A. Calling Objects in LabVIEW Using ActiveX

You can use LabVIEW as an ActiveX client to access the objects, properties, methods, and events associated with other ActiveX-enabled applications. LabVIEW also can act as an ActiveX server, so other applications can access LabVIEW objects, properties, and methods.

ActiveX Objects, Properties, Methods, and Events

ActiveX-enabled applications include objects that have exposed properties and methods that other applications can access. Objects can be visible to the users, such as buttons, windows, pictures, documents, and dialog boxes, or invisible to the user, such as application objects. You access an application by accessing an object associated with that application and setting a property or invoking a method of that object.

Events are the actions taken on an object, such as clicking a mouse, pressing a key, or receiving notifications about things such as running out of memory or tasks completing. Whenever these actions occur to the object, the object sends an event to alert the ActiveX container along with the event-specific data. The ActiveX object defines the events available for an object.

Data Type Mapping

LabVIEW converts the data types of some ActiveX properties and methods into LabVIEW data types so LabVIEW can read and interpret the data. The following table lists the ActiveX data types and the corresponding converted LabVIEW data types.

ActiveX Data Type	LabVIEW Data Type
char	I8 U8
short	I16 U16
long	I32 U32

ActiveX Data Type	LabVIEW Data Type (Continued)
hyper	⟦I64⟧ ⟦U64⟧
float	⟦SGL⟧ ⟦EXT⟧
double	⟦DBL⟧
BSTR	⟦abc⟧ ⟦▫~□⟧

ActiveX VIs, Functions, Controls, and Indicators

Use the following VIs, functions, controls, and indicators to access the objects, properties, methods, and events associated with other ActiveX-enabled applications:

• Use the automation refnum control to create a reference to an ActiveX object. Right-click this control on the front panel to select an object from the type library you want to access.

• Use the Automation Open function to open an ActiveX object.

• Use the ActiveX container to access and display an ActiveX object on the front panel. Right-click the container, select **Insert ActiveX Object** from the shortcut menu, and select the object you want to access.

• Use the Property Node to get (read) and set (write) the properties associated with an ActiveX object.

• Use the Invoke Node to invoke the methods associated with an ActiveX object.

• Use the Register Event Callback function to handle events that occur on an ActiveX object.

• Use the variant control and indicator to pass data to or from ActiveX controls

Tip   Select **Tools».NET & ActiveX»Add ActiveX Controls to Palette** to add custom control files to the ActiveX Controls palette.