



- ▶ Graphical User Interface
- ▶ 68 Built-in Objects

Introduction

Dyalog for Windows Objects provide the interface to a wide range of Windows facilities. These include GUI features such as a top-level window (Form) and controls such as Button, Combo and Edit objects. Windows resources such as bitmaps, cursors, icons, metafiles and fonts, printers, the clipboard and even graphical items such as polylines, rectangles, ellipses, text, an input locator and so forth are all implemented as objects.

In addition to the basic Windows 95/NT components, Dyalog APL also includes some special high-level objects such as a very powerful [Grid](#) (spreadsheet), TabBar, ToolBar, and StatusBar. Access to ActiveX (OCX) controls is also provided.

Objects have properties which define their appearance and behaviour. For example, a Form object has a Caption property which specifies the text string to be displayed in its title bar. Objects generate events as a result of user activity or other occurrences. For example, when the user chooses an item from a menu, the corresponding MenuItem object generates a Select event. To make an application work, events are hooked up to functions (often referred to as callback functions or event handlers) that perform appropriate tasks.

As all objects are themselves [namespaces](#) they may contain all of the code and data they need to perform their tasks (encapsulation). Objects (together with any functions and variables they contain) may be saved as part of the workspace or stored on APL component files. Objects can easily be cloned for re-use in different applications.

System Objects

Root	System-level object
Printer	For hard-copy output
Clipboard	Provides access to Windows clipboard
SysTrayItem	Displays an icon in the Windows system tray

Container Objects

Form	Top-Level Window
PropertySheet	Top-level container for PropertyPages
PropertyPage	Represents one of a set of pages in a PropertySheet
MDIClient	Container for MDI windows
SubForm	Acts as an MDI window or a constrained Form
CoolBar	Rebar controls for managing menubars, toolbars, etc.
ToolControl	Windows 95 Toolbar control
TabControl	Windows 95 Tab control
StatusBar	Ribbon status bar
Group	A frame for grouping Buttons and other objects
Static	A Frame for drawing and clipping graphics
ToolBar	Ribbon toolbar (also supported in Version 7 for Windows 3.1)
TabBar	Contains TabBtns (also supported in Version 7 for Windows 3.1)
Splitter	Divides a Form or SubForm into resizable panes

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Menu

MenuBar	Pulldown menubar
Menu	Popup menu
MenuItem	Selects an option or action
Separator	Separator between items

Action

Button	Selects an option or action
<u>ToolButton</u>	Selects an option or action (in a ToolControl)
<u>TabButton</u>	Selects a tabbed SubForm, an option or action (in a TabControl)
TabBtn	Selects a tabbed SubForm (in a TabBar)
Scroll	Scrollbar
Locator	Graphical (positional) input device
Timer	Generates events at regular intervals

Input and Selection

<u>Grid</u>	Displays a data matrix as a spreadsheet
Edit	Text input field
<u>RichEdit</u>	A multi-line edit box with word-processing capabilities
Spinner	An edit field with attached spin buttons
TrackBar	A slider control used to display or input a number
List	For selecting an item
Combo	Edit field with selectable list of choices
<u>ComboEx</u>	Enhanced Combo box that support images and indentation
<u>TreeView</u>	Displays a hierarchy of items with optional icons
<u>ListView</u>	Displays a collection of items with optional icons
<u>Calendar</u>	Displays a month calendar for user input
<u>DateTimePicker</u>	Displays formatted date/time information for user input
FileBox	Prompts user to select a file
<u>BrowseBox</u>	Prompts user to select a directory, file, printer or computer



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Information

Animation

Label	Plays simple AVI files and resources
StatusField	Displays static text
MsgBox	Displays status information
TipField	Displays a message box
ProgressBar	Displays pop-up context sensitive help
Cursor	A window used to indicate the progress of a lengthy operation
	Defines a cursor

Graphical Output

Circle	Draws a circle
Ellipse	Draws an ellipse
Marker	Draws a series of polymarkers
Poly	Draws lines
Rect	Draws rectangles
Image	Displays Bitmaps, Icons and Metafiles
Text	Draws graphical text

Miscellaneous

OCXClass	Provides access to OLE Controls
<u>OLEClient</u>	Provides access to OLE Automation objects
<u>OLEServer</u>	Exposes APL code as an OLE Automation object
<u>ActiveXControl</u>	Exposes APL code as an ActiveX control
<u>TCPSocket</u>	TCP/IP Interface object
SM	Specifies a window for <code>□SM</code> (character mode interface)

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