



GraphWorX64 Productivity Tips



APPLICATION NOTE

October 2015

Description: Overview of the most important productivity tools in GraphWorX64

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.

Work Environment

- You can double-click on the Ribbon tabs (Home, Dynamics, etc.) to collapse it. Single-clicking the titles will expand it as a menu only when you need it.
- Scrolling your mouse wheel while hovering the Ribbon will quickly switch between the different tabs.
- You can click on the "Customize Quick Access Toolbar" button shown in Figure 1, to add your most commonly used commands to it.

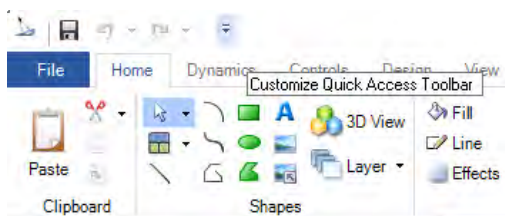


Figure 1 - Quick Access Toolbar

This is how it will look like after adding a few commands:

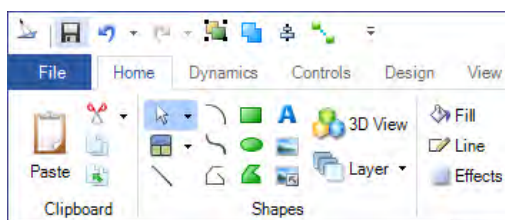


Figure 2 - Modified Quick Access Toolbar

- The Quick Access Toolbar can be placed below the Ribbon as well. You can, for example, set your work environment to look like Figure 3. Here, we also collapsed the Ribbon Bar.

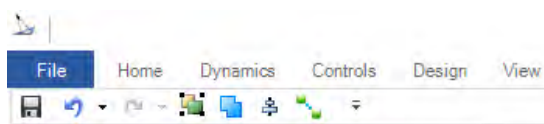


Figure 3 - Quick Access Toolbar below the Ribbon

- GraphWorX64 contains several tabs and toolboxes that can float inside the main container, or can be hooked in a "Visual Studio-like" way.
- While dragging one of them you will notice some special symbol, as you can see in Figure 4.

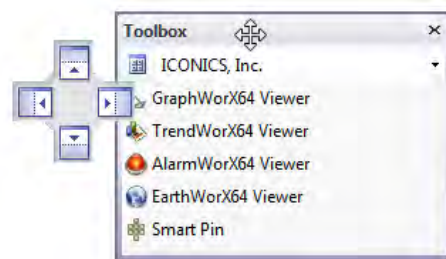


Figure 4 - Relocating Toolbars

Dropping the toolbox over one of them will hook that window in the specified position. Once a toolbox is hooked, you can click on the Pin symbol to auto-hide it.

- The Preferences tab contains many customizable parameters that you can alter depending on your needs. Preferences are set on GraphWorX64-level and not on a display-level, so changing them will affect other displays as well, not only the current one. Preferences can be reset easily.
- Holding down ALT key while scrolling your mouse wheel will adjust the zoom level.
- ALT + Left-Click on the display will double the current zoom level. ALT + Right-Click will set it to half of the current zoom level.
- Holding ALT key while dragging the mouse will zoom to the selected area.

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



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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.

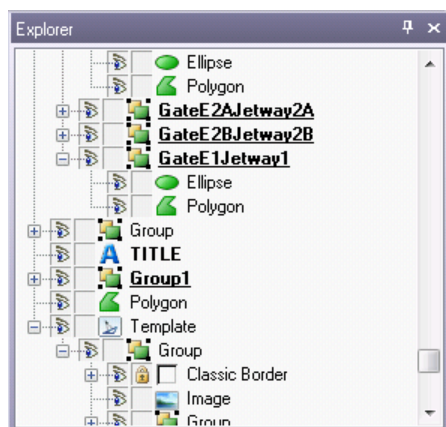


Figure 5 - Object Explorer

Useful Tooltips

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

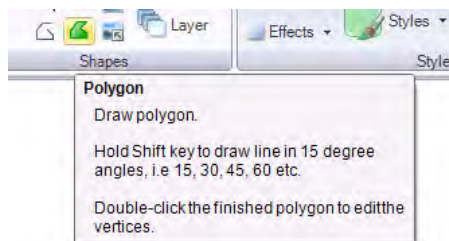


Figure 6 - Tooltip on Polygon Object in the Ribbon

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 needs and

preferences while in configuration mode. You do not need to show all advanced properties if you usually change just basic characteristics of your objects.

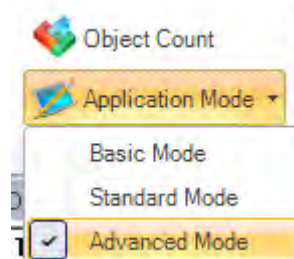


Figure 7 - GraphWorX64 Configuration Modes

Object Interaction

- Holding down the CTRL key allows you to resize an object from its center. SHIFT constrains its ratio. These can be used in combination as well.
- Holding down the SHIFT key while moving an object around within GraphWorX64 will constrain it to a purely horizontal or vertical movement.
- Holding down the SHIFT key while drawing rectangles or ellipses will help you drawing perfect squares or circles.
- Holding down the SHIFT key while drawing a polygon or polyline segment, or while drawing a line, will help you rotate that segment on a 15-degree steps basis.
- The 15-degree rotation mentioned above can be customized to another degree amount, by altering the "Angle" property in the "General Settings" section in the "Preferences" tab.
- Holding down the SHIFT key while drawing an Arc will make you draw a quarter of circle.
- Holding down the CTRL key while dragging an object in GraphWorX64 will create a copy of that object and place it wherever you let go of the mouse button. This is faster than doing a copy, then a paste, then a movement of the object.
- Shift + Click on an object will add it to the current selection, or remove it from the selection if it was already part of it.
- Double-clicking on a Polygon or Polyline is the shortcut to alter its form. Double-clicking on a Rectangle is the shortcut to edit its rounded corners. Double-clicking on an ellipse has no effect.



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- Use Tab to select next object and Shift + Tab to select the previous object (in the order of creation).
- Give objects a name. This will help you using the Object Explorer to quickly find what you are looking for. It is even more helpful for Groups, to quickly identify what that group contains.
- You can use display properties like "Description" and "Title" to help understanding what the display is about. This information will be visible from Windows Explorer too, so you don't need to open a display to understand what's inside it.

Align objects

Use the Align option in the Arrange part of the Home Ribbon to quickly arrange your objects on the screen. This is especially useful if you do not use Snap to grid or Grid features.

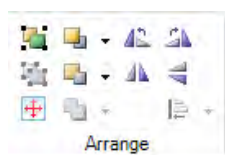


Figure 8 - Arrange Objects

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 and then modify it.

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.

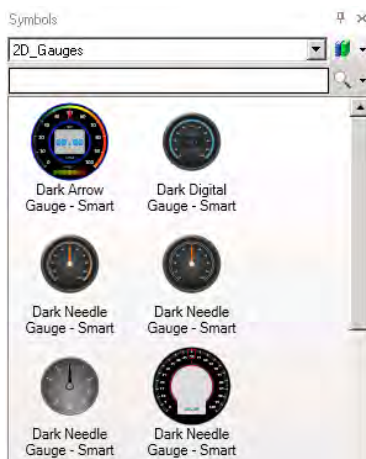


Figure 9 - Symbols Library

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.

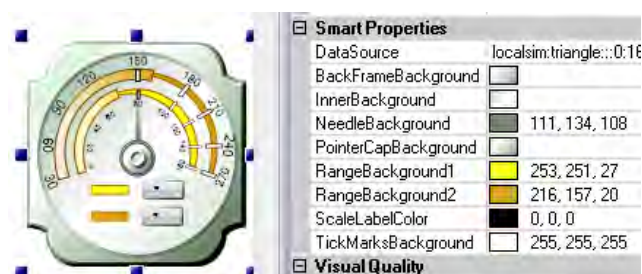


Figure 10 - Smart Properties of Symbol

Runtime Preview

The Runtime Preview Mode allows you to view how the GraphWorX64 display would look 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.

You can enter the Runtime Preview Mode from the "View" tab of the Home Ribbon.

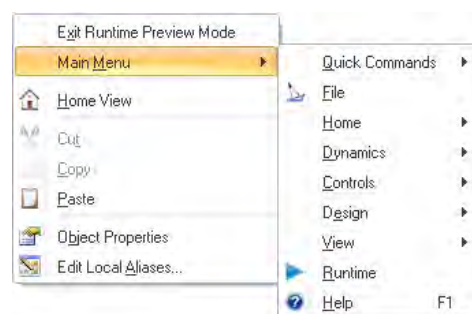


Figure 11 - Runtime Preview Configuration Options

Find and Replace

Use the "find and replace" feature of GraphWorX64. You can skip from one object of interest to another without closing the Find window. You can narrow down your search criteria and you may search and replace across multiple displays. Note that if you



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select Dynamic Data Source for *Find type* the *Find what* combo box will show you all available data sources.

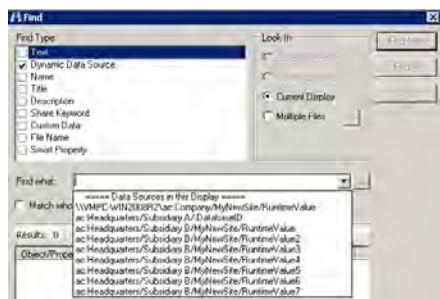


Figure 5 - Find and Replace

Drag and Drop Data Source

The latest GraphWorX64 enables user to configure data source instantly by utilizing drag and drop. Data browser is now a default tree control on the left hand side of the GraphWorX64:

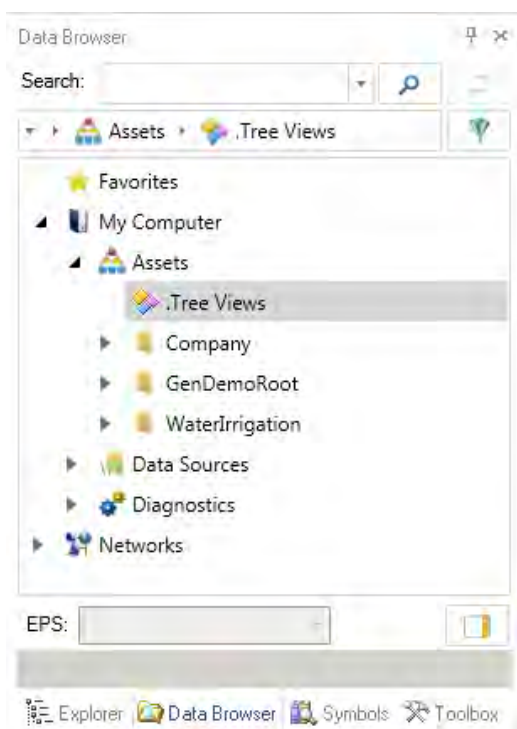


Figure 13 - Data Browser

You are free to browse any data source anytime on the data browser tree control. Once you find the desired one, you can use your mouse the drag and drop it onto the main canvas, it will become a ready-to-display process point and you can get value as soon as you enter runtime mode.

New Grid and Split Panels

A bunch of panels are either introduced or upgraded in the latest GraphWorX64. The conventional Grid panel requires user to specify the position of the object. With the new Grid panel, user can easily drag and drop items between cells in the Panel:

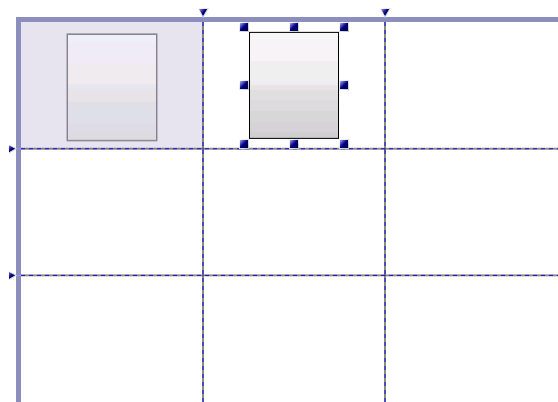


Figure 14 - Grid Panel

There are also two new split panels which provides new ways to organize your items on GraphWorX64:

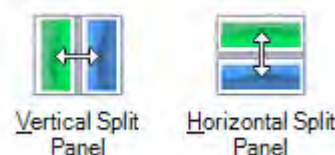


Figure 15 - Split Panels

Once objects are placed into each cell, you can use split bar to rearrange them:

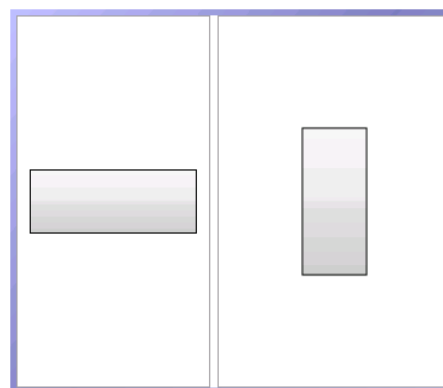


Figure 16 - Vertical Split Panel



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Shortcut Keys

Shortcut	Function	Configuration	Runtime
F1	Help	√	
Alt + F4	Close GraphWorX	√	√
Ctrl + A	Select all objects	√	
Ctrl + C	Copy object	√	
Ctrl + D	Duplicate objects	√	
Ctrl + E	Replace	√	
Ctrl + F	Find	√	
Ctrl + G	Group items	√	
Ctrl + H	Home view	√	√
Ctrl + N	New display	√	
Ctrl + M	Toggle modes	√	√
Ctrl + O	Open file	√	√
Ctrl + R	Runtime preview	√	
Ctrl + S	Save file	√	
Ctrl + U	Ungroup items	√	
Ctrl + V	Paste object	√	
Ctrl + X	Cut object	√	
Ctrl + Z	Undo	√	

Figure 17 – Shortcut Table

If you have further tips/tricks you would like to share, or have questions on any of the items presented, please contact our Technical Support Department: support@iconics.com.