD                   0x0010
WF_WIN286                     0x0010
WF_WIN386                     0x0020
WF_WLO                        0x8000
```

# System menu command values

```
SC_SIZE                    0xF000
SC_MOVE                    0xF010
SC_MINIMIZE                0xF020
SC_MAXIMIZE                0xF030
SC_NEXTWINDOW              0xF040
SC_PREVWINDOW              0xF050
SC_CLOSE                   0xF060
SC_VSCROLL                 0xF070
SC_HSCROLL                 0xF080
SC_MOUSEMENU               0xF090
SC_KEYMENU                 0xF100
SC_ARRANGE                 0xF110
SC_RESTORE                 0xF120
SC_TASKLIST                0xF130
SC_SCREENSAVE              0xF140
SC_HOTKEY                  0xF150
```

# System metrics

```
SM_CXSCREEN               0
SM_CYSCREEN               1
SM_CXVSCROLL              2
SM_CYHSCROLL              3
SM_CYCAPTION              4
SM_CXBORDER               5
SM_CYBORDER               6
SM_CXDLGFRAME             7
SM_CYDLGFRAME             8
SM_CYVTHUMB               9
SM_CXHTHUMB               10
SM_CXICON                 11
SM_CYICON                 12
SM_CXCURSOR               13
SM_CYCURSOR               14
SM_CYMENU                 15
SM_CXFULLSCREEN           16
SM_CYFULLSCREEN           17
SM_CYKANJIWINDOW          18
SM_MOUSEPRESENT           19
SM_CYVSCROLL              20
SM_CXHSCROLL              21
SM_DEBUG                  22
SM_SWAPBUTTON             23
SM_RESERVED1              24
SM_RESERVED2              25
SM_RESERVED3              26
SM_RESERVED4              27
SM_CXMIN                  28
SM_CYMIN                  29
SM_CXSIZE                 30
SM_CYSIZE                 31
SM_CXFRAME                32
SM_CYFRAME                33
SM_CXMINTRACK             34
SM_CYMINTRACK             35
SM_CXDOUBLECLK            36
SM_CYDOUBLECLK            37
SM_CXICONSPACING          38
SM_CYICONSPACING          39
SM_MENUDROPALIGNMENT      40
SM_PENWINDOWS             41
SM_DBCSENABLED            42
SM_CMETRICS               43
WM_DEVMODECHANGE          0x001B
WM_TIMECHANGE             0x001E
```

# System parameters support

```
SPI_GETBEEP                      1
SPI_SETBEEP                      2
SPI_GETMOUSE                     3
SPI_SETMOUSE                     4
SPI_GETBORDER                    5
SPI_SETBORDER                    6
SPI_GETKEYBOARDSPEED             10
SPI_SETKEYBOARDSPEED             11
SPI_LANGDRIVER                   12
SPI_ICONHORIZONTALSPACING        13
SPI_GETSCREENSAVETIMEOUT         14
SPI_SETSCREENSAVETIMEOUT         15
SPI_GETSCREENSAVEACTIVE          16
SPI_SETSCREENSAVEACTIVE          17
SPI_GETGRIDGRANULARITY           18
SPI_SETGRIDGRANULARITY           19
SPI_SETDESKWALLPAPER             20
SPI_SETDESKPATTERN               21
SPI_GETKEYBOARDDELAY             22
SPI_SETKEYBOARDDELAY             23
SPI_ICONVERTICALSPACING          24
SPI_GETICONTITLEWRAP             25
SPI_SETICONTITLEWRAP             26
SPI_GETMENUDROPALIGNMENT         27
SPI_SETMENUDROPALIGNMENT         28
SPI_SETDOUBLECLKWIDTH            29
SPI_SETDOUBLECLKHEIGHT           30
SPI_GETICONTITLELOGFONT          31
SPI_SETDOUBLECLICKTIME           32
SPI_SETMOUSEBUTTONSWAP           33
SPI_SETICONTITLELOGFONT          34
SPI_GETFASTTASKSWITCH            35
SPI_SETFASTTASKSWITCH            36
SPIF_UPDATEINIFILE               0x0001
SPIF_SENDWININICHANGE            0x0002
```

# Text support

```
ETO_GRAYED                    0x0001
ETO_OPAQUE                    0x0002
ETO_CLIPPED                   0x0004
```

**DrawText() format flags**

```
DT_TOP                        0x0000
DT_LEFT                       0x0000
DT_CENTER                     0x0001
DT_RIGHT                      0x0002
DT_VCENTER                    0x0004
DT_BOTTOM                     0x0008
DT_WORDBREAK                  0x0010
DT_SINGLELINE                 0x0020
DT_EXPANDTABS                 0x0040
DT_TABSTOP                    0x0080
DT_NOCLIP                     0x0100
DT_EXTERNALLEADING            0x0200
DT_CALCRECT                   0x0400
DT_NOPREFIX                   0x0800
DT_INTERNAL                   0x1000
```

**Background modes**

```
TRANSPARENT                   1
OPAQUE                        2
```

**Text alignment options**

```
TA_NOUPDATECP                 0x0000
TA_UPDATECP                   0x0001
TA_LEFT                       0x0000
TA_RIGHT                      0x0002
TA_CENTER                     0x0006
TA_TOP                        0x0000
TA_BOTTOM                     0x0008
TA_BASELINE                   0x0018
```

## Window activation

```
WA_INACTIVE                 0
WA_ACTIVE                   1
WA_CLICKACTIVE              2
WM_ACTIVATE                 0x0006
WM_ACTIVATEAPP              0x001C
WM_NCACTIVATE               0x0086
```

# Window class management

**Class styles**

```
CS_VREDRAW                    0x0001
CS_HREDRAW                    0x0002
CS_OWNDC                      0x0020
CS_CLASSDC                    0x0040
CS_PARENTDC                   0x0080
CS_SAVEBITS                   0x0800
CS_DBLCLKS                    0x0008
CS_BYTEALIGNCLIENT            0x1000
CS_BYTEALIGNWINDOW            0x2000
CS_NOCLOSE                    0x0200
CS_KEYCVTWINDOW               0x0004
CS_NOKEYCVT                   0x0100
CS_GLOBALCLASS                0x4000
```

**Class field offsets for GetClassLong() and GetClassWord()**

```
GCL_MENUNAME                      (-8)
GCW_HBRBACKGROUND                 (-10)
GCW_HCURSOR                       (-12)
GCW_HICON                         (-14)
GCW_HMODULE                       (-16)
GCW_CBWNDEXTRA                    (-18)
GCW_CBCLSEXTRA                    (-20)
GCL_WNDPROC                       (-24)
GCW_STYLE                         (-26)
GCW_ATOM                          (-32)
```

# Window create/destroy

**Basic window types**

| | |
|---|---|
| WS_OVERLAPPED | 0x00000000L |
| WS_POPUP | 0x80000000L |
| WS_CHILD | 0x40000000L |

**Clipping styles**

| | |
|---|---|
| WS_CLIPSIBLINGS | 0x04000000L |
| WS_CLIPCHILDREN | 0x02000000L |

**Generic window states**

| | |
|---|---|
| WS_VISIBLE | 0x10000000L |
| WS_DISABLED | 0x08000000L |

**Main window states**

| | |
|---|---|
| WS_MINIMIZE | 0x20000000L |
| WS_MAXIMIZE | 0x01000000L |

**Main window styles**

| | |
|---|---|
| WS_CAPTION | 0x00C00000L |
| WS_BORDER | 0x00800000L |
| WS_DLGFRAME | 0x00400000L |
| WS_VSCROLL | 0x00200000L |
| WS_HSCROLL | 0x00100000L |
| WS_SYSMENU | 0x00080000L |
| WS_THICKFRAME | 0x00040000L |
| WS_MINIMIZEBOX | 0x00020000L |
| WS_MAXIMIZEBOX | 0x00010000L |

**Control window styles**

| | |
|---|---|
| WS_GROUP | 0x00020000L |
| WS_TABSTOP | 0x00010000L |

**Common window styles**

| | |
|---|---|
| WS_OVERLAPPEDWINDOW | (WS_OVERLAPPED \| WS_CAPTION \| WS_SYSMENU \| WS_THICKFRAME \| WS_MINIMIZEBOX \| WS_MAXIMIZEBOX) |
| WS_POPUPWINDOW | (WS_POPUP \| WS_BORDER \| WS_SYSMENU) |
| WS_CHILDWINDOW | (WS_CHILD) |

**Extended window styles**

| | |
|---|---|
| WS_EX_DLGMODALFRAME | 0x00000001L |
| WS_EX_NOPARENTNOTIFY | 0x00000004L |
| WS_EX_TOPMOST | 0x00000008L |
| WS_EX_ACCEPTFILES | 0x00000010L |
| WS_EX_TRANSPARENT | 0x00000020L |

**Obsolete style names**

| | |
|---|---|
| WS_TILED | WS_OVERLAPPED |
| WS_ICONIC | WS_MINIMIZE |
| WS_SIZEBOX | WS_THICKFRAME |
| WS_TILEDWINDOW | WS_OVERLAPPEDWINDOW |

**Special value for CreateWindow, et al.**

| | |
|---|---|
| HWND_DESKTOP | ((HWND)0) |
| WM_CREATE | 0x0001 |
| WM_NCCREATE | 0x0081 |
| WM_DESTROY | 0x0002 |
| WM_NCDESTROY | 0x0082 |
| SW_HIDE | 0 |
| SW_SHOWNORMAL | 1 |
| SW_NORMAL | 1 |
| SW_SHOWMINIMIZED | 2 |
| SW_SHOWMAXIMIZED | 3 |
| SW_MAXIMIZE | 3 |
| SW_SHOWNOACTIVATE | 4 |
| SW_SHOW | 5 |
| SW_MINIMIZE | 6 |
| SW_SHOWMINNOACTIVE | 7 |

```
SW_SHOWNA                      8
SW_RESTORE                     9
```

**Obsolete ShowWindow() command names**

```
HIDE_WINDOW                    0
SHOW_OPENWINDOW                1
SHOW_ICONWINDOW                2
SHOW_FULLSCREEN                3
SHOW_OPENNOACTIVATE 4
```

**WM_SHOWWINDOW wParam codes**

```
WM_SHOWWINDOW                  0x0018
SW_PARENTCLOSING               1
SW_OTHERMAXIMIZED              2
SW_PARENTOPENING               3
SW_OTHERRESTORED               4
WM_SETREDRAW                   0x000B
WM_ENABLE                      0x000A
WM_SETTEXT                     0x000C
WM_GETTEXT                     0x000D
WM_GETTEXTLENGTH               0x000E
GWL_WNDPROC                    (-4)
GWW_HINSTANCE                  (-6)
GWW_HWNDPARENT                 (-8)
GWW_ID                         (-12)
GWL_STYLE                      (-16)
GWL_EXSTYLE                    (-20)
```

## Window drawing support

```
DCX_WINDOW                      0x00000001L
DCX_CACHE                       0x00000002L
DCX_CLIPCHILDREN                0x00000008L
DCX_CLIPSIBLINGS                0x00000010L
DCX_PARENTCLIP                  0x00000020L
DCX_EXCLUDERGN                  0x00000040L
DCX_INTERSECTRGN                0x00000080L
DCX_LOCKWINDOWUPDATE            0x00000400L
DCX_USESTYLE                    0x00010000L
```

# Window message support

```
WM_NULL                       0x0000
WM_USER                       0x0400
```

**PeekMessage() options**
```
PM_NOREMOVE                   0x0000
PM_REMOVE                     0x0001
PM_NOYIELD                    0x0002
```

**GetQueueStatus flags**
```
QS_KEY                        0x0001
QS_MOUSEMOVE                  0x0002
QS_MOUSEBUTTON                0x0004
QS_MOUSE                      (QS_MOUSEMOVE | QS_MOUSEBUTTON)
QS_POSTMESSAGE                0x0008
QS_TIMER                      0x0010
QS_PAINT                      0x0020
QS_SENDMESSAGE                0x0040
QS_ALLINPUT                   0x007f
WH_GETMESSAGE                 3
WH_CALLWNDPROC                4
WH_MSGFILTER                  (-1)
WH_SYSMSGFILTER               6
```

**CallMsgFilter()**
```
MSGF_DIALOGBOX                0
MSGF_MENU                     2
MSGF_MOVE                     3
MSGF_SIZE                     4
MSGF_SCROLLBAR                5
MSGF_NEXTWINDOW               6
MSGF_MAINLOOP                 8
MSGF_USER                     4096
```

**PenWindows specific messages**
```
WM_PENWINFIRST                0x0380
WM_PENWINLAST                 0x038F
```

**Coalescing messages**
```
WM_COALESCE_FIRST             0x0390
WM_COALESCE_LAST              0x039F
```

# Window query and enumeration

```
GW_HWNDFIRST                   0
GW_HWNDLAST                    1
GW_HWNDNEXT                    2
GW_HWNDPREV                    3
GW_OWNER                       4
GW_CHILD                       5
```

# Window repainting

```
WM_PAINT                    0x000F
WM_ERASEBKGND               0x0014
WM_ICONERASEBKGND           0x0027
RDW_INVALIDATE              0x0001
RDW_INTERNALPAINT           0x0002
RDW_ERASE                   0x0004
RDW_VALIDATE                0x0008
RDW_NOINTERNALPAINT         0x0010
RDW_NOERASE                 0x0020
RDW_NOCHILDREN              0x0040
RDW_ALLCHILDREN             0x0080
RDW_UPDATENOW               0x0100
RDW_ERASENOW                0x0200
RDW_FRAME                   0x0400
RDW_NOFRAME                 0x0800
```

## Window scrolling

```
SW_SCROLLCHILDREN              0x0001
SW_INVALIDATE                  0x0002
SW_ERASE                       0x0004
```

# Window size, position, Z-order, and visibility

```
CW_USEDEFAULT                   0x8000
WPF_SETMINPOSITION              0x0001
WPF_RESTORETOMAXIMIZED          0x0002
```

**SetWindowPos() and WINDOWPOS flags**

```
SWP_NOSIZE                      0x0001
SWP_NOMOVE                      0x0002
SWP_NOZORDER                    0x0004
SWP_NOREDRAW                    0x0008
SWP_NOACTIVATE                  0x0010
SWP_FRAMECHANGED                0x0020
SWP_SHOWWINDOW                  0x0040
SWP_HIDEWINDOW                  0x0080
SWP_NOCOPYBITS                  0x0100
SWP_NOOWNERZORDER               0x0200
SWP_DRAWFRAME                   SWP_FRAMECHANGED
SWP_NOREPOSITION                SWP_NOOWNERZORDER
SWP_NOSENDCHANGING              0x0400
SWP_DEFERERASE                  0x2000
```

**SetWindowPos() hwndInsertAfter field values**

```
HWND_TOP                        ((HWND)0)
HWND_BOTTOM                     ((HWND)1)
HWND_TOPMOST                    ((HWND)-1)
HWND_NOTOPMOST                  ((HWND)-2)
WM_WINDOWPOSCHANGING            0x0046
WM_WINDOWPOSCHANGED             0x0047
WM_MOVE                         0x0003
WM_SIZE                         0x0005
```

**WM_SIZE message wParam values**

```
SIZE_RESTORED                   0
SIZE_MINIMIZED                  1
SIZE_MAXIMIZED                  2
SIZE_MAXSHOW                    3
SIZE_MAXHIDE                    4
```