GraphWorX64 - Productivity Tips

APPLICATION NOTE

July 2012

Description: Overview of most important productivity tools and tricks in GraphWorX64
OS Requirement: Windows Server 2003 x64/Vista x64/ Server 2008 x64/Windows 7 x64/ Server 2008 R2 x64
General Requirement: Basic knowledge of GraphWorX64

Introduction

GraphWorX64 has a very powerful development environment in which you can design your HMI/SCADA control screens. It allows you to combine 2D with 3D perspective, create various shapes and smart symbols, insert controls, buttons, pictures, etc.

GraphWorX64's development environment offers a large variety of actions you can perform. ICONICS strived to arrange these actions in the most intuitive and convenient way, nevertheless, some actions may be less obvious than others.

This application note aims to expose you to some functionality that could speed up the development process, and show you some of the interesting actions you may want to take advantage in using.

Easy Orientation in Your Display

The Object Explorer is a tree control that lists all of the objects currently defined on the GraphWorX64 display. This includes all of the objects and groups that are visible and editable, as well as those defined and hidden. The Explorer provides a hierarchical outline of the objects that are currently on the display, removing your need to drill down through several levels to get an object within a grouped object. You can also reorganize objects by dragging and dropping them inside the Explorer tree.

The Explorer can also tell you:

- the order (Z-order) of objects in the display, which is their sequence from front to back.
- whether an object is selected or active. Selected objects are highlighted in blue, while active objects are highlighted in gray.
- if an object has a dynamic action associated with it. Dynamic actions are underlined.

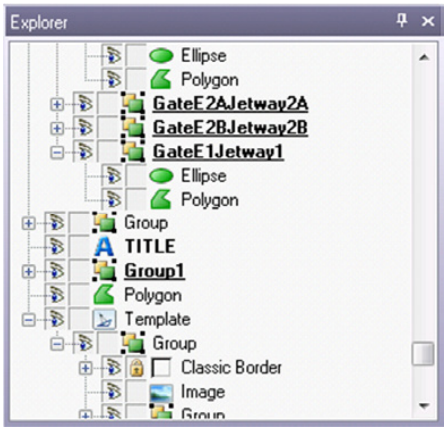

Figure 1 - Object Explorer

Useful Tooltips

Note that hovering over any action or shape in the Ribbon gives you short description or very useful information on how to use it in an advanced way.

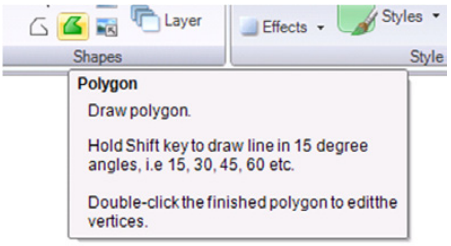

Figure 2 - Tooltip on Polygon Object in the Ribbon

Show Only What You Need

GraphWorX64 comes in three different user-selectable configuration modes: Basic, Standard, and Advanced. Depending on your comfort level and knowledge about this application, you can select different modes that best suit your need and preference while in configuration mode. You do not need to show all advanced properties if you usually change just basic characteristics of your objects.

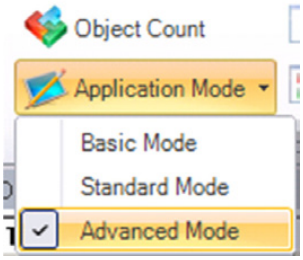

Figure 3 - GraphWorX64 Configuration Modes

Create Marvelous Shapes

Once you have drawn your basic shapes (e.g. lines, rectangles, ellipses, etc.), you can combine them to make new complex shapes using the Arrange pane on the Home ribbon. The following shape manipulation methods can help you create complex dazzling objects from basic shapes.

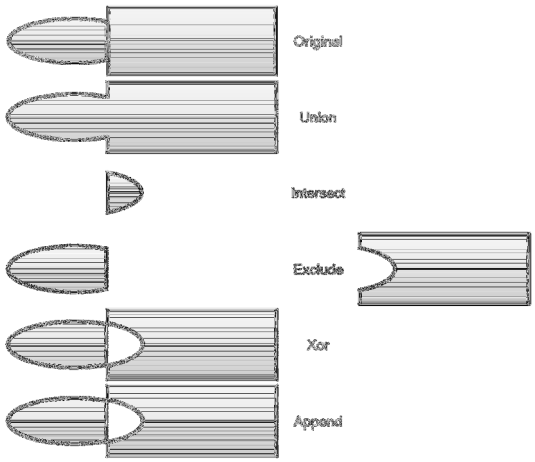

Figure 4 - Arrange Objects Available

Powerful Two-click Transformations

Take advantage of styles, shapes, labels, colors and layout galleries in GraphWorX64. Apart from having access to several predefined shapes, labels etc. you can create your own and store it in the appropriate gallery in order to have it always at hand for other objects.

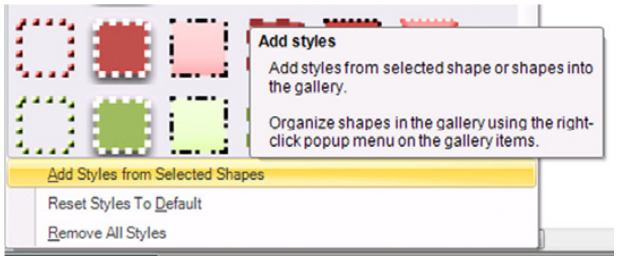

Figure 5 - Adding Styles to the Gallery

Explore Symbol Library

Before creating a symbol from scratch, look in the Symbols Library for a pre-built object that you can use instead. Even if you do not see the exact symbol you are looking for in the library, you can use one as a starting point; modify it, then save the modified version back to the library.

Once you are satisfied with the modified object, you can even add it to the Symbols Library by copying and pasting it into the library. This will now be available for your future projects.

Figure 6 - Symbols Library

A Smart Symbol is More than a Group

Smart Symbols are the 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. They are created from object groups using a wizard, which simplifies the binding of smart properties to properties of the descendant objects. Smart Properties appear in the parent object's Property Pane in a section called Smart Properties. See the dedicated application note on the topic for more details.

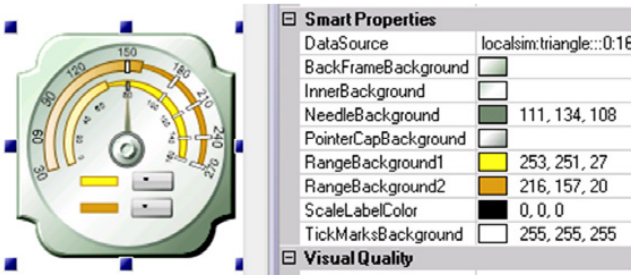

Figure 7 - Smart Properties of Symbol

Shortcuts in 3D View

You can use the keyboard to control your objects in 3D view. They can speed up your development.

- Hit 'W' instead of clicking on the Move button in the Manipulator section of the ribbon
- Hit 'E' instead of clicking on the Rotate button in the Manipulator section of the ribbon
- Hit 'R' instead of clicking on the Scale button in the Manipulator section of the ribbon
- For more precise Moving, Rotating or Scaling, the following keys can be used :
    - Left/Right arrow keys to act along the X axis
    - Up/Down arrow keys to act along the Y axis
    - Pg-Up/Pg-Down to act along the Z axis

Automatic Camera Movement

Camera views in a GraphWorX64 display is a quick and useful way to navigate around your 3D object. Camera views need to be created in configuration mode, before they can be used in runtime, but they are a beautiful way to quickly and smoothly shift your focus on 3D objects. See the dedicated application note on the topic for more details.

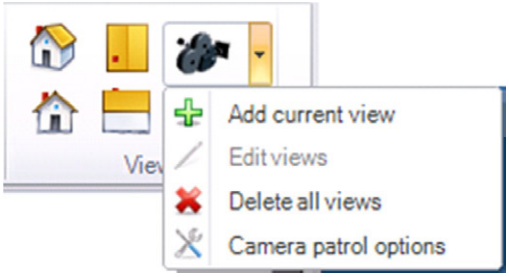

Figure 8 - Camera View Options

Runtime Preview

The Runtime Preview Mode allows you to view how the GraphWorX64 display would look like in runtime. However, since this is only a preview, you can still edit the display because you are still in Configuration Mode. You can use the right-click context menu to access the different configuration options.

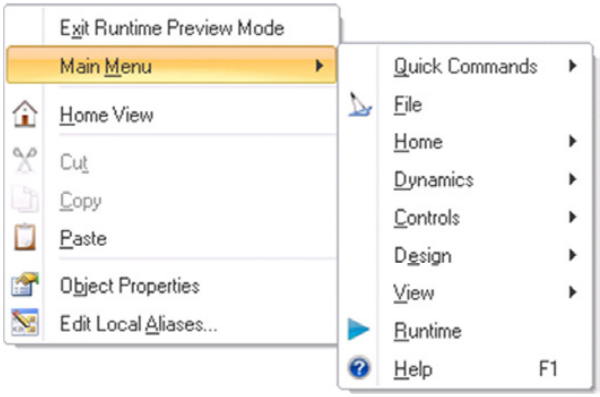

Figure 9 - Runtime Preview Configuration Options