

# UIMS v2.0

## DATA/BASIC API Quick Reference Guide

## Document control

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## Section 1: About this guide

This guide is intended for DATA/BASIC programmers who are writing applications which use the REALITY UIMS User Interface Management System. It is divided into four sections:

- This section describes the purpose of the guide, and lists any related documents and conventions used.
- The second section, Subroutines, lists the UIMS subroutines in alphabetical order, and gives the full syntax of each.
- The third, Constants, lists the predefined UIMS constants by category.
- The fourth, Resource Compiler, lists the keywords recognised by the resource compiler and gives details of mandatory attributes and valid attribute settings. Attributes that are common to several objects are listed separately at the end.

This guide does not attempt to give full details of the subroutines and constants. The programmer should refer to the UIMS DATA/BASIC API, Reference Manual for further information.

This guide has been produced in Filofax format for you to insert into the binder containing your other REALITY Quick Reference Guides.

### 1.1 Related documents

- UIMS DATA/BASIC API, Reference Manual
- UIMS DATA/BASIC API, Programmer's Guide
- RealLink for Windows User Manual
- REALITY DATA/BASIC Quick Reference Guide

### 1.2 Conventions

The following conventions are used in this documentation:

Conventions	Definition
<b>Bold text</b>	Bold text in syntax descriptions represents characters typed exactly as shown. For example, <b>Disable</b> ( <i>Context</i> , <i>Contact</i> , <i>vErr</i> )
<i>Text</i>	Characters or words in italics indicate parameters which must be supplied by the user. For instance, in the example above, the parameters <i>Context</i> , <i>Contact</i> and <i>vErr</i> are italicized to indicate that this is the general form of the Disable subroutine. In an actual program, the user supplies arguments for the place-holders <i>Context</i> , <i>Contact</i> and <i>vErr</i> .  Italic text is also used for titles of documents referred to by this document.
<i>vText</i>	A lower case 'v' prefixing a place-holder name indicates that a variable must be supplied so that a value can be returned. In

Conventions	Definition
	<p>the example above, for instance, the 'v' prefix to the parameter name <i>vErr</i> indicates that, in an actual program, the user must supply the name of a variable in which to return a completion status code.</p>
<p><i>aText</i>, <i>vaText</i></p>	<p>A lower case 'a' prefixing a place-holder name indicates that either the programmer must supply a dynamic array or, when combined with a lower case 'v', that on return the parameter will contain a dynamic array with one value in each attribute.</p>
<p>Header items</p>	<p>In the list of subroutines, each subroutine name is preceded by one or more lower case letters; these indicate the header items that must be included when using the subroutine concerned. The letters have the following meanings:</p> <ul style="list-style-type: none"> <li>d UIMSDEFS</li> <li>c UIMSCOMMON</li> <li>r RFWDEFS</li> <li>k RFWKEYS</li> <li>e UIMS-DDE</li> </ul> <p>All these header items are in the file UIMS-TOOLS. For example, in</p> <p>dc <b>Disable</b>(<i>Context</i>, <i>Contact</i>, <i>vErr</i>)</p> <p>the letters 'dc' indicate that the header items UIMSDEFS and UIMSCOMMON must be included in your program when using this subroutine.</p> <hr/> <p><b>Note</b></p> <p>These letters are for information only and do not form part of the syntax. They must be omitted when using the subroutines.</p>

## Section 2: Subroutines

dc **AddChild**(Context, Object, Index, Child, vErr)  
 dc **AddChildren**(Context, Object, Index, aChildren, vErr)  
 dc **AddTimer**(Context, Interval, vHandle)  
 dc **AppHelp**(Context, Section, vErr)  
 dc **AppWinGetDisplay**(Context, AppWindow, vDisplay)  
 dc **AppWinGetHScroll**(Context, AppWindow, vHScrollBar)  
 dc **AppWinGetMenuBar**(Context, AppWindow, vMenuBar)  
 dc **AppWinGetStyle**(Context, AppWindow, vWinStyle)  
 dc **AppWinGetVScroll**(Context, AppWindow, vVScrollBar)  
 dc **AppWinMaximize**(Context, AppWindow, vErr)  
 dc **AppWinMinimize**(Context, AppWindow, vErr)  
 dc **AppWinRemoveMenuBar**(Context, AppWindow, vErr)  
 dc **AppWinRestore**(Context, AppWindow, vErr)  
 dc **AppWinSetDefButton**(Context, AppWindow, Button, vErr)  
 dc **AppWinSetMenuBar**(Context, AppWindow, MenuBar, vErr)  
 dc **AppWinSetSizing**(Context, AppWindow, Sizing, vErr)  
 dc **AppWinSetStyle**(Context, AppWindow, WinStyle, vErr)  
 dc **AppWinSetTitle**(Context, AppWindow, Title, vErr)  
 dc **BitTest**(Value, Bit, vState)  
 dc **BrushGetColour**(Context, Brush, vColour)  
 dc **BrushSetColour**(Context, Brush, Colour, vErr)  
 dcr **ChangeNVButtonGroup**(Context, Group, Control, aTitles, aResponses, vErr)  
 dcr **ChangeNVContacts**(Context, Group, FirstContact, Number, aResponses, vErr)  
 dc **CheckButtonDeselect**(Context, Button, vErr)  
 dc **CheckButtonGetSelected**(Context, Button, vSelected)  
 dc **CheckButtonSelect**(Context, Button, vErr)  
 dc **CheckButtonSetSelected**(Context, Button, Selected, vErr)  
 dc **CheckButtonSetTitle**(Context, Button, Title, vErr)  
 dc **CheckButtonSetToggle**(Context, Button, Toggle, vErr)  
 dc **ChildWinGetHScroll**(Context, ChildWindow, vHScrollBar)  
 dc **ChildWinGetStyle**(Context, ChildWindow, vWinStyle)  
 dc **ChildWinGetVScroll**(Context, ChildWindow, vVScrollBar)  
 dc **ChildWinSetDefButton**(Context, ChildWindow, Button, vErr)  
 dc **ChildWinSetStyle**(Context, ChildWindow, WinStyle, vErr)  
 dc **ClipboardGetContent**(DataFormat, vContent, vLength)  
 dc **ClipboardGetSize**(Format, vSize)  
 dc **ClipboardSetContent**(Format, Content, Length, vErr)  
 dc **Copy**(Context, Contact, StartChar, StartLine, EndChar, EndLine, vErr)  
 dc **CreateAppWin**(Context, Ident, Title, HPos, VPos, Width, Height, Style, BorderStyle, Parent, vAppWindow)  
 dc **CreateCheckButton**(Context, Ident, Title, HPos, VPos, Width, Height, Parent, vButton)  
 dc **CreateChildWin**(Context, Ident, HPos, VPos, Width, Height, Style, BorderStyle, Parent, vChildWindow)  
 dc **CreateDlgBox**(Context, Ident, Title, HPos, VPos, Width, Height, Style, Parent, vDlgBox)  
 dc **CreateDrawBrush**(Context, Ident, Colour, Style, vBrush)

dc **CreateDrawFont**(Context, Ident, Style, TypeFace, PointSize, vFont)  
 dc **CreateDrawPen**(Context, Ident, Colour, Width, Style, vPen)  
 dc **CreateDrawrule**(Context, Ident, Foreground, Background, DrawMode, TextMode, vDrawrule)  
 dc **CreateEditBox**(Context, Ident, HPos, VPos, Width, Height, Style, Mask, Parent, vEditBox)  
 dc **CreateExGroup**(Context, Ident, Title, HPos, VPos, Width, Height, Style, Parent, vGroup)  
 dc **CreateIncGroup**(Context, Ident, Title, HPos, VPos, Width, Height, Style, Parent, vGroup)  
 dc **CreateLine**(Context, Ident, HStart, VStart, HEnd, VEnd, EndStyles, Parent, vLine)  
 dc **CreateListBox**(Context, Ident, HPos, VPos, Width, Height, Controls, Parent, vListBox)  
 dc **CreateMenuBar**(Context, Ident, Parent, vMenuBar)  
 dc **CreateMenuItem**(Context, Ident, Title, Parent, vMenuItem)  
 dc **CreateMessageBox**(Context, Style, Title, Message, aButtonTitles, vResponse, vErr)  
 dcr **CreateNVContactGroup**(Context, Group, FirstContact, Number, aResponses, vErr)  
 r **CreateNVHotspotGroup**(Context, Group, Number, aHPos, aVPos, aWidth, aHeight, aResponses, vErr)  
 dc **CreateOptionButton**(Context, Ident, Title, HPos, VPos, Width, Height, Parent, vButton)  
 dc **CreatePointer**(Context, Ident, Type, vPointer)  
 dc **CreatePullDownMenu**(Context, Ident, Title, Parent, vMenu)  
 dc **CreateRect**(Context, Ident, HPos, VPos, Width, Height, Style, Parent, vRect)  
 dc **CreateScrollBar**(Context, Ident, Type, HPos, VPos, Width, Height, Parent, vScrollBar)  
 dc **CreateText**(Context, Ident, String, HPos, VPos, Width, Height, Parent, vText)  
 dc **CreateTextEditor**(Context, Ident, HPos, VPos, Width, Height, Style, Parent, vEditor)  
 dc **CreateTitledButton**(Context, Ident, Title, HPos, VPos, Width, Height, Parent, vButton)  
 dc **Cut**(Context, Contact, StartChar, StartLine, EndChar, EndLine, vErr)  
 re **DDE.ADVISE**(LinkIdent, vData, vStatus)  
 re **DDE.CLOSEADVISE**(LinkIdent, vErr)  
 re **DDE.EXECUTE**(Application, Topic, Command, vErr)  
 re **DDE.OPENADVISE**(Application, Topic, Item, vLinkIdent, vErr)  
 re **DDE.PEEK**(Application, Topic, Item, vData, vErr)  
 re **DDE.POKE**(Application, Topic, Item, Data, vErr)  
 dc **Destroy**(Context, Object, vErr)  
 dcr **DestroyNVGroup**(Context, Group, vErr)  
 dc **Disable**(Context, Contact, vErr)  
 dc **DisplayGetMetrics**(Context, Display, vBdrWidth, vBdrHeight, vSizeBdrWidth, vSizeBdrHeight, vTitleBarHeight, vMenuBarHeight, vVScrollWidth, vHScrollHeight, vErr)

dc **DisplayGetPixelSize**(Context, Display, vPWidth, vPHeight, vErr)  
 c **DisplayImage**(ImageMan, Left, Top, Right, Bottom, ImageFile, ScaleFactor, Window, Context, vImage)  
 dc **DlgBoxGetMode**(Context, DlgBox, vMode)  
 dc **DlgBoxGetStyle**(Context, DlgBox, vStyle)  
 dc **DlgBoxSetDefButton**(Context, DlgBox, Button, vErr)  
 dc **DlgBoxSetMode**(Context, DlgBox, Mode, vErr)  
 dc **DlgBoxSetStyle**(Context, DlgBox, Style, vErr)  
 dc **DlgBoxSetTitle**(Context, DlgBox, Title, vErr)  
 dc **Draw**(Context, Contact, vErr)  
 dc **DrawLine**(Context, Contact, HStart, VStart, HEnd, VEnd, EndStyles, vErr)  
 dc **DrawRect**(Context, Contact, Left, Top, Right, Bottom, RectStyle, vErr)  
 dc **DrawruleGetBrush**(Context, Drawrule, vBrush)  
 dc **DrawruleGetColour**(Context, Drawrule, vForeground, vBackground, vErr)  
 dc **DrawruleGetFont**(Context, Drawrule, vFont)  
 dc **DrawruleGetPen**(Context, Drawrule, vPen)  
 dc **DrawruleSetBrush**(Context, Drawrule, Brush, vErr)  
 dc **DrawruleSetColour**(Context, Drawrule, Foreground, Background, vErr)  
 dc **DrawruleSetFont**(Context, Drawrule, Font, vErr)  
 dc **DrawruleSetPen**(Context, Drawrule, Pen, vErr)  
 dc **DrawTextString**(Context, Contact, Text, HPos, VPos, vErr)  
 dc **EditBoxGetContent**(Context, EditBox, vText, vComplete, vErr)  
 dc **EditBoxSetContent**(Context, EditBox, Text, vErr)  
 dc **EditBoxSetSelected**(Context, EditBox, StartPos, EndPos, State, vErr)  
 dc **Enable**(Context, Contact, vErr)  
 dc **Erase**(Context, Contact, Left, Top, Right, Bottom, vErr)  
 c **EraseImage**(ImageMan, Image, vErr)  
 r **Execute**(CommandLine, WindowState, Control, vErr)  
 dc **ExGroupGetSel**(Context, Group, vSelection)  
 dc **ExGroupSetStyle**(Context, Group, Style, vErr)  
 dc **ExGroupSetTitle**(Context, Group, Title, vErr)  
 dc **FontGetMetrics**(Context, Font, vHeight, vAscent, vDescent, vLeading, vLcWidth, vUcWidth, vMaxWidth, vErr)  
 dc **FontGetPointSize**(Context, Font, vPointSize)  
 dc **FontGetStyle**(Context, Font, vStyle)  
 dc **FontGetTextLen**(Context, Font, String, vLength)  
 dc **FontGetTypeFace**(Context, Font, vTypeFace)  
 dc **FontSetPointSize**(Context, Font, PointSize, vErr)  
 dc **FontSetStyle**(Context, Font, Style, vErr)  
 dc **FontSetTypeFace**(Context, Font, TypeFace, vErr)  
 dc **GetAppName**(Context, vAppName, vErr)  
 dc **GetBorderStyle**(Context, Contact, vStyle)  
 dc **GetChild**(Context, Object, Index, vChild)  
 dc **GetChildCount**(Context, Object, vCount)  
 dc **GetChildren**(Context, Object, vaChildren, vErr)  
 dc **GetChildFocus**(Context, Contact, vFocus)



dc **GetClip**(Context, Window, vTop, vLeft, vBottom, vRight, vErr)  
 dc **GetCoordMode**(Context, vCoordMode)  
 dc **GetCursorPosition**(Context, Window, vHPos, vVPos, vErr)  
 dc **GetCursorState**(Context, Window, vVisible, vCurType, vErr)  
 dc **GetDefaults**(vDisplay, vPrinter, vTypeFace, vErr)  
 dc **GetDrawrule**(Context, Object, vDrawrule)  
 dc **GetErrorText**(Error, vText, vErr)  
 dc **GetEventMask**(Context, Object, vEventMask)  
 dc **GetFrontWindow**(Context, vTopWindow)  
 dc **GetHelpFile**(Context, vFilename, vErr)  
 dc **GetHelpIndex**(Context, Contact, vSection)  
 dc **GetHelpKey**(Context, vKey)  
 dc **GetMsg**(TimeOut, vContext, vWindow, vContact, vMsgType, vTimeStamp, vData1, vData2, vData3, vData4)  
 dc **GetObjectParent**(Context, Object, vParent)  
 dc **GetPointer**(Context, Object, vPointer)  
 dc **GetPointerPos**(Context, Contact, vHPos, vVPos, vErr)  
 dc **GetPosition**(Context, Contact, vHPos, vVPos, vErr)  
 dc **GetRootWindow**(Context, vRootWindow)  
 dc **GetSecondaryEventMask**(Context, vEventMask, vUnmaskable, vAlert, vErr)  
 dc **GetSize**(Context, Contact, vWidth, vHeight, vErr)  
 dc **GetSolidColour**(Context, Colour, vSolidColour)  
 dc **GetState**(Context, Contact, vState)  
 dc **GetTeFontSize**(vPointSize, vWidth, vHeight)  
 dc **GetTeFontSizes**(vaPointSizes, vaWidths, vaHeights)  
 dc **GetTypeFace**(Index, vTypeFace)  
 dc **GetTypeFaces**(vaTypeFaces, vErr)  
 dc **GetUimsVersion**(vMajor, vMinor, vRevision, vErr)  
 dc **GetUpdate**(Context, Contact, vUpdate)  
 dc **GrabPointer**(Context, Contact, vErr)  
 dc **HiByte**(Word, vHiByte)  
 dc **IncGroupSetStyle**(Context, Group, Style, vErr)  
 dc **IncGroupSetTitle**(Context, Group, Title, vErr)  
 dc **InitialiseUims**  
 dc **IsUimsCapable**(vCapable)  
 dc **ListBoxAddContent**(Context, ListBox, Index, Item, vErr)  
 dc **ListBoxAddContents**(Context, ListBox, Index, aItemList, vErr)  
 dc **ListBoxAddSelection**(Context, ListBox, Selection, vErr)  
 dc **ListBoxAddSelections**(Context, ListBox, aSelectList, vErr)  
 dc **ListBoxGetContent**(Context, ListBox, Index, vItem, vErr)  
 dc **ListBoxGetContents**(Context, ListBox, vaItemList, vErr)  
 dc **ListBoxGetSelections**(Context, ListBox, vaSelectList, vErr)  
 dc **ListBoxRemoveContent**(Context, ListBox, Item, vErr)  
 dc **ListBoxRemoveContents**(Context, ListBox, Index, Count, vErr)  
 dc **ListBoxRemoveSelection**(Context, Listbox, Selection, vErr)

dc **ListBoxRemoveSelections**(Context, Listbox, aSelectList, vErr)  
 dc **ListBoxSetLink**(Context, ListBox, EditText, vErr)  
 dc **LoadAppRes**(Context, FileName, vErr)  
 dc **LoByte**(Word, vLoByte)  
 dc **MakePullDownMenu**(Context, Ident, Title, FirstItem, aItemTitles, Parent, vMenu)  
 dc **Map**(Context, Contact, vErr)  
 dc **MenuItemCheck**(Context, MenuItem, vErr)  
 dc **MenuItemGetCheckMark**(Context, MenuItem, vCheck)  
 dc **MenuItemSetAutoCheck**(Context, MenuItem, Autocheck, vErr)  
 dc **MenuItemSetCheckMark**(Context, MenuItem, Check, vErr)  
 dc **MenuItemSetTitle**(Context, MenuItem, Title, vErr)  
 dc **MenuItemUncheck**(Context, MenuItem, vErr)  
 dc **MenuSetTitle**(Context, Menu, Title, vErr)  
 dc **Move**(Context, Contact, HPos, VPos, vErr)  
 dc **OptionButtonDeselect**(Context, Button, vErr)  
 dc **OptionButtonGetSelected**(Context, Button, vSelected)  
 dc **OptionButtonSelect**(Context, Button, vErr)  
 dc **OptionButtonSetSelected**(Context, Button, Selected, vErr)  
 dc **OptionButtonSetTitle**(Context, Button, Title, vErr)  
 dc **OptionButtonSetToggle**(Context, Button, Toggle, vErr)  
 dc **Paste**(Context, Contact, Character, Line, vErr)  
 dc **PenGetColour**(Context, Pen, vColour)  
 dc **PenGetWidth**(Context, Pen, vWidth)  
 dc **PenSetColour**(Context, Pen, Colour, vErr)  
 dc **PenSetWidth**(Context, Pen, Width, vErr)  
 dc **PointerGetType**(Context, Pointer, vType)  
 dc **PointerSetType**(Context, Pointer, Type, vErr)  
 r **ReMapNVLine25**(Context, Enable, vErr)  
 dc **RemoveChild**(Context, Object, Child, vErr)  
 dc **RemoveChildren**(Context, Object, Index, Count, vErr)  
 dc **RemoveTimer**(Context, Timer, vErr)  
 dc **Resize**(Context, Contact, Width, Height, vErr)  
 dc **Scroll**(Context, Window, HScroll, VScroll, Left, Top, Right, Bottom, vErr)  
 dc **ScrollBarGetThumb**(Context, ScrollBar, vPosition)  
 dc **ScrollBarSetInc**(Context, ScrollBar, PageInc, LineInc, vErr)  
 dc **ScrollBarSetRange**(Context, ScrollBar, Min, Max, vErr)  
 dc **ScrollBarSetThumb**(Context, ScrollBar, Position, vErr)  
 dc **ScrollBarSetTracking**(Context, ScrollBar, Track, vErr)  
 rk **SendKeys**(Keys, Control, vErr)  
 dc **SetBorderStyle**(Context, Contact, Style, vErr)  
 dc **SetClip**(Context, Window, Top, Left, Bottom, Right, vErr)  
 dc **SetContactFocus**(Context, Contact, vErr)  
 dc **SetCoordMode**(Context, CoordMode, vErr)  
 dc **SetCursorPosition**(Context, Window, HPos, VPos, vErr)  
 dc **SetCursorState**(Context, Window, Visible, CurType, vErr)  
 dc **SetDrawrule**(Context, Object, Drawrule, vErr)  
 dc **SetEnabled**(Context, Contact, Enabled, vErr)  
 dcr **SetEnabledNVGroup**(Context, Group, Enable, vErr)

dc **SetEventMask**(Context, Object, EventMask, vErr)  
dc **SetHelpFile**(Context, Filename, vErr)  
dc **SetHelpIndex**(Context, Contact, Section, vErr)  
dc **SetHelpKey**(Context, Key, vErr)  
dc **SetMapped**(Context, Contact, Mapped, vErr)  
dcr **SetMappedNVGroup**(Context, Group, Mapped, vErr)  
r **SetNVHelp**(Filename, vErr)  
dc **SetPointer**(Context, Object, Pointer, vErr)  
dc **SetPointerPos**(Context, Contact, HPos, VPos, vErr)  
dc **SetSecondaryEventMask**(Context, EventMask, Unmaskable, Alert, vErr)  
dc **SetSync**(Context, Mode, vErr)  
dc **SetTeFontSize**(PointSize, Flags, vErr)  
dc **SetTeWindow**(Context, Window, Controls, Err)  
dc **SetUimsMode**  
dc **SetUpdate**(Context, Contact, Update, vErr)  
dc **SignOff**(Context, vErr)  
dc **SignOn**(AppName, vContext)  
dc **SoundSpeaker**(Pitch, Duration, Repeat, Delay, vErr)  
c **StartImage**(vImageMan)  
c **StopImage**(ImageMan, vErr)  
r **SystemCommand**(CommandCode, Options, ParamString, vResponse, vErr)  
dc **TextEditorGetContent**(Context, Editor, vText, vErr)  
dc **TextEditorGetTextLen**(Context, Editor, vLength)  
dc **TextEditorSetContent**(Context, Editor, Text, vErr)  
dc **TextGetContent**(Context, Text, vString, vErr)  
dc **TextSetContent**(Context, Text, String, vErr)  
dc **TextSetJustification**(Context, Text, Just, vErr)  
dc **TitledButtonSetStyle**(Context, Button, Style, vErr)  
dc **TitledButtonSetTitle**(Context, Button, Title, vErr)  
dc **TypeFaceGetName**(Context, TypeFace, vFontName, vErr)  
dc **TypeFaceGetPointSize**(Context, TypeFace, Index, vPointSize)  
dc **TypeFaceGetPointSizes**(Context, TypeFace, vaPointSizes, vErr)  
dc **UngrabPointer**(vErr)  
dc **UnMap**(Context, Contact, vErr)  
dc **WaitPointerOff**(Context, vErr)  
dc **WaitPointerOn**(Context, vErr)

## Section 3: Constants

### **App Window Sizes.** *One of:*

UIMS.WS.MAX Maximize  
UIMS.WS.MIN Minimize  
UIMS.WS.NORMAL Normal/restored

### **App Window Styles.** *Combination of:*

UIMS.WIN.CLOSABLE  
UIMS.WIN.DIALOG Allow tabbing between children  
UIMS.WIN.HSCROLL Display horizontal scroll-bar  
UIMS.WIN.ICONISABLE Allow minimise  
UIMS.WIN.MOVABLE  
UIMS.WIN.SIZABLE  
UIMS.WIN.TEXT Attach a text canvas  
UIMS.WIN.VSCROLL Display vertical scroll-bar

### **Pre-defined combinations.** *One of:*

UIMS.WIN.ALL All except UIMS.TEXT  
UIMS.NONE None of the above

### **Border Style.** *One of:*

UIMS.BORDER Square, single border  
UIMS.NONE No border

### **Brush Style.** *One of:*

UIMS.BRUSH.HOLLOW Transparent.  
UIMS.BRUSH.SOLID

### **Child Window Styles.** *Combination of:*

UIMS.NONE  
UIMS.WIN.DIALOG Allow tabbing between children  
UIMS.WIN.HSCROLL Display horizontal scroll-bar  
UIMS.WIN.TEXT Attach a text canvas  
UIMS.WIN.VSCROLL Display vertical scroll-bar

### **Colours.** *One of:*

UIMS.BLACK  
UIMS.BLUE  
UIMS.BROWN  
UIMS.CYAN  
UIMS.DARKBLUE  
UIMS.DARKCYAN  
UIMS.DARKGREEN  
UIMS.DARKGREY  
UIMS.DARKMAGENTA  
UIMS.DARKRED  
UIMS.DEFAULT Use colour from default Drawrule  
UIMS.GREEN  
UIMS.GREY  
UIMS.MAGENTA  
UIMS.RED  
UIMS.WHITE  
UIMS.YELLOW

**Contact States.** *Combination of:*

UIMS.ENABLED  
UIMS.MAPPABLE

**Coordinate Mode.** *One of:*

UIMS.COORD.GRAPHIC Graphics (pixel) mode  
UIMS.COORD.TEXT Text (character) mode

**Cursor Style.** *One of:*

UIMS.BAR Vertical bar  
UIMS.BLOCK Block cursor  
UIMS.OUTLINE Outline cursor  
UIMS.UNDERLINE Underline cursor

**DDE.ADVISE Status Codes**

2000 ADV.NODATA Item has not changed.  
2001 ADV.MOREDATA Item has changed more than once.  
2002 ADV.LASTDATA Item has changed once.

**DDE Error Codes**

2003 ADV.CONFAIL An 'advise' DDE link was not established or has been terminated by the server.  
2100 ERR.DDE.CONFAIL Failed to initiate the conversation.  
2101 ERR.DDE.BUSY The server is busy.  
2107 ERR.DDE.LOW.MEMORY Insufficient memory due to an internal error condition.  
2108 ERR.DDE.MEMORY.ERR Memory allocation failed.  
2114 ERR.DDE.SERVER.DIED Conversation terminated prematurely.  
2115 ERR.DDE.SYS.ERR Internal error.

**Dialog Box Mode.** *One of:*

UIMS.MODE.ALLAPPS UIMS application modal.  
UIMS.MODE.APP Application modal (default)  
UIMS.MODE.LESS Modeless  
UIMS.MODE.SYS System modal

**Dialog Box Style.** *Combination of:*

UIMS.NONE  
UIMS.WIN.CLOSABLE  
UIMS.WIN.MOVABLE

**Drawing Mode.** *One of:*

UIMS.DRAW.CLEAR  
UIMS.DRAW.COPY  
UIMS.DRAW.NOTCLEAR  
UIMS.DRAW.NOTCOPY  
UIMS.DRAW.NOTOR  
UIMS.DRAW.NOTXOR  
UIMS.DRAW.OR  
UIMS.DRAW.XOR

**Edit Box Style.** *Combination of:*

UIMS.EBOX.BORDER Rectangular border  
 UIMS.NONE

**Error Codes**

0 ERR.RFW.SUCCESS No Error  
 0 ERR.SUCCESS No Error  
 1 ERR.FAIL General failure  
 2 ERR.UNSUPPORTED Unsupported facility  
 3 ERR.INVHANDLE Invalid handle  
 5 ERR.MALLOC No memory allocated  
 8 ERR.INVCLASS Invalid class  
 10 ERR.NOITEM Couldn't find the item to delete  
 11 ERR.INVPARAM Invalid parameter  
 12 ERR.ITEMEXISTS Item already exists  
 15 ERR.INVPARENT Parent is not of appropriate type  
 16 ERR.DRAW.ORPHAN Cannot Draw an orphan  
 21 ERR.COORDMODE Invalid coordinate mode  
 24 ERR.NOSCREEN Couldn't get the default screen  
 27 ERR.NOTREALISED Contact has not yet been realised  
 35 ERR.FILEOPEN Error opening file  
 38 ERR.INVFILENAME Invalid file name specified  
 501 ERR.CLIP.FORMAT Format is not available  
 502 ERR.CLIP.OPEN Failed to open clipboard  
 603 ERR.EBOX.NOTEXTSEL No text selected  
 800 ERR.DLGBOX.INVMODE Invalid dialog box mode  
 8201 ERR.NV.NOMEM Out of memory.  
 8202 ERR.NV.EXISTS Identifier already in use.  
 8203 ERR.NV.INVALIDID Group does not exist.  
 8204 ERR.NV.INVALIDINST Invalid context handle.

See also: Execute Errors, SendKeys Errors, System Command Errors

**Event Mask.** *Combination of:*

UIMS.EM.BUTTONPRESS Button contact pressed  
 UIMS.EM.CLICK Mouse button click  
 UIMS.EM.CLOSE Window closed  
 UIMS.EM.DBLCCLICK Mouse button double click  
 UIMS.EM.DRAG Mouse move with button down  
 UIMS.EM.ENTER Focus enter  
 UIMS.EM.EXIT Application exit

**Event Mask (cont.)**

UIMS.EM.HSCROLL Horizontal scroll on window  
 UIMS.EM.IDLE No events pending  
 UIMS.EM.KEYPRESS Key pressed  
 UIMS.EM.KILL Window killed  
 UIMS.EM.LBOX.DESELECT  
 ListBox item deselected  
 UIMS.EM.LBOX.SELECT ListBox item selected  
 UIMS.EM.LEAVE Focus leave  
 UIMS.EM.MENUITEM Menu item selected  
 UIMS.EM.MOTION Mouse move  
 UIMS.EM.MOVE Window moved  
 UIMS.EM.NOTIFY Error occurred

UIMS.EM.PRESS Mouse button press  
 UIMS.EM.RELEASE Mouse button release  
 UIMS.EM.SCROLL Scroll bar moved  
 UIMS.EM.SELECT Contact contents selected  
 UIMS.EM.SIZE Window re-sized  
 UIMS.EM.TIMER Timer expired  
 UIMS.EM.UPDATE Contact exposed, needs update  
 UIMS.EM.VSCROLL Vertical scroll on window

**Pre-defined combinations. One of:**

UIMS.EM.NEWVIEW Event mask for NewView

**Default Application Context Event Mask. Combination of:**

UIMS.EM.BUTTONPRESS  
 UIMS.EM.CLOSE  
 UIMS.EM.EXIT  
 UIMS.EM.KEYPRESS  
 UIMS.EM.MENUITEM  
 UIMS.EM.NOTIFY

**Default Object Event Mask. All events except:**

UIMS.EM.IDLE:

**ExclusiveGroup Styles**

UIMS.BORDER Enclose the group in a box  
 UIMS.NONE

**Execute Controls. Combination of:**

EXECUTE.SINGLE Do not start a second instance.  
 EXECUTE.REFOCUS Return when running;  
 EXECUTE.WAIT Return when complete;  
 RFW.NONE Do not return.

**Execute Errors**

8100 ERR.EXECUTE.MEMALLOC Out of memory.  
 8102 ERR.EXECUTE.NOFILE File not found.  
 8104 ERR.EXECUTE.NOPATH Path not found.  
 8105 ERR.EXECUTE.LINK Attempt to dynamically link to a task.  
 8106 ERR.EXECUTE.DATASEG Each task requires separate data segments.  
 8110 ERR.EXECUTE.WINVERSION Incorrect Windows version.  
 8111 ERR.EXECUTE.INVEXE Invalid Windows executable file (non-Windows application or error in .EXE image).  
 8112 ERR.EXECUTE.OS2 OS/2 application.  
 8113 ERR.EXECUTE.DOS DOS 4.0 application.  
 8114 ERR.EXECUTE.INVEXE2 Unknown executable type.  
 8115 ERR.EXECUTE.OLDEXE Windows program not supported in current mode.  
 8116 ERR.EXECUTE.RUNNING Attempt to run a second instance of a program containing multiple, writeable data segments.  
 8117 ERR.EXECUTE.RUNNING2 Attempt to run a second instance of a program that links to non-shareable DLLs.  
 8118 ERR.EXECUTE.PROTECTED Attempt to run a protected mode application in real mode.  
 8132 ERR.EXECUTE.INUSE Application already in use.  
 8133 ERR.EXECUTE.MEMLOCK Internal error.

**Execute Window States.** *One of:*

EXECUTE.HIDE  
 EXECUTE.MAXIMIZE  
 EXECUTE.MINIMIZE Minimise and activate top-level window.  
 EXECUTE.NORMAL As EXECUTE.SHOWNORMAL  
 EXECUTE.RESTORE As EXECUTE.SHOWNORMAL  
 EXECUTE.SHOW  
 EXECUTE.SHOWMAXIMIZED  
 EXECUTE.SHOWMINIMIZED Activate but display as an icon.  
 EXECUTE.SHOWMINNOACTIVE  
 EXECUTE.SHOWNA  
 EXECUTE.SHOWNOACTIVATE  
 EXECUTE.SHOWNORMAL Activate and restore window.

**Font Style.** *Combination of:*

UIMS.FONT.BOLD  
 UIMS.FONT.ITALIC  
 UIMS.FONT.OUTLINE  
 UIMS.FONT.STRIKEOUT  
 UIMS.FONT.UNDERLINE  
 UIMS.NONE Plain text

**InclusiveGroup Styles**

UIMS.BORDER Enclose the group in a box  
 UIMS.NONE

**Key Codes**

UIK.0 – UIK.9  
 UIK.A – UIK.Z  
 UIK.AMPERSAND &  
 UIK.APOSTROPHE '  
 UIK.ASTERISK \*  
 UIK.AT @  
 UIK.BACKSLASH \  
 UIK.BACKSPACE  
 UIK.BAR |  
 UIK.BRACELEFT {  
 UIK.BRACERIGHT }  
 UIK.BRACKETLEFT [  
 UIK.BRACKETRIGHT ]  
 UIK.CANCEL  
 UIK.CIRCUMFLEX ^  
 UIK.CLEAR  
 UIK.COLON :  
 UIK.COMMA ,  
 UIK.DELETE  
 UIK.DOLLAR \$  
 UIK.DOWN  
 UIK.END  
 UIK.EQUAL =  
 UIK.ESCAPE  
 UIK.EXCLAM !  
 UIK.F1 – UIK.F15

**Key Codes (cont.)**

UIK.BRACKETRIGHT ]  
 UIK.CANCEL  
 UIK.CIRCUMFLEX ^  
 UIK.CLEAR  
 UIK.COLON :  
 UIK.COMMA ,  
 UIK.DELETE  
 UIK.DOLLAR \$  
 UIK.DOWN  
 UIK.END  
 UIK.EQUAL =  
 UIK.ESCAPE  
 UIK.EXCLAM !  
 UIK.F1 – UIK.F15



UIK.GRAVE `   
 UIK.GREATER >   
 UIK.HELP   
 UIK.HOME   
 UIK.INSERT   
 UIK.LEFT   
 UIK.LESS <   
 UIK.MINUS -   
 UIK.MULTI00 – UIK.MULTI7F   
 UIK.NEXT   
 UIK.NUMBERSIGN #   
 UIK.PARENLEFT (   
 UIK.PARENRIGHT )   
 UIK.PERCENT %   
 UIK.PERIOD .   
 UIK.PLUS +   
 UIK.PRIOR   
 UIK.QUESTION ?   
 UIK.QUOTEDBL "   
 UIK.QUOTELEFT (deprecated)   
 UIK.QUOTERIGHT (deprecated)   
 UIK.RETURN   
 UIK.RIGHT   
 UIK.SCRLOCK Scroll Lock   
 UIK.SEMICOLON ;   
 UIK.SLASH /   
 UIK.SPACE Space   
 UIK.TAB

**Key Codes** (cont.)

UIK.TILDE ~   
 UIK.UNDERSCORE \_   
 UIK.UNKNOWN Unknown key   
 UIK.UP

**Key Modifiers.** Combination of:

UIK.ALT   
 UIK.CAPSLOCK   
 UIK.CTRL   
 UIK.NUMLOCK   
 UIK.SHIFT

**List Box Controls.** One of:

UIMS.LBOX.MULTISELECT Multiple selections allowed   
 UIMS.NONE Single selection only

**Message Box Styles**

A combination of one value from each of the following groups:

**Number of Buttons**

0 Use pre-defined style   
 1 One button   
 2 Two buttons   
 3 Three buttons

**Icon**

- 0 Use pre-defined style
- 16 Information icon
- 32 Warning icon
- 48 Alert icon
- 64 Query icon

**Default button**

- 0 Leftmost button
- 256 Second button
- 512 Third button

**Predefined Styles. One of:**

- UIMS.ALERT2 Alert Box with 2 Buttons.
- UIMS.ALERT3 Alert Box with 3 Buttons.
- UIMS.INFO Information Box with 1 button.(default)

**Message Box Styles (cont.)****Predefined Styles (cont.)**

- UIMS.QUERY2 Query Box with 2 Buttons.
- UIMS.QUERY3 Query Box with 3 Buttons.
- UIMS.WARN2 Warning Box with 2 Buttons.
- UIMS.WARN3 Warning Box with 3 Buttons.

**Messages**

- 1 UIMS.MSG.ENTER Focus enter
- 2 UIMS.MSG.LEAVE Focus leave
- 3 UIMS.MSG.PRESS Mouse button press
- 4 UIMS.MSG.RELEASE Mouse button release
- 5 UIMS.MSG.CLICK Mouse button click
- 6 UIMS.MSG.DBLCLICK Mouse button double click
- 7 UIMS.MSG.MOTION Mouse move
- 8 UIMS.MSG.DRAG Mouse move with button down
- 9 UIMS.MSG.KEYPRESS Key pressed
- 10 UIMS.MSG.UPDATE Contact exposed, needs update
- 11 UIMS.MSG.CLOSE Window closed
- 12 UIMS.MSG.KILL Window killed
- 13 UIMS.MSG.SIZE Window re-sized
- 14 UIMS.MSG.VSCROLL Vertical scroll on window
- 15 UIMS.MSG.HSCROLL Horizontal scroll on window
- 16 UIMS.MSG.EXIT Application exit
- 17 UIMS.MSG.NOTIFY Error occurred
- 18 UIMS.MSG.TIMER Timer expired
- 19 UIMS.MSG.IDLE No events pending
- 21 UIMS.MSG.MENUITEM Menu item selected
- 22 UIMS.MSG.SCROLL Scroll bar moved
- 23 UIMS.MSG.SELECT Contact contents selected
- 24 UIMS.MSG.BUTTONPRESS Button contact pressed
- 25 UIMS.MSG.LBOX.SELECT ListBox item selected
- 26 UIMS.MSG.LBOX.DESELECT ListBox item deselected
- 27 UIMS.MSG.MOVE Window moved
- 97 UIMS.MSG.CREATE Appwin created
- 98 UIMS.MSG.DESTROY Appwin destroyed

**NewView Options** (*ChangeNVButtonGroup* subroutine)

NV.CHANGE.MAP Change the mapped states of the buttons  
 UIMS.NONE Change only the titles and responses

**Pen Styles.** *One of:*

UIMS.PEN.HOLLOW  
 UIMS.PEN.SOLID

**Pointer Modifiers.** *One of:*

UIK.P.BUTTON1  
 UIK.P.BUTTON2  
 UIK.P.BUTTON3  
 UIK.P.BUTTON4  
 UIK.P.BUTTON5  
 UIK.P.DRAG Drag is active

**Pointer Types.** *One of:*

UIMS.PTR.ARROW  
 UIMS.PTR.CROSS  
 UIMS.PTR.IBEAM  
 UIMS.PTR.PLUS  
 UIMS.PTR.WAIT

**Rectangle Styles.** *One of:*

UIMS.NONE  
 UIMS.RECT.BORDER Square corners

**Scroll-bar Operations.** *One of:*

UIMS.SB.DOWN Down arrow  
 UIMS.SB.LEFT Left arrow  
 UIMS.SB.PAGEDOWN Page down region  
 UIMS.SB.PAGELEFT Page left region  
 UIMS.SB.PAGERIGHT Page right region  
 UIMS.SB.PAGEUP Page up region  
 UIMS.SB.RIGHT Right arrow  
 UIMS.SB.THUMB Thumb positioned

**Scroll-bar Operations** (*cont.*)

UIMS.SB.THUMBTRACK Thumb dragged  
 UIMS.SB.UP Up arrow

**Scroll-bar Types.** *One of:*

UIMS.SCROLLBAR.HORZ Horizontal scroll-bar  
 UIMS.SCROLLBAR.VERT Vertical scroll-bar

**SendKeys Control Codes**

SVK.DELAY:*delay:terminator*  
 SVK.KEYRATE:*time:terminator*

**SendKeys Controls.** *One of:*

SENDKEYS.WAIT Don't send until next Execute.  
 RFW.NONE Send immediately.

**SendKeys Errors**

8135 ERR.SENDKEYS.FAIL Internal error.

8136 ERR.SENDKEYS.INUSE SendKeys is in use by another instance of RealLink

### ***SendKeys Key Definitions***

SVK.ALTGRKEY ALT GR  
SVK.ALTKEY ALT  
SVK.BKSP Backspace  
SVK.BREAK BREAK (CTRL+PAUSE)  
SVK.CAPSLOCK CAPS LOCK  
SVK.CTRLKEY CTRL  
SVK.DEL DELETE  
SVK.DOWN DOWN (cursor key)  
SVK.END END  
SVK.ENTER RETURN  
SVK.ESC ESC  
SVK.F1 Function key F1  
SVK.F10 Function key F10  
SVK.F11 Function key F11  
SVK.F12 Function key F12  
SVK.F13 Function key F13

### ***SendKeys Key Definitions (cont.)***

SVK.F14 Function key F14  
SVK.F15 Function key F15  
SVK.F16 Function key F16  
SVK.F2 Function key F2  
SVK.F3 Function key F3  
SVK.F4 Function key F4  
SVK.F5 Function key F5  
SVK.F6 Function key F6  
SVK.F7 Function key F7  
SVK.F8 Function key F8  
SVK.F9 Function key F9  
SVK.GREYMINUS Keypad minus (-)  
SVK.GREYPLUS Keypad plus (+)  
SVK.HOME HOME  
SVK.INS INSERT  
SVK.LEFT LEFT (cursor key)  
SVK.LSHIFTKEY SHIFT (left)  
SVK.NUMLOCK NUM LOCK  
SVK.PAUSE PAUSE  
SVK.PGDN PAGE DOWN  
SVK.PGUP PAGE UP  
SVK.PRTSC PRINT SCREEN  
SVK.RIGHT RIGHT (cursor key)  
SVK.RSHIFTKEY SHIFT (right)  
SVK.SCROLL SCROLL LOCK  
SVK.TAB TAB  
SVK.UP UP (cursor key)

### ***SendKeys Key Modifiers***

SVK.ALT ALT  
SVK.ALTGR ALT GR  
SVK.CTRL CTRL  
SVK.SHIFT SHIFT

**System Commands.** *One of:*

SYS.CREATEDIR Create a directory on the PC  
 SYS.DELDIR Delete a directory on the PC  
 SYS.DELFILE Delete a file on the PC  
 SYS.EXIST Check if a file or directory exists on the PC  
 SYS.LOOKUP

**System Command Options**

EXIST.TIMESTAMP Return the time of the last modification to the file or directory  
 EXIST.SIZE Return the size of the file  
 EXIST.HEADER Return the first line of the file  
 RFW.NONE

**System Command Errors**

0 ERR.SYS.SUCCESS  
 8142 ERR.SYS.FAIL  
 8141 ERR.SYS.INVCOMMAND Invalid command  
 8140 ERR.SYS.DIRECTORY A directory with the specified name exists  
 8143 ERR.SYS.NOFILE The file or directory does not exist

**TE Window Controls**

TE.SHOWWIN Don't hide the RealLink window  
 TE.NOAUTOSCROLL Disable horizontal scroll bar.  
 TE.NOAUTORESIZE Disable Auto Resize Window  
 TE.NOAUTOFONT Disable RealLink Auto Select Font  
 TE.10PTFONT Change the text to 10pt size

**Text Alignment.** *One of:*

UIMS.JUST.BOTH Both left and right aligned (justified)  
 UIMS.JUST.CENTRED Centred  
 UIMS.JUST.LEFT Left aligned  
 UIMS.JUST.RIGHT Right aligned

**Text Editor Styles.** *Combination of:*

UIMS.NONE  
 UIMS.TXED.AUTOSCROLL Auto-scrolling  
 UIMS.TXED.BORDER Rectangular border  
 UIMS.TXED.HSCROLLBAR Horizontal scrollbar  
 UIMS.TXED.READONLY Read only, no editing  
 UIMS.TXED.VSCROLLBAR Vertical scrollbar

**Text Mode.** *One of:*

UIMS.TEXT.HOLLOW  
 UIMS.TEXT.OPAQUE

**Titled Button Styles.** *Combination of:*

UIMS.NONE  
 UIMS.TB.THICK Thickened border

**Update Mode.** *One of:*

UIMS.IMMEDIATE Update immediately  
 UIMS.NONE Don't update, wait for draw command

***General Constants***

FALSE

TRUE

## Section 4: Resource compiler

### Object Types

APPWINDOW	BRUSH
CHECKBUTTON	CHILDWINDOW
DIALOGBOX	DRAWRULE
EDITBOX	EXCLUSIVEGRP
INCLUSIVEGRP	LINE
LISTBOX	MENU
MENUBAR	MENUITEM
OPTIONBUTTON	PEN
POINTER	RECTANGLE
SCROLLBAR	TEXT
TEXTEDITOR	TITLEDBUTTON

### Object Attributes

#### Note

Attributes displayed in **bold** are mandatory.

### **APPWINDOW**

#### **BDRSTYLE**

Border style – one of: NONE  
BORDER

#### CHILDREN

List of Object IDs.

#### CLIPREGION

List of four coordinate values (top, left, bottom, right)

#### CURSORPOS

Cursor position – list of two coordinate values

#### (horizontal, vertical)

#### CURSORSTATE

List of two settings (Visible,Type)

Visible – one of: TRUE

FALSE

Type – one of: OUTLINE

BLOCK

UNDERLINE

BAR

### **APPWINDOW** (cont.)

#### DRAWRULE

Object ID.

#### ENABLED

TRUE or FALSE

#### EVENTMASK

List of settings

#### HELPINDEX

Help identifier value.

#### MAPPED

TRUE or FALSE

#### MENUBAR

Object ID.

#### POINTER

Object ID.

### **POSITION**

List of two coordinate values (horizontal, vertical).

### **SIZE**

List of two coordinate values (width, height).

#### SIZING

One of: MAX

MIN

NORMAL

### **STYLE**

List of settings, each one of:

CLOSABLE

	DIALOG HSCROLL ICONISABLE MOVABLE NONE SIZABLE TEXT VSCROLL
<b>TITLE</b>	String. UPDATE NONE or IMMEDIATE
<b>BRUSH FOREGROUND STYLE</b>	Colour One of: HOLLOW SOLID
<b>CHECKBUTTON</b>	
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPIINDEX	Help identifier value.
MAPPED	TRUE or FALSE
<b>POSITION</b>	List of two coordinate values (horizontal, vertical).
<b>CHECKBUTTON (cont.)</b>	
SELECTED	One of: TRUE FALSE
<b>SIZE</b>	List of two coordinate values (width, height).
<b>TITLE</b>	String. TOGGLE One of: TRUE FALSE
UPDATE	NONE or IMMEDIATE
<b>CHILDWINDOW</b>	
<b>BDRSTYLE</b>	Border style – one of: NONE BORDER
CHILDREN	List of Object IDs.
CLIPREGION	List of four coordinate values (top, left, bottom, right).
CURSORPOS	Cursor position – list of two coordinate values
horizontal, vertical).	
CURSORSTATE	List of two settings (Visible, Type). Visible – one of: TRUE FALSE Type – one of: OUTLINE BLOCK UNDERLINE BAR
DRAWRULE	Object ID.
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPIINDEX	Help identifier value.
MAPPED	TRUE or FALSE
POINTER	Object ID.
<b>POSITION</b>	List of two coordinate values (horizontal, vertical).
<b>SIZE</b>	List of two coordinate values (width, height).



**CHILDWINDOW** (cont.)**STYLE**

List of settings, each one of:

DIALOG  
HSCROLL  
NONE  
TEXT  
VSCROLL

UPDATE

NONE OR IMMEDIATE

**DIALOGBOX**CHILDREN  
DEFBUTTON  
ENABLED  
EVENTMASK  
HELPIINDEX  
MAPPED  
MODEList of Object IDs.  
Object ID.  
TRUE or FALSE  
List of settings  
Help identifier value.  
TRUE or FALSE  
One of: APP  
LESS  
SYS**POSITION**

List of two coordinate values (horizontal, vertical).

**SIZE**

List of two coordinate values (width, height).

**STYLE**List of settings, each one of: CLOSABLE  
MOVABLE  
NONE**TITLE**

String.

UPDATE

NONE OR IMMEDIATE

**DRAWRULE****BACKGROUND**

BRUSH

Colour  
Object ID.**DRAWMODE**One of: CLEAR  
COPY  
NOTCLEAR  
NOTCOPY  
NOTOR  
NOTXOR**DRAWRULE** (cont.)**DRAWMODE**(cont.) OR  
XOR**FOREGROUND**

Colour

PEN

Object ID.

**TEXTMODE**One of: OPAQUE  
HOLLOW

**EDITBOX**

CONTENT	String
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPIINDEX	Help identifier value.
MAPPED	TRUE or FALSE

**MASK**

Must be a null string.

**POSITION**

List of two coordinate values (horizontal, vertical)

**SIZE**

List of two coordinate values (width, height).

**STYLE**

One of: BORDER  
NONE

**UPDATE**

NONE OR IMMEDIATE

**EXCLUSIVEGRP****BORDER**

BORDER or NONE

CHILDREN  
ENABLED  
EVENTMASK  
HELPIINDEX  
MAPPED

List of Object IDs  
TRUE or FALSE  
List of settings  
Help identifier value.  
TRUE or FALSE

**POSITION**

List of two coordinate values (horizontal,

vertical).

**SIZE**

List of two coordinate values (width, height).

**TITLE**

String

**UPDATE**

NONE OR IMMEDIATE

**INCLUSIVEGRP****BORDER**

BORDER or NONE

CHILDREN  
ENABLED  
EVENTMASK  
HELPIINDEX  
MAPPED

List of Object IDs  
TRUE or FALSE  
List of settings  
Help identifier value.  
TRUE or FALSE

**POSITION**

List of two coordinate values (horizontal,

vertical)

**SIZE**

List of two coordinate values (width, height).

**TITLE**

String

**UPDATE**

NONE OR IMMEDIATE

<b>LINE</b>	
DRAWRULE	Object ID
ENABLED	TRUE or FALSE
<b>ENDPOS</b>	List of two coordinate values (horizontal,
vertical), relative to STARTPOS.	
<b>ENDSTYLE</b>	Must be set to DEFAULT.
MAPPED	TRUE or FALSE
<b>STARTPOS</b>	List of two coordinate values (horizontal,
vertical)	
UPDATE	NONE OR IMMEDIATE
<b>LISTBOX</b>	
CONTENT	List of strings
<b>CONTROLS</b>	One of: NONE
ENABLED	MULTISELECT
EVENTMASK	TRUE or FALSE
HELPINDEX	List of settings
LINK	Help identifier value.
MAPPED	Object ID
	TRUE or FALSE
<b>POSITION</b>	List of two coordinate values (horizontal,
vertical)	
SELECTION	Value
<b>LISTBOX (cont.)</b>	
<b>SIZE</b>	List of two coordinate values (width, height)
UPDATE	NONE OR IMMEDIATE
<b>MENU</b>	
CHILDREN	List of Object IDs
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPINDEX	Help identifier value
MAPPED	TRUE or FALSE
<b>TITLE</b>	String
<b>MENUBAR</b>	
CHILDREN	List of Object IDs
EVENTMASK	List of settings
MAPPED	TRUE or FALSE
UPDATE	NONE OR IMMEDIATE
<b>MENUITEM</b>	
AUTOCHECK	One of: TRUE
	FALSE
CHECKMARK	One of: TRUE
	FALSE
ENABLED	TRUE or FALSE

EVENTMASK	List of settings
HELPINDEX	Help identifier value
MAPPED	TRUE or FALSE
<b>TITLE</b>	String
<b>OPTIONBUTTON</b>	
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPINDEX	Help identifier value
MAPPED	TRUE or FALSE
<b>POSITION</b>	List of two coordinate values (horizontal, vertical)
<b>OPTIONBUTTON</b> ( <i>cont.</i> )	
SELECTED	One of: TRUE FALSE
<b>SIZE</b>	List of two coordinate values (width, height)
<b>TITLE</b>	String
TOGGLE	One of: TRUE FALSE
UPDATE	NONE OR IMMEDIATE
<b>PEN</b>	
<b>FOREGROUND</b>	Colour
<b>STYLE</b>	One of: HOLLOW SOLID
<b>WIDTH</b>	Number of pixels
<b>POINTER</b>	
<b>TYPE</b>	One of: ARROW CROSS CUSTOM IBEAM PLUS WAIT
<b>RECTANGLE</b>	
DRAWRULE	Object ID.
ENABLED	TRUE or FALSE
<b>ENDPOS</b>	List of two coordinate values (horizontal, vertical), relative to STARTPOS
MAPPED	TRUE or FALSE
<b>STARTPOS</b>	List of two coordinate values (horizontal, vertical)
<b>STYLE</b>	One of: BORDER NONE

UPDATE	NONE OR IMMEDIATE
<b>SCROLLBAR</b>	
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPIINDEX	Help identifier value
INC	List of two increment values (page, line)
MAPPED TRUE or FALSE	
<b>POSITION</b>	List of two coordinate values (horizontal,
vertical)	
RANGE	List of two coordinate values
(minimum, maximum)	
<b>SIZE</b>	List of two coordinate values (width,
height)	
THUMBPOS	Value
TRACK	One of: TRUE FALSE
<b>TYPE</b>	One of: HORZ VERT
UPDATE	NONE OR IMMEDIATE
<b>TEXT</b>	
<b>CONTENT</b>	String
DRAWRULE	Object ID
ENABLED	TRUE or FALSE
HELPIINDEX	Help identifier value
JUSTIFICATION	One of: BOTH CENTRED LEFT RIGHT
MAPPED	TRUE or FALSE
<b>POSITION</b>	List of two coordinate values
(horizontal, vertical)	
<b>SIZE</b>	List of two coordinate values (width,
height)	
UPDATE	NONE OR IMMEDIATE
<b>TEXTEDITOR</b>	
CONTENT	String
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
<b>TEXTEDITOR (cont.)</b>	
HELPIINDEX	Help identifier value
MAPPED	TRUE or FALSE
<b>POSITION</b>	List of two coordinate values
(horizontal, vertical)	

<b>SIZE</b> height)	List of two coordinate values (width,
<b>STYLE</b>	List of settings, each one of: NONE AUTOSCROLL BORDER HSCROLLBAR READONLY VSCROLLBAR
UPDATE	NONE OR IMMEDIATE
<b>TITLEDBUTTON</b>	
ENABLED	TRUE or FALSE
EVENTMASK	List of settings
HELPINDEX	Help identifier value
MAPPED	TRUE or FALSE
<b>POSITION</b> (horizontal, vertical)	List of two coordinate values
<b>SIZE</b> height) STYLE	List of two coordinate values (width, One of: NONE THICK
<b>TITLE</b> UPDATE	String NONE OR IMMEDIATE
<b>Common Object Attributes</b>	
<b>EVENTMASK</b>	<i>List of:</i>
BUTTONPRESS	CLICK
CLOSE	DBLCLICK
DRAG	ENTER
EXIT	HSCROLL
IDLE	KEYPRESS
KILL	LBOXDESELECT
LBOXSELECT	LEAVE
<b>EVENTMASK (cont.)</b>	
MENUITEM	MOTION
MOVE	NEWVIEW
NOTIFY	PRESS
RELEASE	SCROLL
SELECT	SIZE
TIMER	UPDATE
VSCROLL	
<b>Colours. One of:</b>	
BLACK	CYAN
DARKGREEN	DARKRED
MAGENTA	YELLOW
BLUE	DARKBLUE
DARKGREY	GREEN

RED  
DARKCYAN  
GREY

BROWN  
DARKMAGENTA  
WHITE

**Virtual Keys. One of:**

0 -9  
AMPERSAND  
ASTERISK  
BACKSLASH  
BAR  
BRACERIGHT  
BRACKETRIGHT  
CIRCUMFLEX  
COLON  
DELETE  
DOWN  
END  
ESCAPE  
F1 - F15  
GREATER  
HELP  
INSERT  
LEFT  
MINUS

A - Z  
APOSTROPHE  
AT  
BACKSPACE  
BRACELEFT  
BRACKETLEFT

CLEAR  
COMMA  
DOLLAR

EQUAL  
EXCLAM

HOME

LESS  
MULTI00 - MULTI7F

**Virtual Keys (cont.)**

NEXT  
PARENLEFT  
PERCENT  
PLUS  
QUOTERIGHT  
QUOTEDBL  
RETURN  
SEMICOLON  
SPACE  
TAB  
UNDERSCORE

NUMBERSIGN  
PARENRIGHT  
PERIOD  
PRIOR  
QUESTION  
QUOTELEFT  
RIGHT  
SLASH

TILDE  
UP

**Key Modifiers. Combination of:**

CAPSLOCK  
SHIFT

NUMLOCK  
CTRL

**About NEC**

Our customers change lives, so we create software and services that get them better outcomes. By innovating when it matters most, we help to keep people safer, healthier and better connected worldwide.

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