GraphWorX64 – Smart Symbols Property Binding Editor

APPLICATION NOTE

July 2012

Description: Guide to create an example which effectively uses the Property Binding Editor for Smart Symbols in GraphWorX64.
OS Requirement: Windows Server 2003 x64/Vista x64/ Server 2008 x64/Windows 7 x64/ Server 2008 R2 x64
General Requirement: GENESIS64 v10.7

Introduction:

Smart Symbols are an enhanced version of object groups. They greatly simplify the configuration and save engineering time by allowing a configuration of properties of inner objects without a need to drill-into the symbol.
This app note does not focus on creating smart symbols, but it is trying to show how to use Smart Symbols Property Binding Editor Syntax. If you don't know how to use Smart Symbols refer to application note *GraphWorX64 - Smart Symbols*.

Creating a Simple Smart Symbol:

1. Open a new GraphWorX64 display by going to **Start → All Programs → ICONICS → GENESIS64 → GraphWorX64 → GraphWorX64.**
2. Before you start with creating Smart Symbol please prepare very simple GraphWorX64 display with one local alias (e.g **"<<result>>**") as a process point and save it as pop.gdfx.
3. Open a new display (Smart Symbol.gdfx) and create simple smart symbol (e.g. rectangle, ellipse) with simple dynamic. You can do that by adding rectangle on GraphWorX64 display, creating a Group of object(s) and converting it to Smart Symbol. You can do both actions by right-clicking the object and selecting "Group" and then "Convert to Smart Symbol…" as shown on Figure 1.

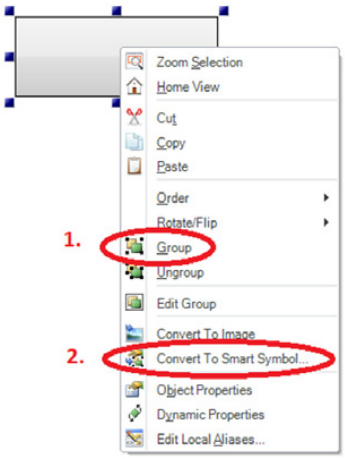

Figure 1 – Creating Simple Smart Symbol

NOTE: If you don't know how to use / create Smart Symbols see application note "*GraphWorX64 - Smart Symbols*". In this case we use simple object like rectangle which will open a popup and resolve local alias to show how to use Syntax in Property Binding Editor.

4. During the procedure of creating smart symbol don't forget to create a collection of Smart Properties similar to Figure 2.

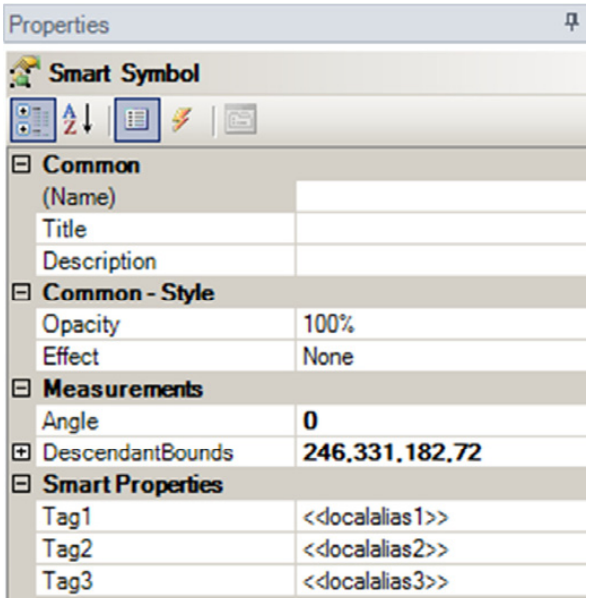

Figure 2 – Collection of Smart Properties in Smart Symbol

5. Ones you have a Smart Symbol created, you can associate it with Dynamic (Load Display) as shown on Figure 3.

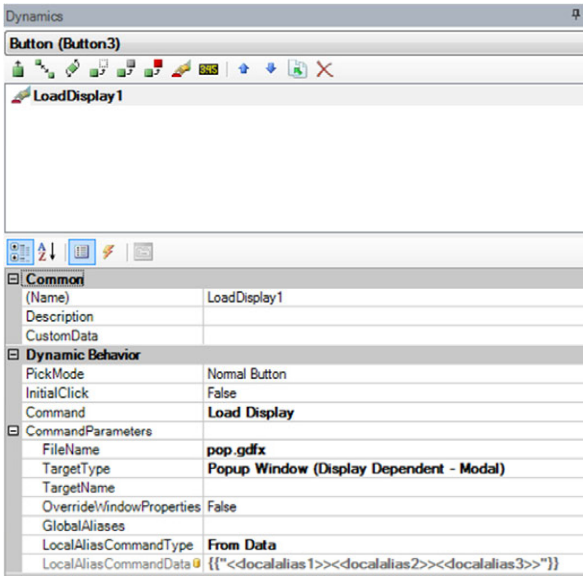

Figure 3 – Load Display Properties

6. Add Local Aliases on this display. See the figure below how to configure them.

NOTE: If you don't have ICONICS Simulator you can use different OPC Server like ICONICS OPC UA.

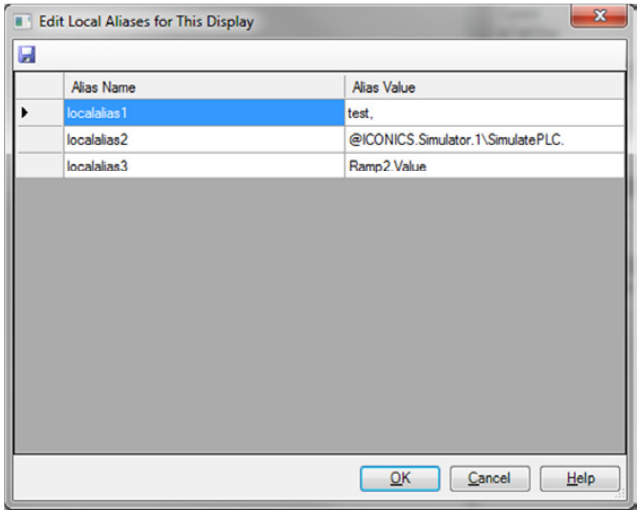

Figure 4 – Add Local Aliases to a display

7. Also add new process point (controlling point) on GraphWorX64 display and use following syntax:
   {{"<<localalias1>><<localalias2>><<localalias3>>"}}

Using Smart Property Editor:

You can add smart properties to any smart symbol. In this section, we will detail how to expose the local alias via Pick Action - Load Display.

1. Having your smart symbol selected right-click on it and select "Edit Group".
2. Select the rectangle. In the Dynamics right click on "LocalAliasCommandData" and select "Smart Binding Editor".

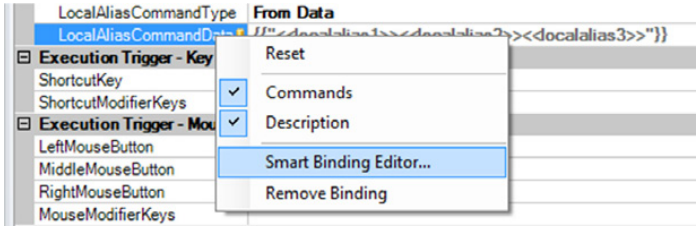

Figure 5 – Editing Smart Binding Editor

3. Add the syntax below into Smart Property Binding Editor. You can write it manually and by selecting predefined Smart Properties variables on the left side.
   `$"{{""$ + {{Tag1}} + {{Tag2}} + {{Tag3}} + $""}}"$`

   NOTE: From v10.7 the colored syntax is used. This is helpful especially in a case that you need to create complex logic between different smart properties. Please also notice that special delimiters like **$** or **"**" needs to be used to separate strings.

4. Click on "Check Syntax" button to get "no errors" message and then click OK to apply the changes.
5. Your Property should be bound now (see Figure 3 for more details).

   NOTE: If you want to add another Smart Properties and bind it you can select "Add to smart properties" on appropriate GraphWorX64 property.

6. If you are able to resolve process point with local aliases on parent display try to open popup which should resolve local aliases with smart properties. It should be one process point which resolves 3 local aliases bind to smart properties.