



GraphWorX64 Scripting

Interacting with a TrendWorX64 Viewer



APPLICATION NOTE

August 2014

Description: A scripting guide demonstrating how to interact with the TrendWorX64 Viewer control.

General Requirement: General knowledge of GraphWorX64 and its scripting capabilities; familiarity with the TrendWorX64 Viewer control.

Introduction

This guide will introduce you to writing scripts that interface with the TrendWorX64 Viewer. It includes examples of how to add a new pen, delete or modify an existing pen and toggle legend using GraphWorX64 Scripting.

This document assumes that you have read the *GraphWorX64 Scripting – Quick Start* application note.

Preparing the display

To create this example we will need a display containing a TrendWorX64 Viewer control with a plot. You will not be able to add pens to your control unless it contains at least one plot.

It is very important that the trend viewer control, chart and its plot have unique names. Our scripts will use this name to identify which trend viewer to interact with (in case there is more than one on a display). The names can be assigned in the Advanced tab of the respective item.



Figure 1 – TrendWorX64 Viewer called “TWX” with a plot called “Plot1”

Adding References

The following code requires some extra references beyond the defaults. To add these references, open the Script Editor and click on the “Add References” button on the left.

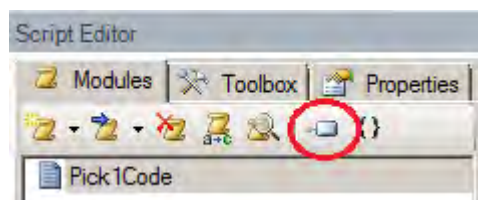


Figure 2 - Add References button

Scroll down to the bottom of the References window and click in the cell for Assembly Codebase in the last empty row. Click the “...” button that will appear when you click in the cell. Browse to the following file and add it:

- C:/Program Files/ICONICS/GENESIS64/Components/IcoDataConnector.DLL
- C:/Program Files/ICONICS/GENESIS64/Components/IcoCommonConnectors.DLL

Add Pen script

First we need to prepare the connection configuration, which means what type of data source we want to connect and its properties. In the following script we will define a connection to TrendWorX64 Logger pen without any aggregates.

```
var config : Ico.Data.DataConnector.UaSessionConfiguration;  
config = new Ico.Data.DataConnector.UaSessionConfiguration();  
config.PointName = "@ICONICS.TWXSQLSvr64.1\\Database Group.Logging  
Group.Ramp.History";  
config.UsageType = Ico.Data.DataConnector.UaSessionConfiguration.Usage.History;  
config.AggregateType = ""; // raw data  
config.MaxSamplesForRawData = 125;
```

Next we will create a new pen and will attach the above connection configuration to it.

```
var pen : Ico.Twx.TwxChartPen = new Ico.Twx.TwxChartPen();  
pen.RangeAxis.ShowTitle = true;  
pen.Name = "Pen1";  
pen.Stroke = new SolidColorBrush(Colors.Blue);  
pen.DataConnectionConfiguration = config.GetConfiguration();
```

Having created a pen with configuration we need to get a reference to our TrendWorX64 Viewer where we want the pen to be added. Also we have to specify the appropriate plot (series).

```
var control : Ico.Twx.TwxViewControl = ThisDocument.GetElementByName("TWX");  
var series : Ico.Twx.TwxSeries;  
series = control.FindSeries("Plot1");
```

Finally we just add the pen.

```
series.Pens.Add(pen);
```

The code is complete. We can save our display, go to runtime mode, then press the button add our new pen.

NOTE: Wait a moment if you do not see the pen immediately. It may need a few seconds to begin drawing its line.



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Edit Pen Script

First we need to get a reference to our TrendWorX64 Viewer and the concerned pen.

```
var control : Ico.Twx.TwxViewControl = ThisDocument.GetElementByName("TWX");  
var pen : Ico.Twx.TwxChartPen  
pen = control.FindPen("Pen1");
```

Next we may modify the properties such as color or stroke thickness in this example.

```
pen.Stroke = new SolidColorBrush(Colors.Red);  
pen.StrokeThickness = 5;
```

Delete Pen Script

First we need to get a reference to our TrendWorX64 Viewer and the concerned pen.

```
var control : Ico.Twx.TwxViewControl = ThisDocument.GetElementByName("TWX");  
var pen : Ico.Twx.TwxChartPen  
pen = control.FindPen("Pen1");
```

When removing pen we also need to get reference of the series where the plot is located.

```
var series : Ico.Twx.TwxSeries;  
series = control.FindSeries("Plot1");
```

Then we can delete our pen.

```
series.Pens.Remove(pen);
```

Toggle Legend Script

Get reference to your control and chart.

```
var control : Ico.Twx.TwxViewControl = ThisDocument.GetElementByName("TWX");  
var chart : Ico.Twx.TwxChartComponent  
chart = control.FindChartComponent("Chart1");
```

Toggle the legend visibility.

```
chart.ShowLegend = !chart.ShowLegend;
```

Conclusion

These simple examples show some important concepts, like how to get a reference to a TrendWorX64 Viewer control. This is very similar to the procedure for getting a reference to other controls as well. You've also learned about how the TrendWorX64 Viewer is structured and how to interact with its elements.

Feel free to experiment with the other available methods. You can find these by using the Intelli-sense built into the Script Editor, or by browsing the GENESIS64 API Reference Help.

ICONICS Customer Connection Portal hosts a library of automation examples that are very handy when you start scripting.