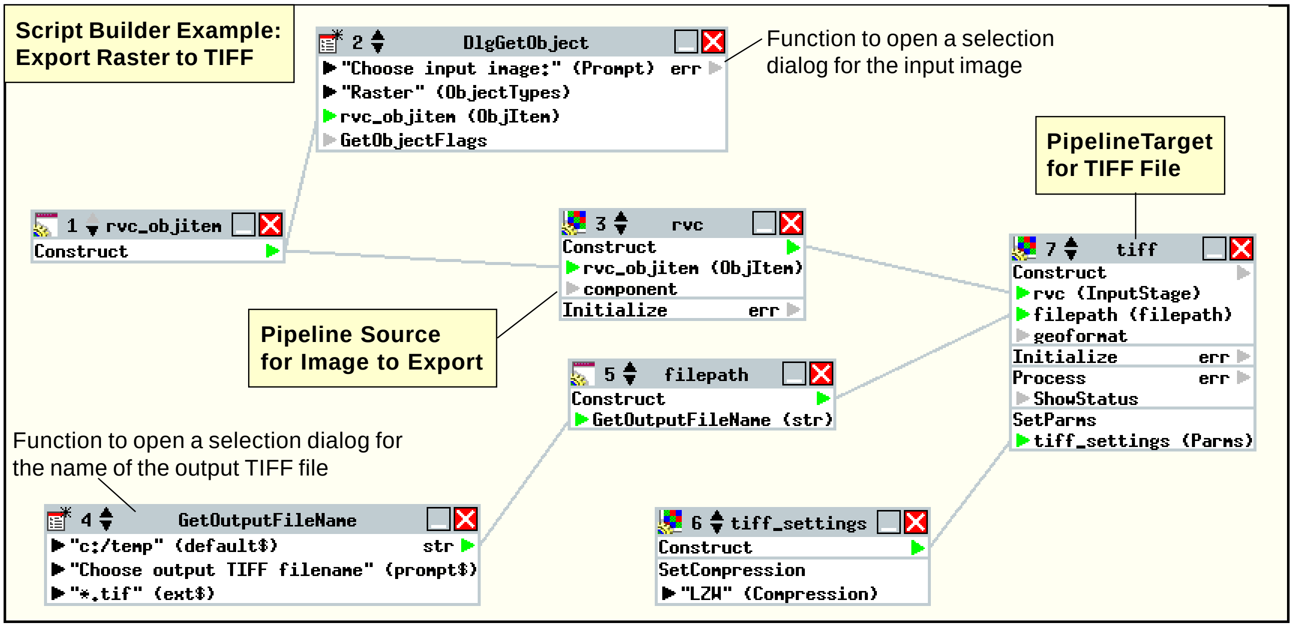
Geospatial Script Builder

Operating the Script Builder



Script Builder Example: Export Raster to TIFF

Function to open a selection dialog for the input image

PipelineTarget for TIFF File

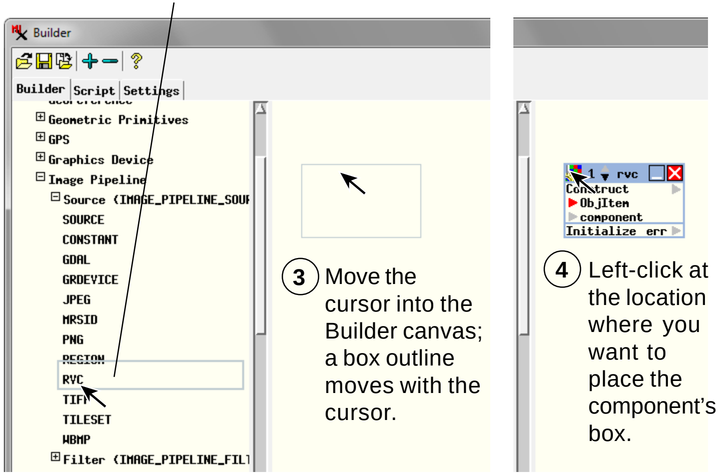
Pipeline Source for Image to Export

Function to open a selection dialog for the name of the output TIFF file

Adding a Component to the Builder Canvas

1. Use the tree control in the list to locate the desired class or function.

2. Left-click on the class or function name; a box appears around it to indicate that it is selected. (Release the mouse button after the left-click; dragging is not required.)

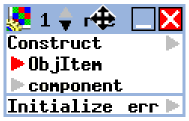


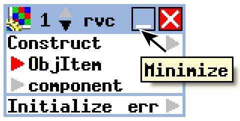
3. Move the cursor into the Builder canvas; a box outline moves with the cursor.

4. Left-click at the location where you want to place the component's box.

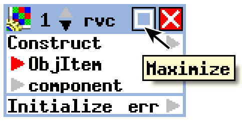
Moving, Minimizing, and Maximizing Components

To move the box representing a class or function in the Builder canvas, drag the box's title bar.



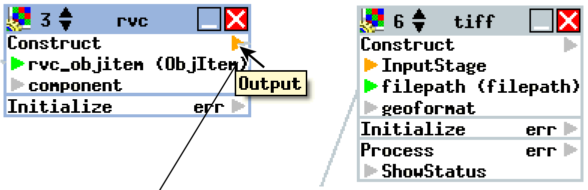


Left-click on the Minimize icon button in the title bar to minimize a component box.

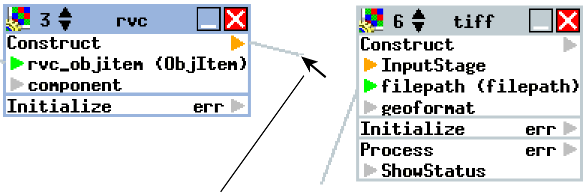


Move the pointer over a minimized component box to temporarily show the details for the class or function. Left-click on the Maximize button in the title bar of the transient box to fully restore the detailed box to the canvas.

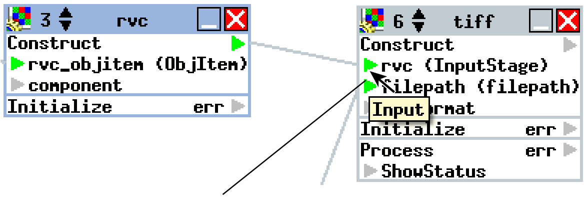
Connecting Two Components (Setting One Component as the Input for Another)



1. In the Builder canvas, locate the box for the class or function to be used as the input. Left-click on its output arrowhead in the upper right corner of the box (below the title bar). This arrowhead should change color from gray to orange, indicating it is ready to be connected. (Release the mouse button after the left-click; dragging is not required.)



2. Move the mouse from the starting output arrowhead to the input arrowhead on the left side of the component box for which you are setting the input. A line is automatically drawn following the cursor from the starting arrowhead.

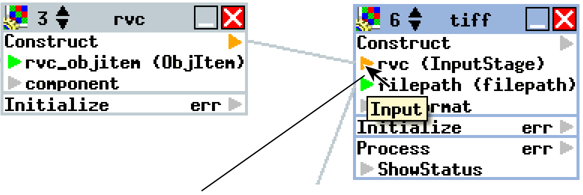


3. Left-click on the Input Stage arrowhead to complete the connection. The starting and ending arrowheads should both turn green to indicate the connection has been made.

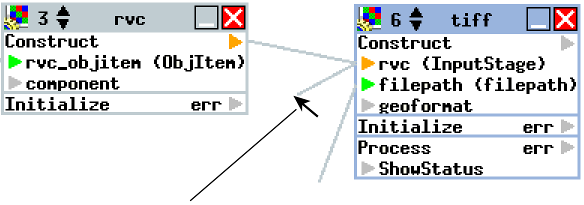
(over)

Breaking the Connection between Components

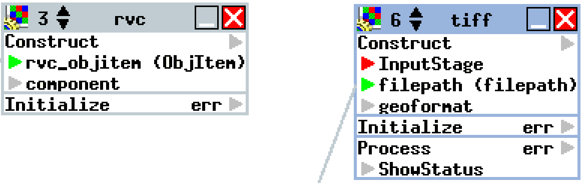
You can break existing connections between components to make changes such as inserting addtional components (such as additional pipeline filters).



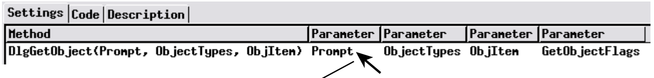
1. Left-click on the input arrowhead at the end of the connecting line. The output and input arrowheads on either end of the line should turn orange.



2. Move the mouse into a blank area of the Builder canvas. A connecting line automatically follows the mouse cursor. Left-click in the blank area. The existing connecting line is deleted, as shown below.

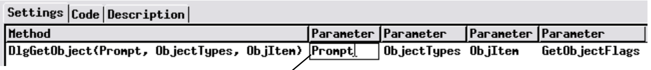


Setting Parameter Values for Functions and Class Methods



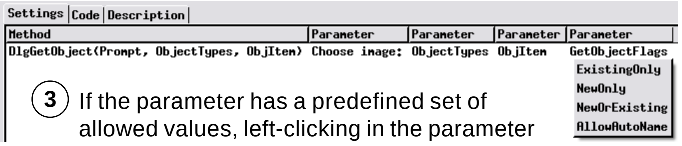
Method	Parameter	Parameter	Parameter	Parameter
DlgGetObject(Prompt, ObjectTypes, ObjItem)	Prompt	ObjectTypes	ObjItem	GetObjectFlags

1. With the component box for the class or function selected in the Builder canvas, move the mouse to the Settings tabbed panel at the bottom of the window and left-click on the placeholder text shown under one of the Parameter columns.



Method	Parameter	Parameter	Parameter	Parameter
DlgGetObject(Prompt, ObjectTypes, ObjItem)	Prompt	ObjectTypes	ObjItem	GetObjectFlags

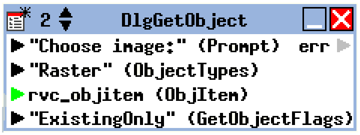
2. If the parameter is numeric or string without a predefined set of allowed values, the parameter field is directly editable. A text edit cursor is placed at the end of the placeholder value. Select the placeholder text and type the desired parameter value. For a string field, enclosing quotation marks are provided in the SML script automatically.



Method	Parameter	Parameter	Parameter	Parameter
DlgGetObject(Prompt, ObjectTypes, ObjItem)	Choose image:	ObjectTypes	ObjItem	GetObjectFlags

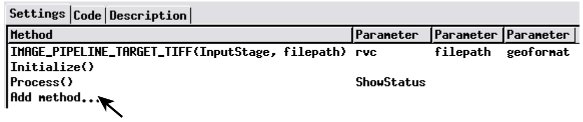
3. If the parameter has a predefined set of allowed values, left-clicking in the parameter field pops up a menu from which you can select the appropriate choice.

The function parameter settings you choose are also shown in the function's box in the Builder canvas.



Adding Class Methods (Class Functions)

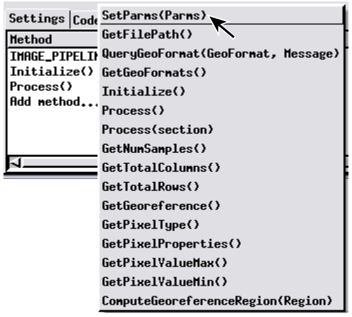
Many SML classes provide methods (class functions) to operate on class data. Some classes (such as pipeline TARGET classes) have required methods [Initialize() and Process()] that are automatically shown in the Method column in the Settings panel. You can also add optional methods to a class in the SML Script Builder.

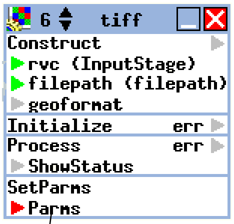


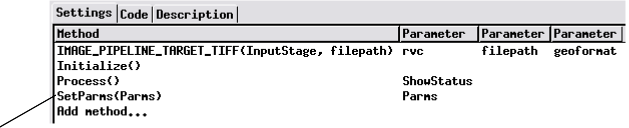
Method	Parameter	Parameter	Parameter
IMAGE_PIPELINE_TARGET_TIFF(InputStage, filepath)	rvc	filepath	geoformat
Initialize()			
Process()	ShowStatus		
Add method...			

1. With the desired class box selected in the Builder canvas, left-click on Add method... in the Settings tabbed panel.

2. Choose the desired class method from the pop-up menu.





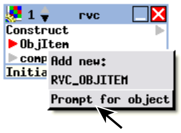


Method	Parameter	Parameter	Parameter
IMAGE_PIPELINE_TARGET_TIFF(InputStage, filepath)	rvc	filepath	geoformat
Initialize()			
Process()	ShowStatus		
SetParms(Parms)	Parms		
Add method...			

The selected method is added to the list in the Settings panel and is also shown in the class box in the Builder canvas.

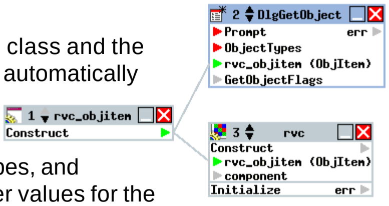
Adding a Prompt for Input or Output RVC Object

1. Right-click on the *ObjItem* parameter entry in the RVC source or target box.



2. Choose *Prompt for object* from the resulting menu.

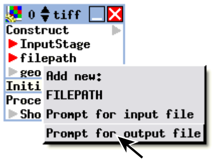
3. Boxes for the rvc_objitem class and the DlgGetObject function are automatically added to the canvas.



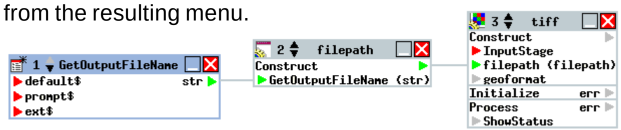
4. Set the Prompt, ObjectTypes, and GetObjectFlags parameter values for the DlgGetObject function in the Settings panel.

Adding a Prompt for an Input or Output File

1. Right-click on the *filepath* parameter entry in the source or target box (TIFF target in this example).



2. Choose *Prompt for input file* (for a source) or *Prompt for output file* (for a target) from the resulting menu.



3. Boxes for the filepath class and the GetOutputFileName function are automatically added to the canvas (above).

4. Set the default$, prompt$, and ext$ parameter values for the GetOutputFileName function in the Settings panel.