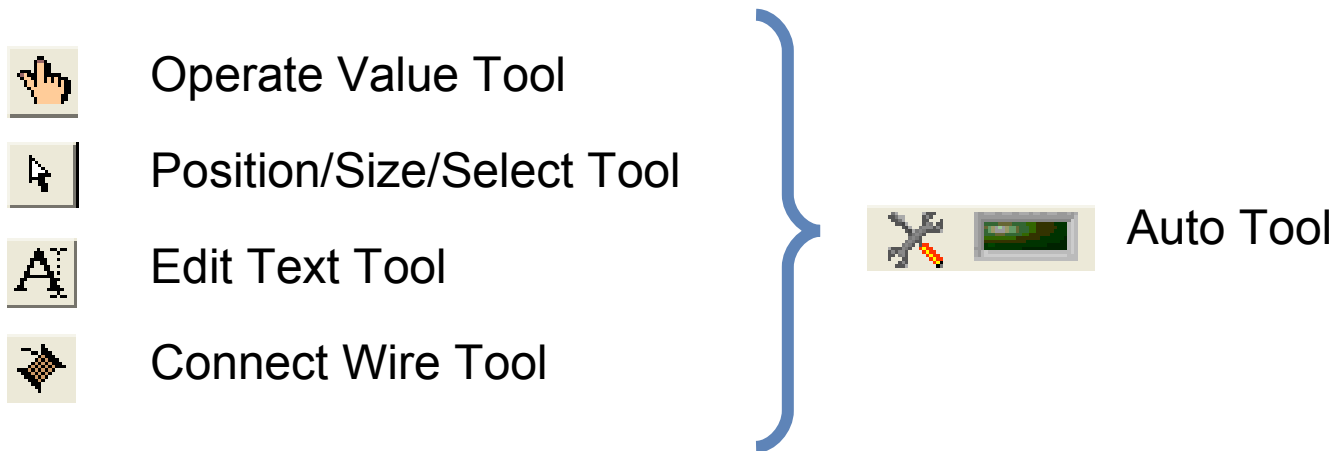


Tips & tricks to enhance your LabVIEW development experience

Jeffrey Habets
NI Certified LabVIEW Architect
www.vi-tech.nl

Automatically Select the Right Tool

- Avoid manually switching among many tools

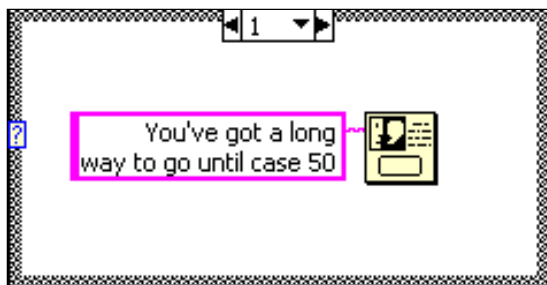


Also try the auto-wiring setting (LabVIEW blockdiagram options, default on)
Use spacebar and 'a'-key to aid in wiring your blockdiagram

Just try it!

Easily Scroll Through Structures

- You can use Ctrl + Mouse Scroll to scroll through:
 - Case Structures
 - Event Structures
 - Stacked Sequence Structures
 - Diagram Disable Structures

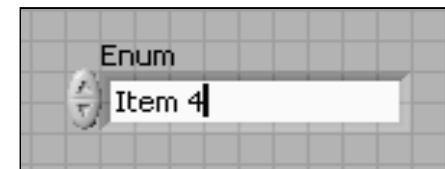
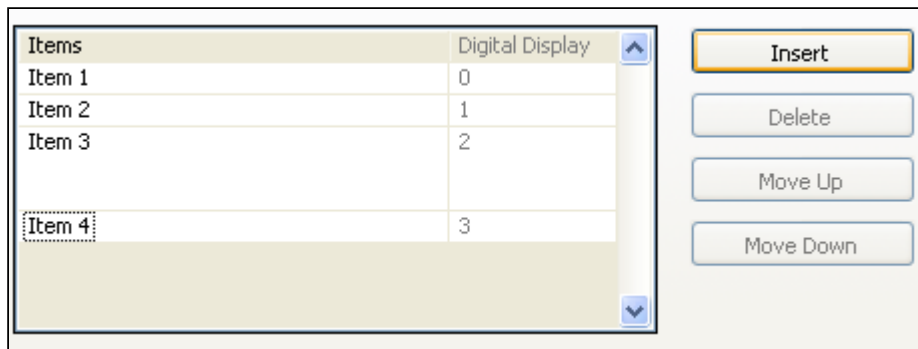


Ctrl + Mouse Scroll Wheel



Easily Add Enumeration Items

- Press Ctrl while over an Enum to use the Text Tool
- Use Shift + Enter to repeatedly add items

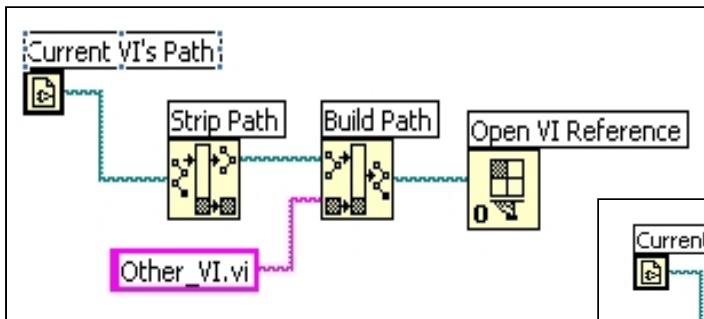


Shift + Enter

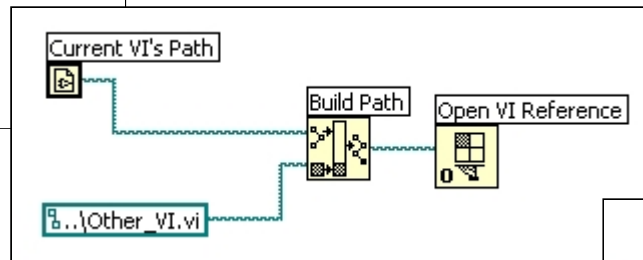
Quickly Open a VI Reference (next to current VI on disk)

- LabVIEW automatically looks in the current directory
- Right-click on VI and select Call Setup to call it dynamically

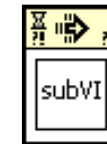
Good



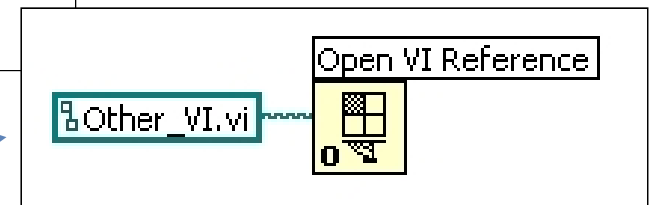
Better



Call Setup

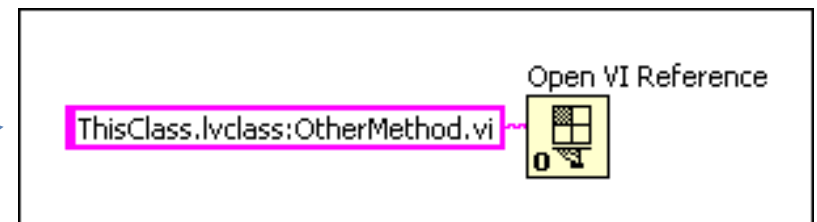


Best



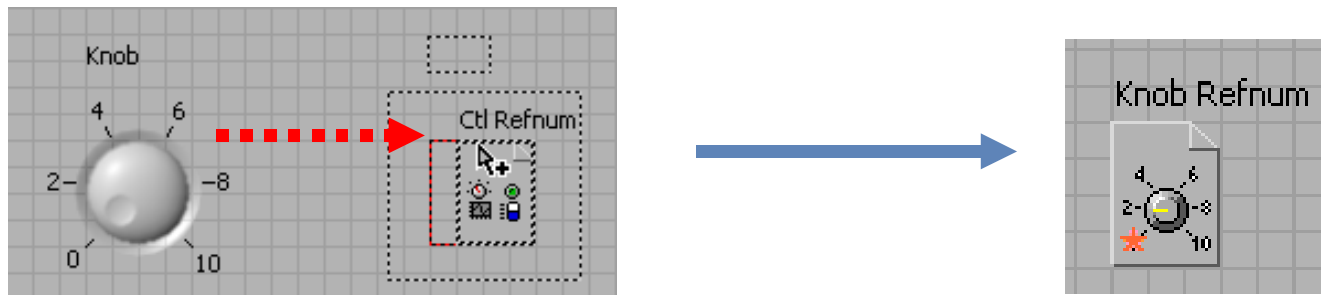
Note: This method requires a path constant.

When using classes: opening a reference to a method that is a member of the same class



Automatically Create Control References

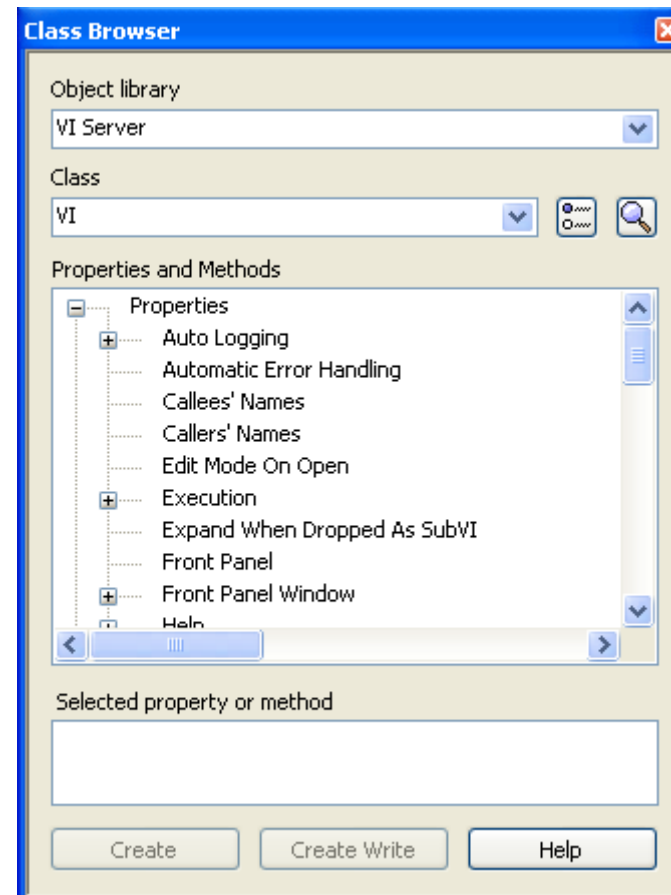
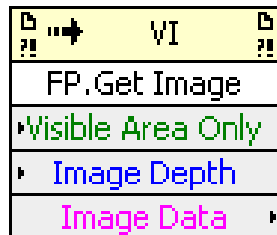
- Simply drag a control into a Control Refnum
- Automatically creates a class-specific, type-specific reference



Note: To keep the original control, use Ctrl-Drag instead.

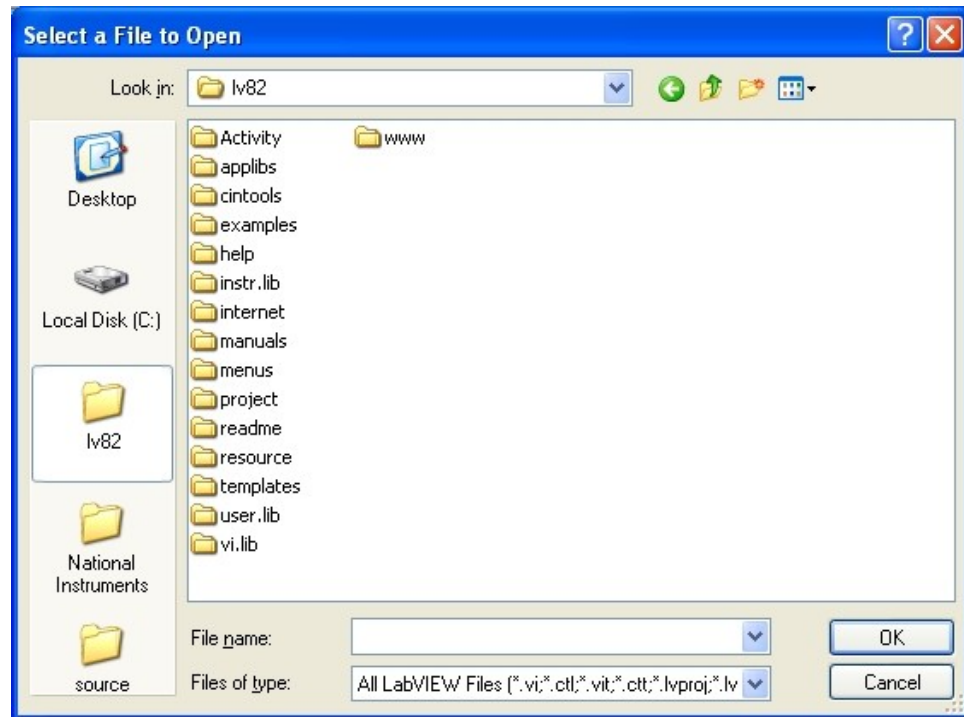
Quickly Browse Properties and Methods

- View >> Class Browser
- Shortcut: Ctrl + Shift + B
- Drag a property or method directly into your VI



Change the Windows File Dialog (to contain recently used folders in LabVIEW)

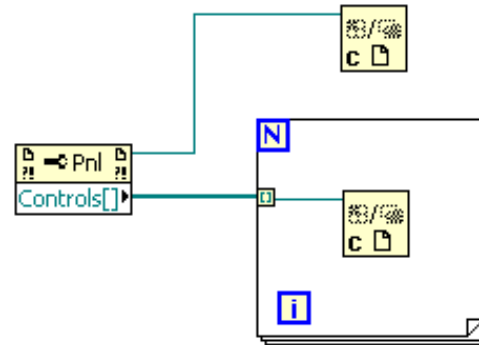
- Add LabVIEW.ini token
“MRUFolders = TRUE”
- Maintain easy access to the last
5 directories used in LabVIEW



Note 1: Only available in LabVIEW 8.20 and later.
Note 2: Overrides TweakUI settings.

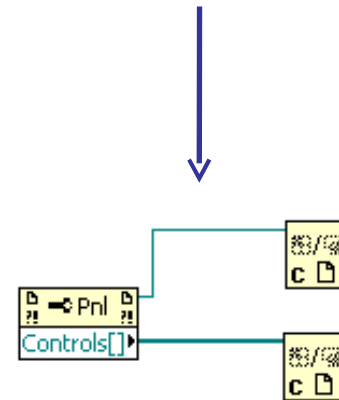
Close Arrays of References

- In LabVIEW 8.20, you must close multiple references in a For Loop



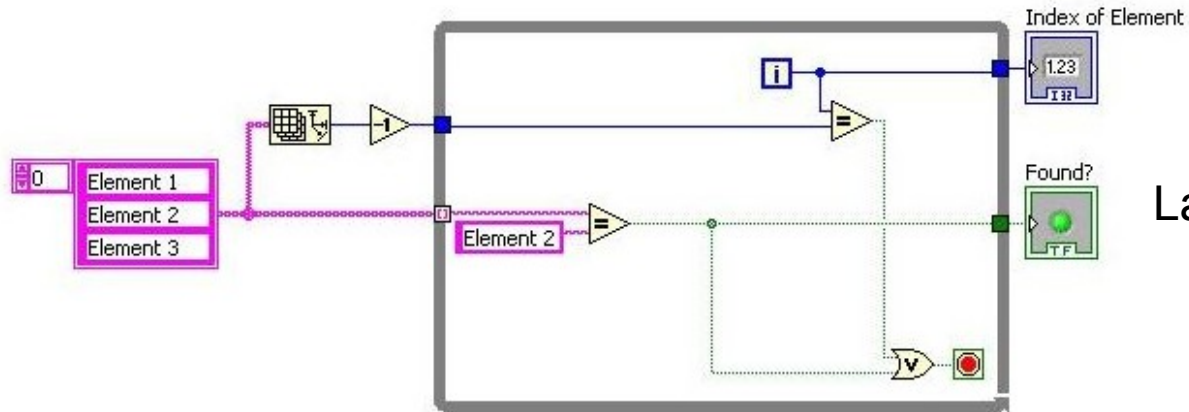
LabVIEW 8.20

- In LabVIEW 8.5, Close Reference now accepts a 1D array of references



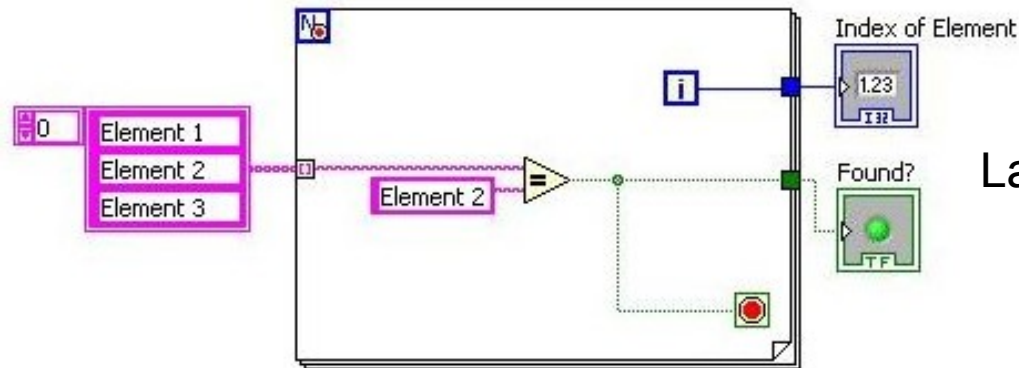
LabVIEW 8.5

For Loop with Break



LabVIEW 8.20

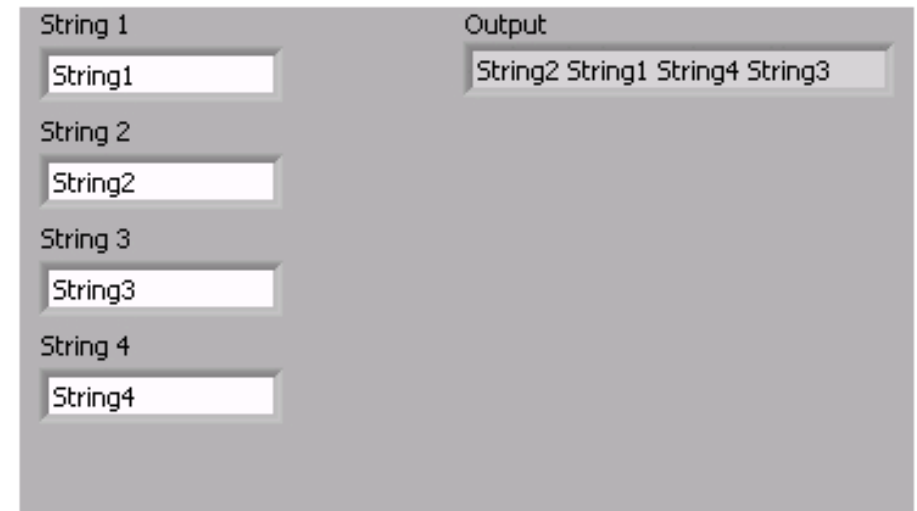
- Run a fixed number of times or until a condition is met



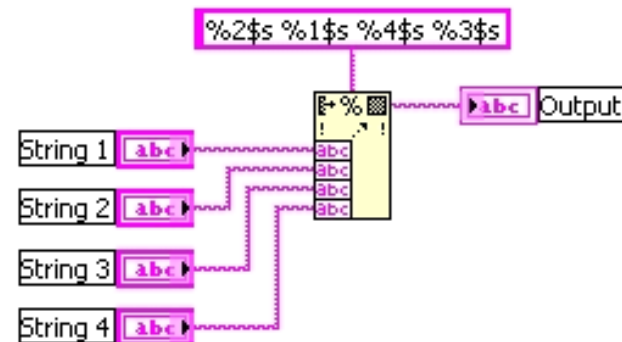
LabVIEW 8.5

Format into string parameter order

Format Into String function now allows you to specify a different order for the inputs to appear in the formatted string than the order you wire them into the function



Use 'n\$' specifier to select wired input



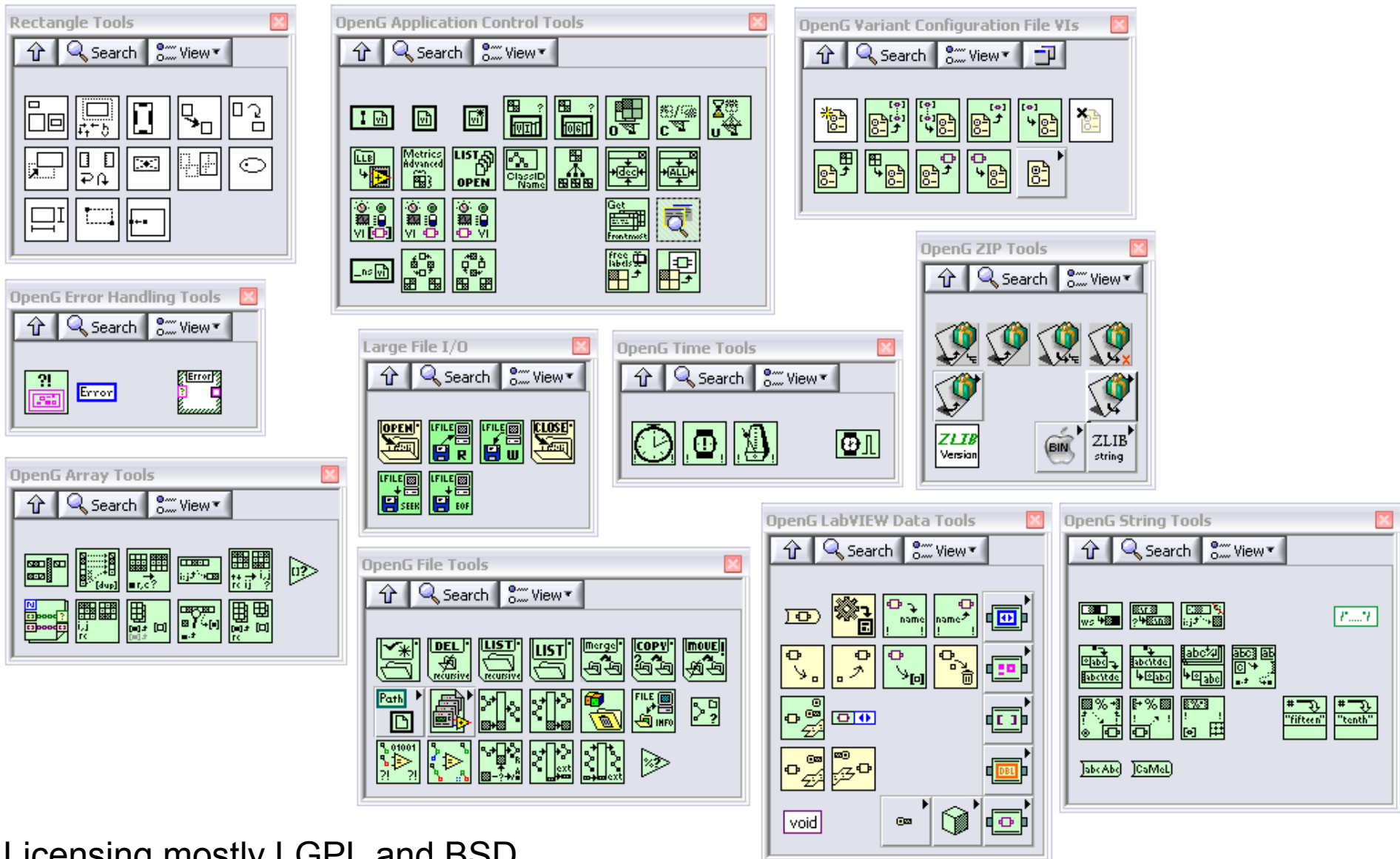
OpenG Open source LabVIEW library

The screenshot displays the VI Package Manager (VIPM) window. The main window shows a list of installed and available packages. The 'OpenG' window is open, showing a grid of icons for various OpenG packages.

Package Name	Version	Release	Repository	LV Version	OS Version	Vendor	Packager	License
vi-tech_lib_rcf_class_tool	1.1.0	1	Unpublished	>= 86	ALL	VI Technologies	Jeffrey Habets	BSD
ogrsc_rename_folder_of_vis	1.6	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogrsc_package_builder	0.1.0alpha	1	VI Package Network	>= 61	ALL	OpenG.org	Konstantin Shifershteyn <kostya@kshif.com>	LGPL
ogrsc_msi_builder	1.0.0alpha	1	VI Package Network	>= 61	9x,NT	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogrsc_dynamicpalette	0.19	1	VI Package Network	>= 60	NT,9x, Linux,	OpenG.org	Jim Kring <jim@jimkring.com>	BSD
ogrsc_deab	0.10	1	VI Package Network	>= 60	All	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogrsc_compare_vi_to_disk	1.1	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogrsc_builder	2.0.0.399	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogmnu_classic_sync	2.5	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	LGPL
ogmnu_appcontrol_plus	0.3	1	VI Package Network	>= 60	All	OpenG.org	Jim Kring <jim@jimkring.com>	none
oglib_variantconfig	2.7	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	BSD
oglib_time	2.3	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	BSD
oglib_string	2.6	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	BSD
oglib_portio	1.2	1	VI Package Network	>= 60	NT,9x	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_picture	2.2	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_numeric	2.3	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_msgqueue	3.0	1	VI Package Network	>= 82	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_md5	1.6	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_lvzip	2.5.1	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_lvdata	2.9	1	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_largefile	1.4	1	VI Package Network	>= 61	NT,9x	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_file	3.0.1	1	VI Package Network	>= 82	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_error	2.3	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_dictionary	1.1	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_comparison	2.3	2	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_boolean	2.3	3	VI Package Network	>= 61	All	OpenG.org	Jim Kring <jim@jimkring.com>	
oglib_array	3.0.0	1	VI Package Network	>= 82	All	OpenG.org	Jim Kring <jim@jimkring.com>, Doug Femec <dou...	
oglib_appcontrol	2.10	1	VI Package Network	>= 61	All	OpenG.org	Ton Plomp <t.c.plomp@gmail.com>	
ogedit_file_locate_in_project	1.0.0.3	1	VI Package Network	>= 82	All	OpenG.org	Jim Kring <jim@jimkring.com>	
ogedit_birds_eye_view	1.7	2	VI Package Network	>= 60	All	OpenG.org	Philippe Guerit <pjm_labview@yahoo.com>	
ogctl_buttons	2.3	1	VI Package Network	>= 60	All	OpenG.org	Jim Kring <jim@jimkring.com>	
nirsc_html_help_common	2.0	1	VI Package Network	>= 61	ALL	NI	Jim.kring@jameskring.com	

Install OpenG packages with VIPM, follow instructions on www.openg.org to install

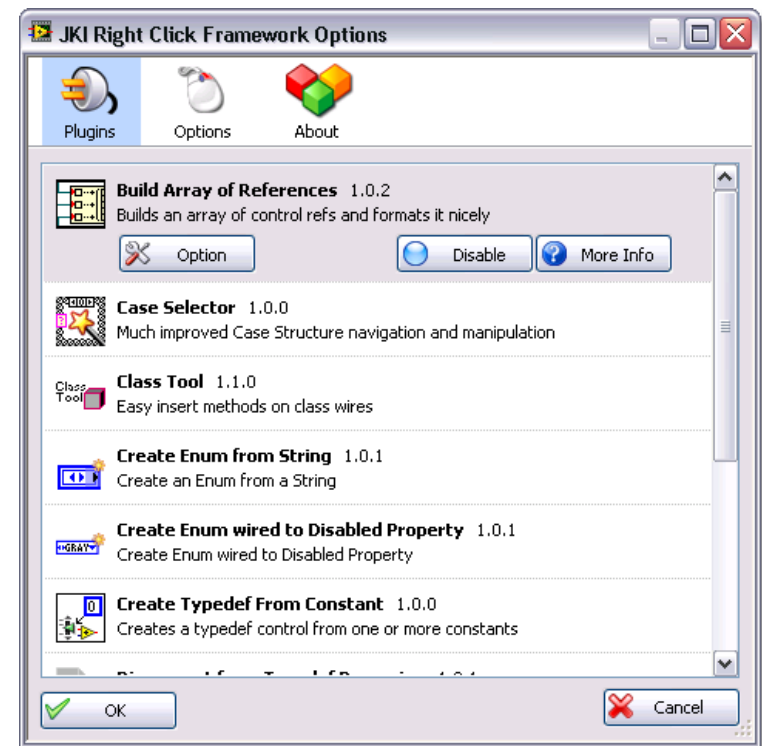
OpenG Open source LabVIEW library



Licensing mostly LGPL and BSD

JKI Right-Click Framework (RCF)






- Extends the LabVIEW environment with a framework that allows us to write plug-ins that can be easily called when editing code
- Many community plug-ins already available
- Creating a plug-in is pretty straight forward
- In most cases you'll require scripting to develop your plug-in













Starting point: NI Communities: JKI Right-Click Framework

<http://decibel.ni.com/content/groups/jki-right-click-framework-for-labview?view=overview>

JKI Right-Click Framework (RCF) - Plug-ins

- [Align Terminal Labels](#) - Allows you to automatically align the selected terminal labels to the specified position.
-  [Autoformat Waveform Chart Digital Displays - Plugin Right-Click Framework for LabVIEW](#) - This plugin will Auto Format Waveform Chart Digital Display(s).
-  [Autosize Column Width of Table, MultiColumnListbox, and Tree - Plugin Right-Click Framework for LabVIEW](#) - This plugin will Autosize Column Width of Table, MultiColumnListbox, and Tree.
-  [Build Array of References](#) - builds an array control references on the block diagram for the selected FP controls or BD control terminals.
-  [Build Cluster of References](#) - builds a typedef cluster of control references for the selected controls.
-  [Case Selector](#) - allows you to view a list of frames in a Case Structure and select one outside of the native interface. Also, reorder/copy/insert/delete frames easier than ever. Also available on LAVA CR [here](#).

• [Class Tool Plugin](#) - insert class methods on object wires

-  [Create RTM Case](#) - create cases in a case structure from tag of a menu file (.rtm)
-  [Create Typedef From Constant](#) - creates a typedef from a constant.
-  [Disabled Property](#) - enable and disable selected FP controls.
-  [Expand SubVI](#) - Replaces the SubVI with its contents.
-  [Explore...](#) - Windows Explorer Plugin - Opens a explorer window with the VI or CTL selected.
- [Insert TypeConversion](#) - automatically inserts a type conversion node on selected wires if needed.
-  [Label Manager](#) - quick and ergonomic management of text labels styles
-  [Size Window to Contents](#) - resizes the contents of the selected window to enclose its contents.
-  [Scroll to VI Zero Origin - Plugin Right-Click Framework for LabVIEW](#) - This plugin will scroll / set the VI Front Panel Origin position to (0,0).
-  [Retain All Wire Values](#) - Retains wire values through the entire hierarchy of the VI.
-  [Wire Nodes by Corners](#) - Auto wire selected Nodes by Corners.

JKI RCF - Class Tool plug-in

The screenshot shows a LabVIEW Class Tool interface with a context menu open over a 'SIM.DAQ' object. The menu is organized into several sections, each highlighted with a red box and labeled with red text:

- Public methods**: Destroy, SimulatedDAQ_Create, SimulatedDAQ_GetObjectStatus.
- Parent's Public methods**: DAQ:DAQ_GetObjectStatus, DAQ:DAQ_Create, DAQ:Destroy, DAQ:Start, DAQ:Stop, DAQ:Configure, DAQ:GetDataEventRef, DAQ:GetSampleInfo, DAQ:SetInputRange.
- Protected methods**: ReadData, SimulatedDAQ_GOOPKernel.
- Parents Protected methods**: DAQ:ReadData, DAQ:DAQ_GOOPKernel.
- Private methods**: SimulatedDAQ_Delete, SimulatedDAQ_GetAttributes, SimulatedDAQ_GetAttributesToModify, SimulatedDAQ_GetClassAttributes, SimulatedDAQ_GetClassAttributesToModify, SimulatedDAQ_New, SimulatedDAQ_SetModifiedAttributes, SimulatedDAQ_SetModifiedClassAttributes.

On the right side, a secondary context menu is also visible, containing options like 'VI from Dynamic Dispatch Template', 'VI from Static Dispatch Template', and 'VI for Data Member Access...'. The background shows a LabVIEW block diagram with 'SIM.DAQ' and 'DAQ' objects connected by wires.

Only methods that can be called in the current context are shown!

Resources

Tips and Tricks on the LabVIEW Wiki

http://labviewwiki.org/Tips_and_tricks

LabVIEW Advanced Virtual Architects

<http://www.lavag.org/>



Darren's Nuggets

<http://decibel.ni.com/content/docs/DOC-4002>

Quick Drop keyboard shortcut plug-ins

<http://decibel.ni.com/content/groups/quick-drop-enthusiasts>

Tips and Tricks to Speed LabVIEW Development

<http://zone.ni.com/devzone/cda/tut/p/id/6103>

RCF Class Tool plug-in

<http://decibel.ni.com/content/docs/DOC-6771>

Stay in touch



<http://nl.linkedin.com/in/vitech>



[JeffreyHabets](#)

Thanks!