



▶ Writing ActiveX Controls

▶ Introduction

Introduction

The ActiveXControl object allows you to package a Dyalog application as an ActiveX Control. To run your application, all the user needs is your control and a copy of the Dyalog dynamic link library.

Both may be downloaded over the Internet, so this feature gives you a powerful, inexpensive and convenient way to deliver Dyalog applications to end-users.

Packaged as an ActiveX control, your Dyalog GUI application may be included in a program written in Microsoft Visual Basic, Microsoft Excel, Borland Delphi, or in any other host application that supports ActiveX.

It also allows your Dyalog application to be run inside a web page hosted by Microsoft Internet Explorer, or by any other web browser that supports ActiveX. To run an ActiveX control under NetScape, you will need to install the NCompass ScriptActive PlugIn.

How it Works

Following the procedure described below, you create a workspace that contains one or more ActiveXControl namespaces.

Next, you select *Make OCX/DLL* from the *Session File* menu. This causes the ActiveXControl namespaces to be registered as ActiveX objects and a separate file (with the extension .OCX) is produced. This file contains your workspace packaged as a collection of ActiveX objects.

Your .OCX file represents a ready-to-run set of ActiveX objects but with a run-time dependency on the Dyalog Dynamic Link Library, DYALOG.DLL.

When a host application loads an instance of one of your controls, the system automatically loads DYALOG.DLL to support it. Subsequent instances of the same, or other Dyalog ActiveX controls, share the same DYALOG.DLL run-time library. This library is subsequently removed from memory, when the last Dyalog ActiveX control is destroyed.

Creating a Dyalog APL ActiveX Control

There are only a few simple steps involved in making your own ActiveX control:

1. Make a Form
2. Make an ActiveXControl object as a child of the Form.

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3. Write a *Create* function and attach it as a callback to the Create event. This event will be generated when a host application creates a new instance of your control. Your "Create" function should initialise (this instance of) the control and populate it with other GUI objects. These can include any of the controls supported by the Dyalog APL Windows interface. Alternatively, you can populate the ActiveXControl object with other GUI controls at this stage.
4. Write the functions and define the variables corresponding to the methods, properties and events to be exported by your control. These provide the interface between your control and the host application.
5. Specify the names and COM data types for the functions, variables and events that your ActiveX control will expose. This may be done using dialog boxes or under program control.
6. Select *Make OCX/DLL* from the *Session File* menu. This will build a .OCX file and a type library file containing everything needed for another application to use your control.

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