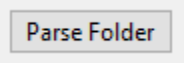
Overview

This tool will parse a folder of Experion graphics and pull out all the data references (CM, SCADA, etc) to the objects within the graphics. It allows you to replace data references, custom properties, tooltips, shapes, and CSS via excel.

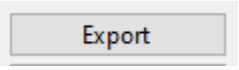
Parser

Point the app to a folder of ".htm" files (e.g. the Abstract folder).

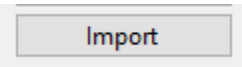
Then, click the "Parse Folder" button



The parsing may take several minutes depending on the size of the graphics folder. Once parsing is complete, a table will populate with data. To get the data into a more user friendly format, click the "Export" button and a ".xlsx" file will be created.



Any edits to the ".xlsx" file can be imported back into program by the "Import" button



Parsed Data

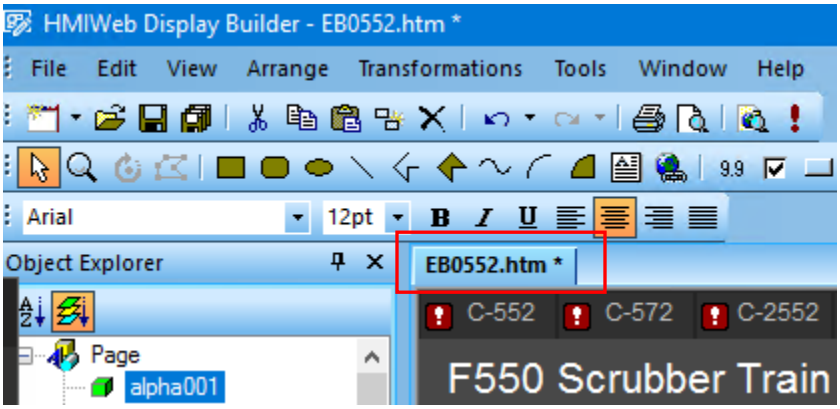
There is a wealth of information in the parsed contents. See the below table headers for detailed descriptions:

Unique Shape ID

This is a unique identifier for a particular object on a graphic. Use this column for sorting. For example, if you sort in ascending order, it is the equivalent of sorting by “Shape Name” then “Graphic”. Sorting by the string representation, i.e. “Shape Name”, can be very slow if there is a large set of data.

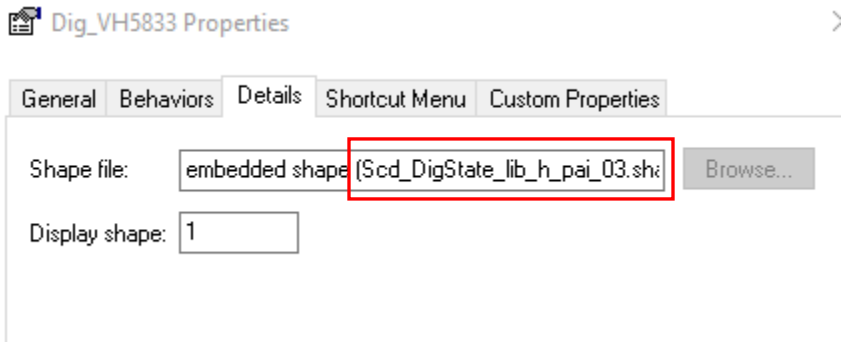
Graphic

This is the name of the ".htm" file that the parsed object resides in.



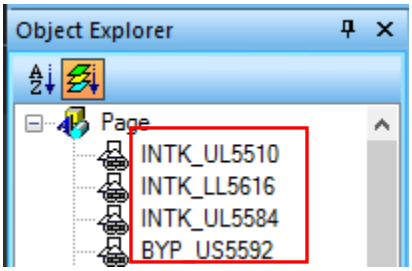
Shape Source

If object is a shape (“.sha”), then this is the name of the “.sha” file



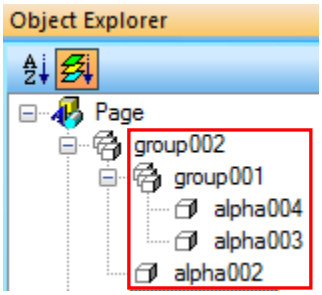
Shape Name

This is the name of the object within HMIWeb Object explorer



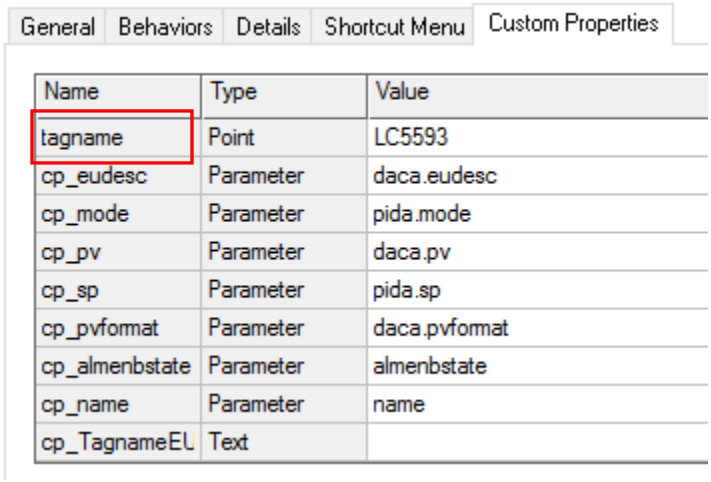
Shape Path

This shows you the path to drill down to locate the data reference or custom property. In other words, if the object is part of a group, this shows the hierarchy of the child/parent elements.



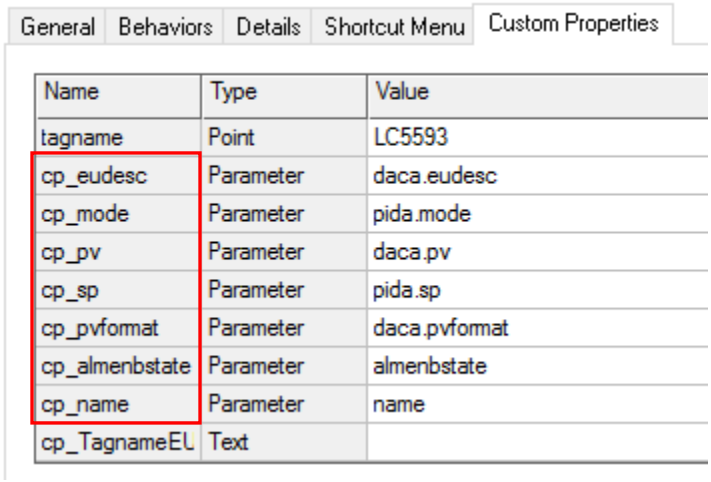
Custom Property (Point)

If object is a shape (“.sha”), then this is the name of the custom property that references a tag (e.g. CM tagname, SCADA tagname, etc)



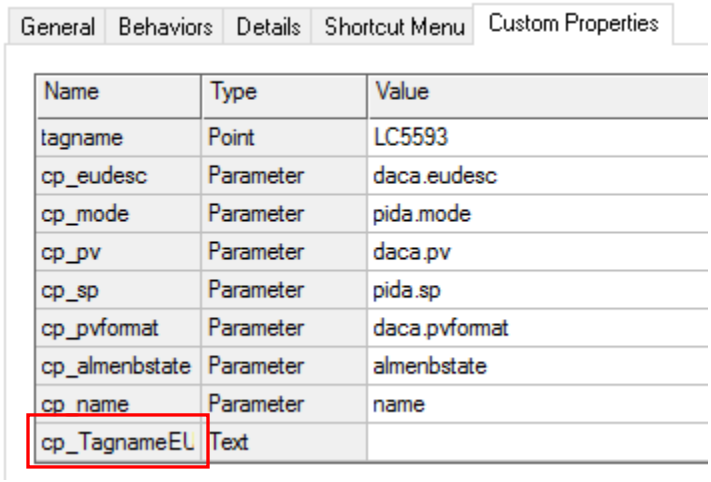
Custom Property (Parameter)

If object is a shape (“.sha”), then this is the name of the custom property that references a parameter (e.g. CM.Parameter, CM.FunctionBlock.Parameter, SCADA.Parameter, etc)



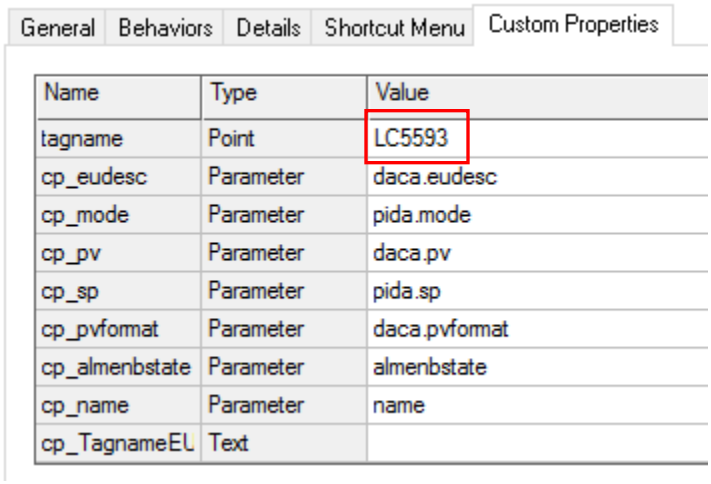
Custom Property (Misc)

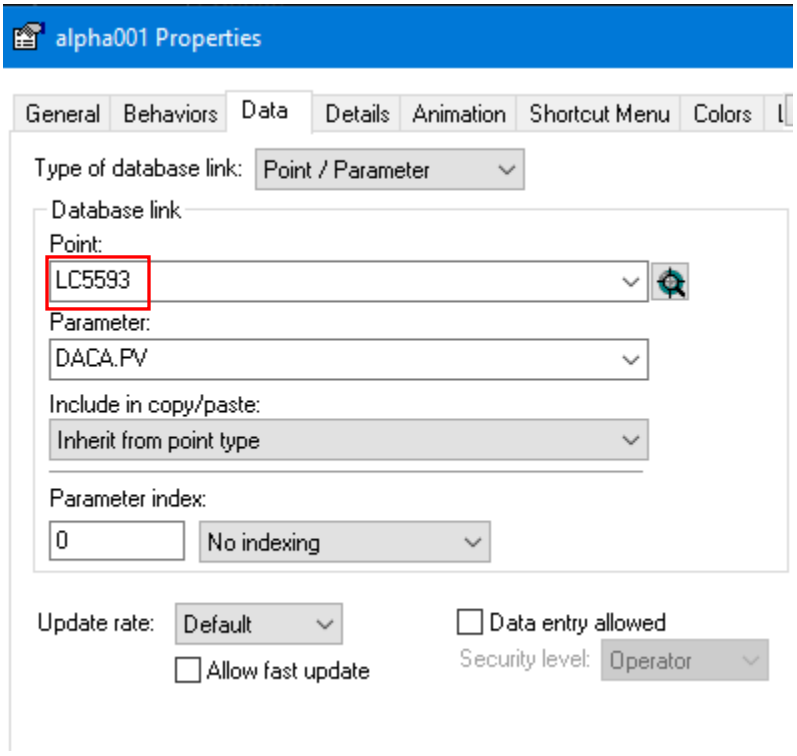
If object is a shape (“.sha”), then this is the name of the custom property that references something that is not a data reference (e.g. CSS styles, labels, context menu, etc)

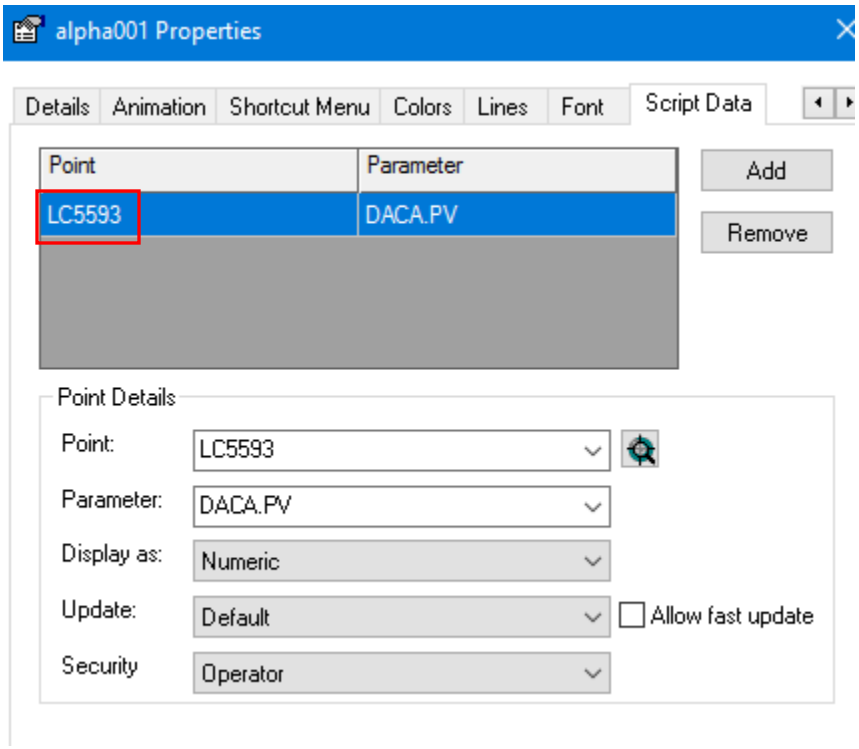


Point

This is the CM or SCADA tag reference, which can be on the “Custom Properties”, “Data”, or “Script Data” tabs

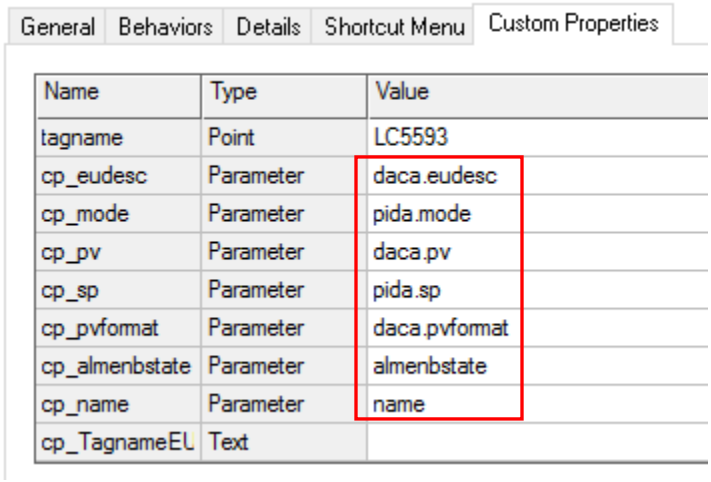


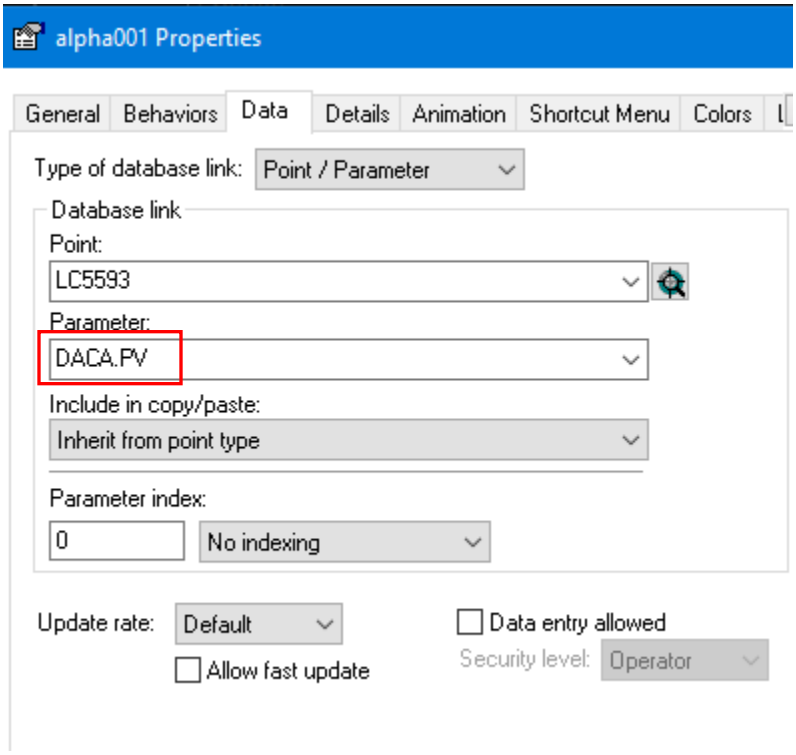


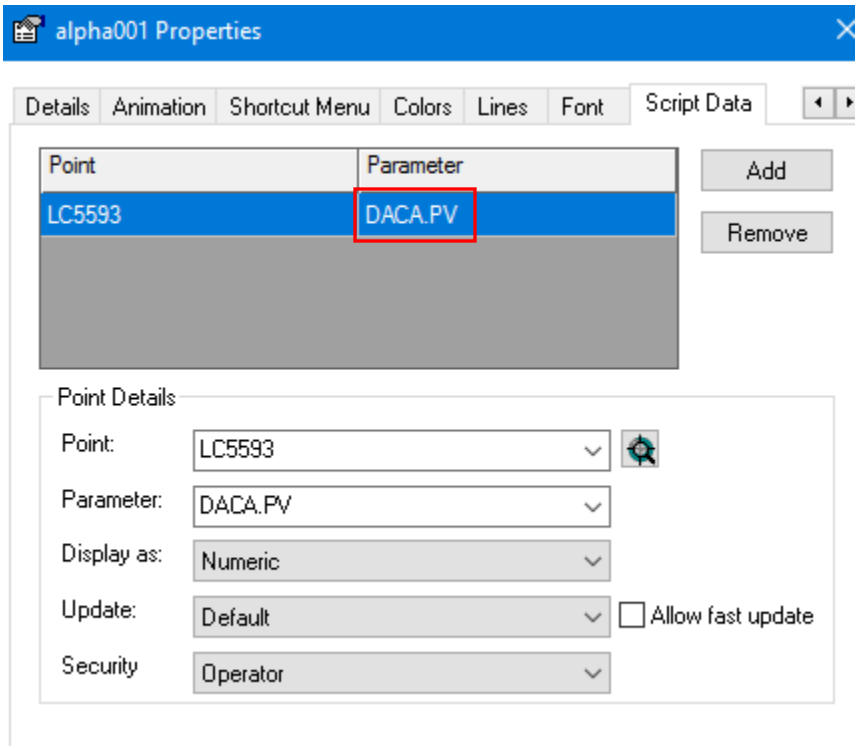

alpha001 Properties
Details
Animation
Shortcut Menu
Colors
Lines
Font
Script Data
Point
Parameter
LC5593
DACA.PV
Add
Remove
Point Details
Point:
LC5593
Parameter:
DACA.PV
Display as:
Numeric
Update:
Default
Allow fast update
Security
Operator

Parameter

This is the “parameter” or “functionblock.parameter” reference, which can be on the “Custom Properties”, “Data”, or “Script Data” tabs

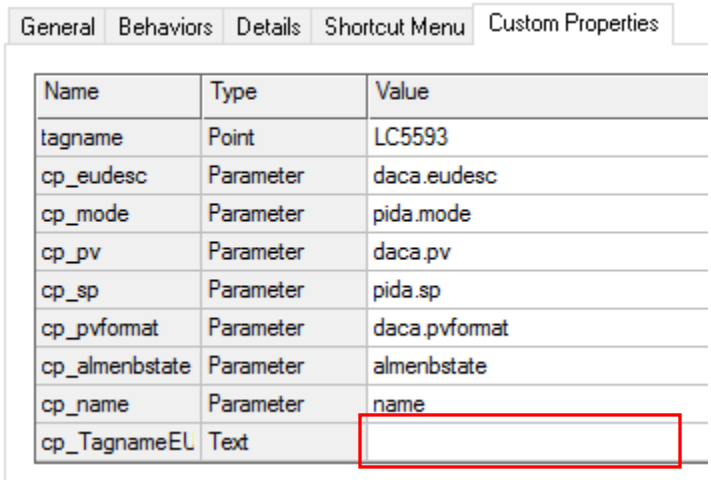





alpha001 Properties
Details
Animation
Shortcut Menu
Colors
Lines
Font
Script Data
Point
Parameter
LC5593
DACA.PV
Add
Remove
Point Details
Point:
LC5593
Parameter:
DACA.PV
Display as:
Numeric
Update:
Default
Allow fast update
Security
Operator

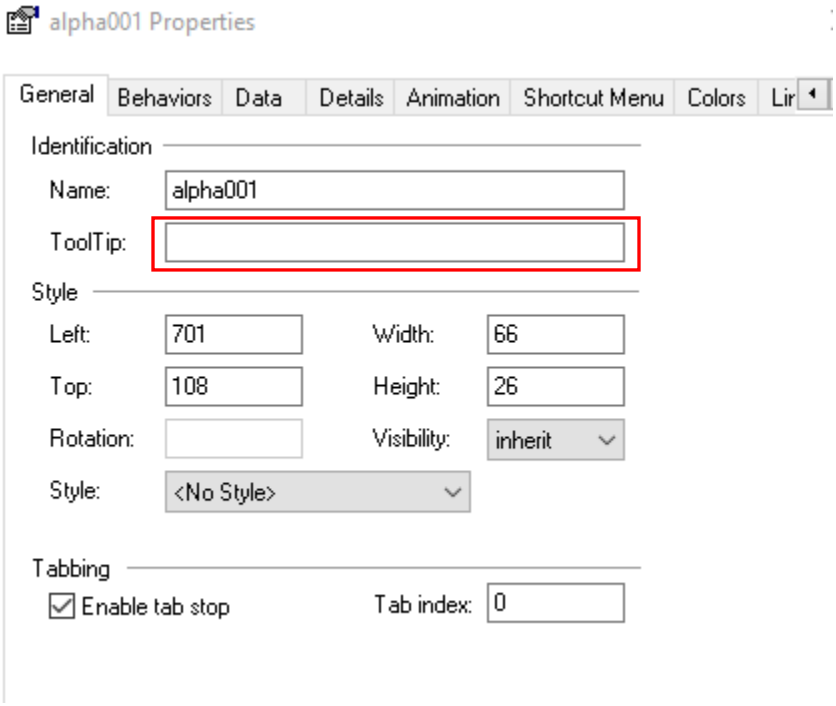
Misc Prop Value

This is any parameter that is not a tag or parameter reference, which can be on the “Custom Properties” tab



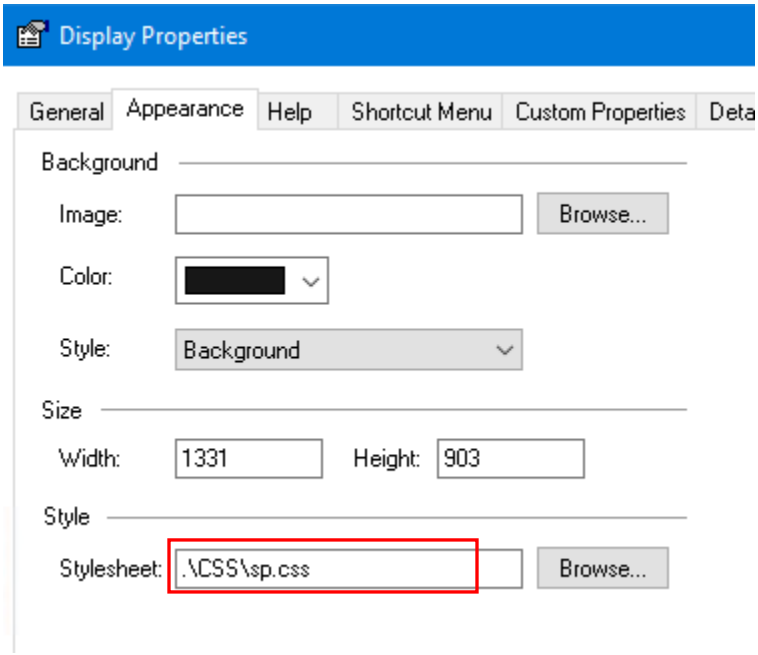
Tooltip

this is the text that appears when hovering over an object in station



CSS

This is the stylesheet of the ".htm" file



Type

This is an internal parameter to app. Describes whether the data reference lives on the “Custom Properties”, “Data”, or “Script Data” tabs

Replace Point Name

Fill this cell in to replace the value in the “Point” column. If there are multiple data references using this tagname (e.g. a shape that has 1 “Point” custom property and many “Parameter” custom properties), then all the data references will be updated regardless of whether you explicitly fill out this column for every data ref.

The below screenshot are custom parameters for a single shape.

Custom Property (Misc)	Point	Parameter	Misc Prop Value	ToolTip	CSS	Type	Replace Point Name
cp_eudesc	HC1000		automana.eude...			CustomParameter	
cp_modeAttr	HC1000		automana.mod...			CustomParameter	
cp_nmode	HC1000		automana.nor...			CustomParameter	
cp_mode	HC1000		automana.mode			CustomParameter	
cp_op	HC1000		automana.op			CustomParameter	
tagname	HC1000					CustomParameter	HC1234

All the “HC1000” references will be changed to “HC1234”, even though “HC1234” is only in 1 row. You could also fill in all the rows with “HC1234” and it would produce the same effect.

Replace Parameter

Fill this cell in to replace the value in the “Parameter” column

Replace Misc Prop Value

Fill this cell in to replace the value in the “Misc Prop Value” column

Replace Tooltip

Fill this cell in to replace the value in the “Tooltip” column

New CSS

Fill this cell in to replace the value in the “CSS” column

Replace Shape

Fill this cell in to replace the value in the “Shape Source” column

Custom Parameter Type

This is an internal parameter to app. Describes whether the custom property is Ebmedded HTML (e.g. to display tagname over shape, miscellaneous (custom property that is not a data reference), on the script tab, or on the data tab.

Gfx.Shape

This is the “Graphic” column concatenated with the “Shape Name” column. Don’t sort on this column, it is very slow with large data sets. This column, when sorted in ascending order, is used to generate the “Unique Shape ID” column.

Data Object ID

This is an internal parameter to app that is used to update the DS_datasource1.dsd file located in the "_files" folder of an ".htm" graphic.

Binding ID

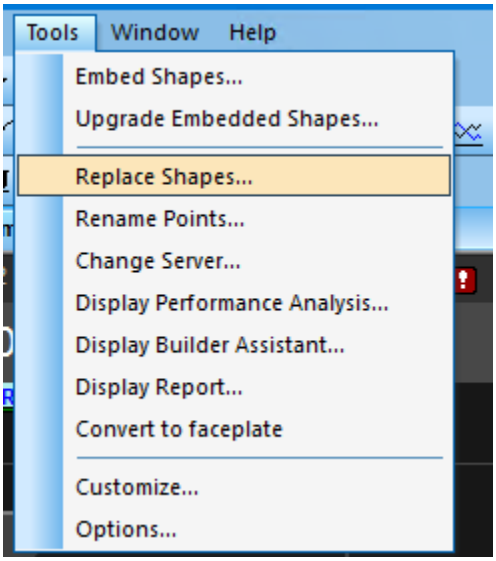
This is an internal parameter to app that is used to update the bindings.xml file located in the "_files" folder of an ".htm" graphic.

CSV Custom Parameter Index

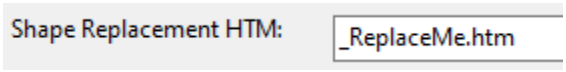
This is an internal parameter to app that is used to update the DS_datasource1.dsd file located in the "_files" folder of an ".htm" graphic.

Replace Shapes

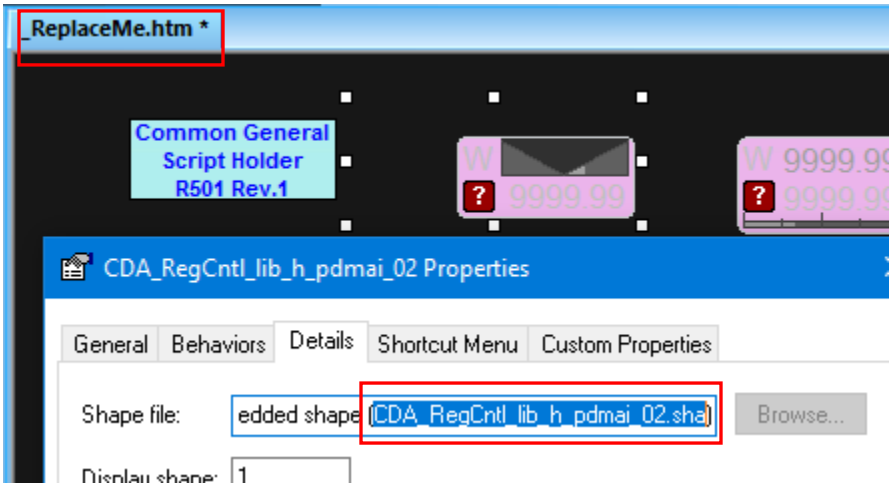
HMIWeb has built in functionality to replace all the shapes on a graphic.



If all the shapes need to be upgraded/replaced, then this is the recommended option. However, sometimes you need to target individual shapes to upgrade/replace. To do this, first create a an ".htm" file such as "_ReplaceMe.htm" and add filename to app



On this graphic, add shapes to it like you normally would (e.g. insert new shape or copy/paste). Any shape that is in this graphic can be referenced in the "Replace Shape" column. See below screenshots for example



Replace Shape
CDA_RegCntl_lib_h_pdmai_02.sha

You only have to add a new shape name to 1 row in spreadsheet i.e. the following examples are equivalent

A	C	D	T
Unique Shape ID	Shape Source	Shape Name	Replace Shape
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	

A	C	D	T
Unique Shape ID	Shape Source	Shape Name	Replace Shape
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha
3	CDA_AnOutput_lib_h_omai_01.sha	shape001	CDA_RegCntl_lib_h_pdmai_02.sha

Once the “Replace Shape” column is populated, click the “Replace Shapes” button

Replace Shapes

Replacing shapes will require you to run the parser again because the shapes will inherently have new custom properties. When shapes are replaced, they are not resized so you will need to look through graphics and may need to move shapes to line up properly. Also, if there is a custom property on the old shape that matches a custom property on the new shape, then the old value will be copied to the new shape. Any new custom properties will use the default value.

Replace Data References, Custom Properties, Tooltips, CSS

Clicking “Replace Points & Params” will replace the following values if the “Replace” column is not empty.

- “Replace Point Name” -> “Point Name”
- “Replace Parameter” -> “Parameter”
- “Replace Misc Prop Value” -> “Misc Prop Value”
- “Replace Tooltip” -> “Tooltip”
- “New CSS” -> “CSS”

You will need to run parser again after any updates are applied.

Sometimes when an object is deleted from a graphic, the tag reference in its associated ".dsd file" is not deleted. Not sure why or how this happens, but it can created invalid refs in the graphic if the tag.param no longer exists. The parser shows the ghost refs as "??" under the shape name. Remove Ghost Refs checkbox will remove these items from the ".dsd file" so these invalid refs never occur. It is recommended that you always leave this checked.

To delete a point/parameter/custom property, etc i.e. insert a blank value, put "$null" without quotation marks in the corresponding replace column. If you need to insert a "$null" in the replace column put a "\$null" to escape the deletion keyword.

Troubleshooting

If replace shapes button does not work as expected, make sure the case of the “Replace Shape” name matches the case of the “.sha” file in the shape replacement “.htm”. I believe this issue is fixed in the latest version of app but there may some things that are still case sensitive.