



LabVIEW Developer Days

Build Code. Form Communities. Gain Confidence.



Personalizing the LabVIEW Environment to Accelerate Productivity

Why should we personalize our LabVIEW environment?

Agenda

Standard LabVIEW options

Built-in tools in LabVIEW and their modifications

Additional tools and their modifications

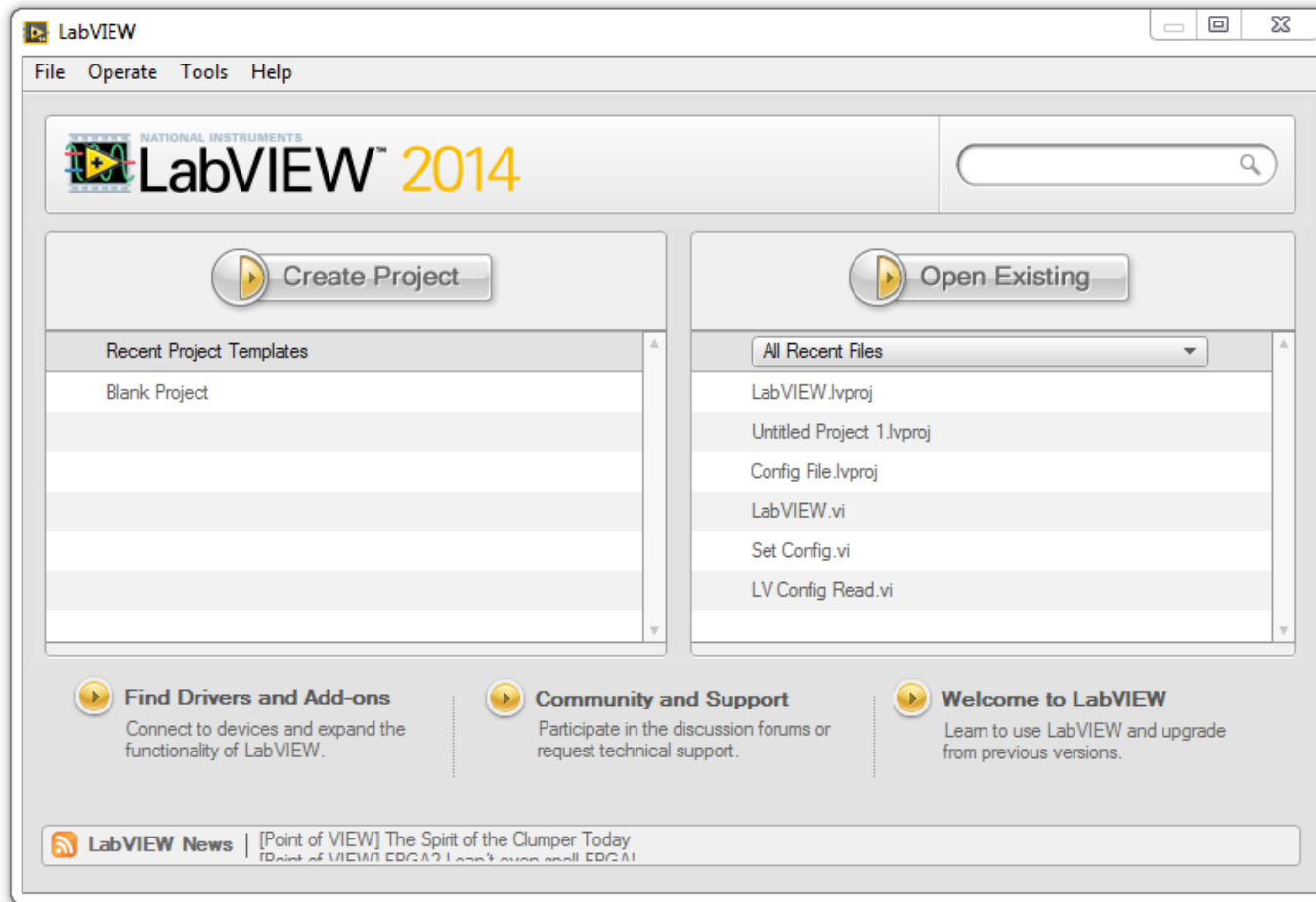
Agenda

Standard LabVIEW options

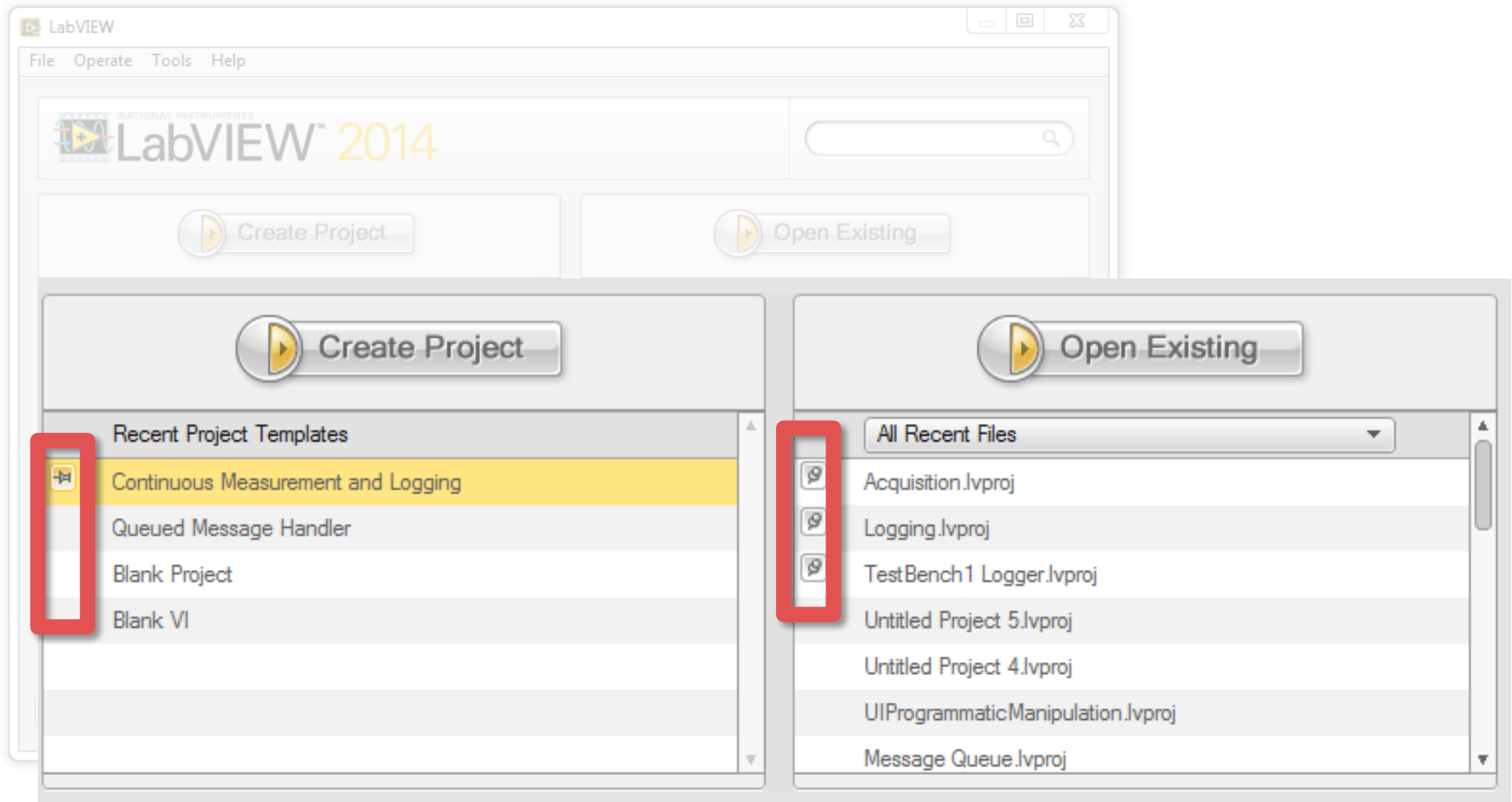
Built-in tools in LabVIEW and their modifications

Additional tools and their modifications

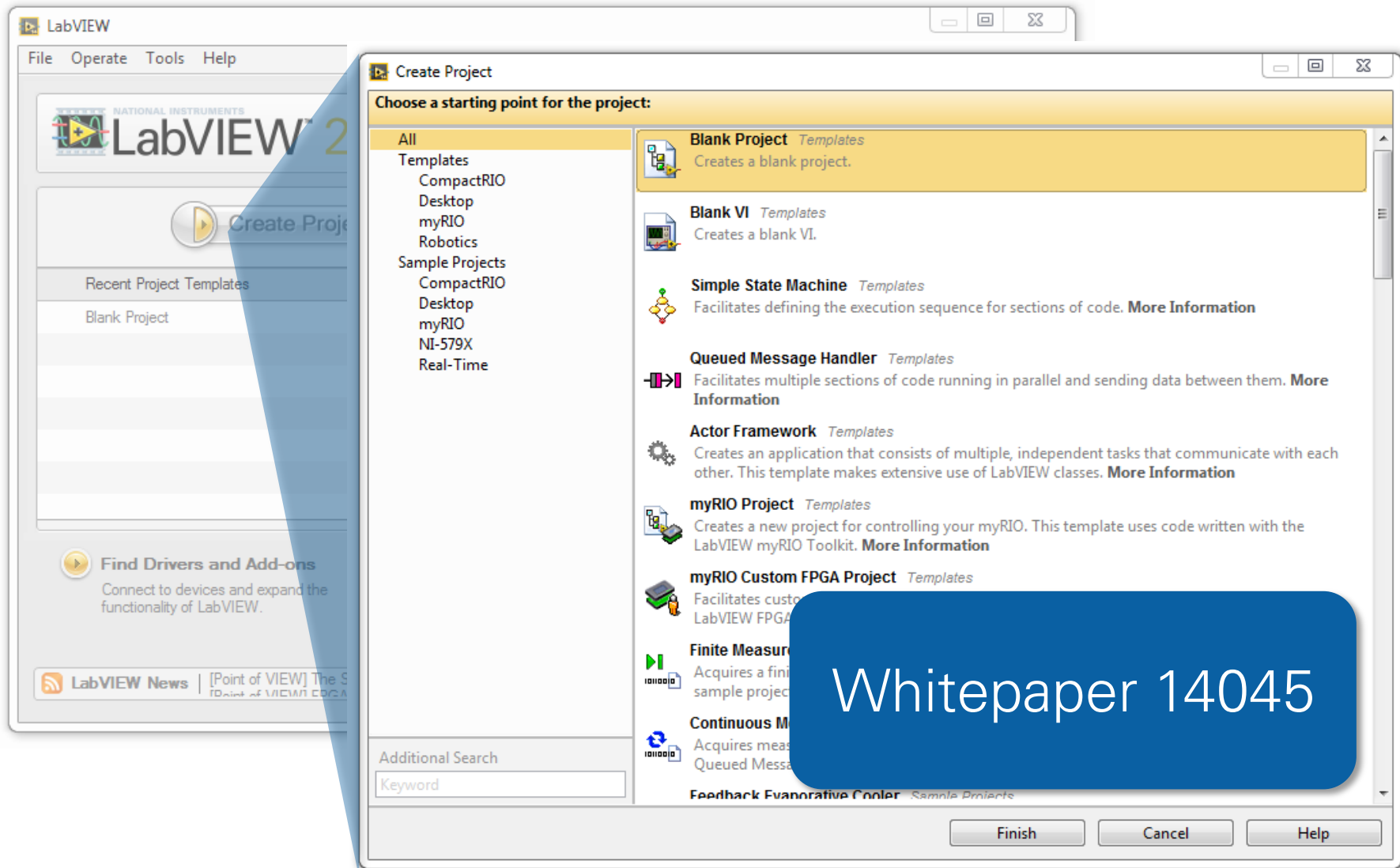
Getting Started Window



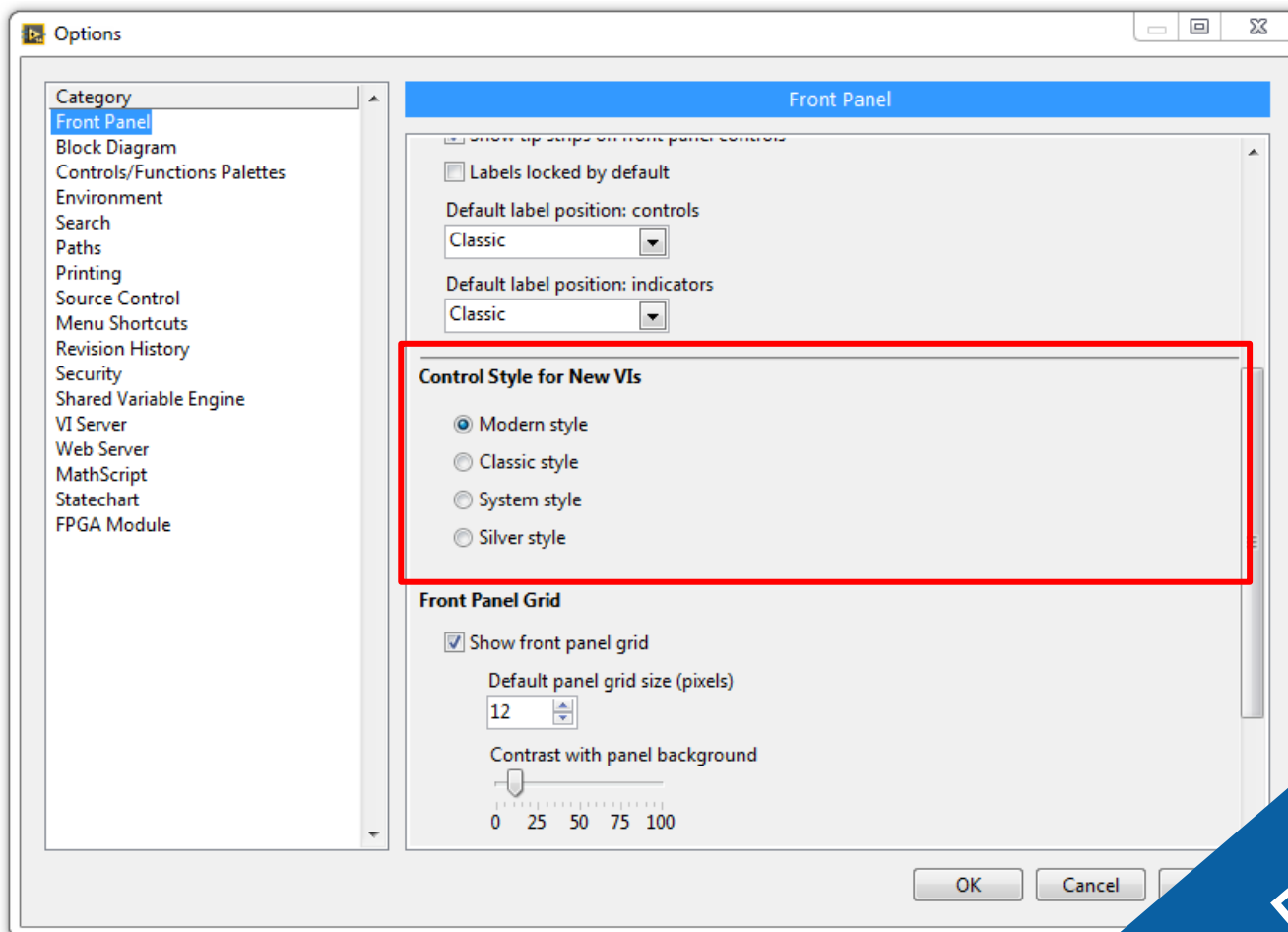
Getting Started Window



Getting Started Window

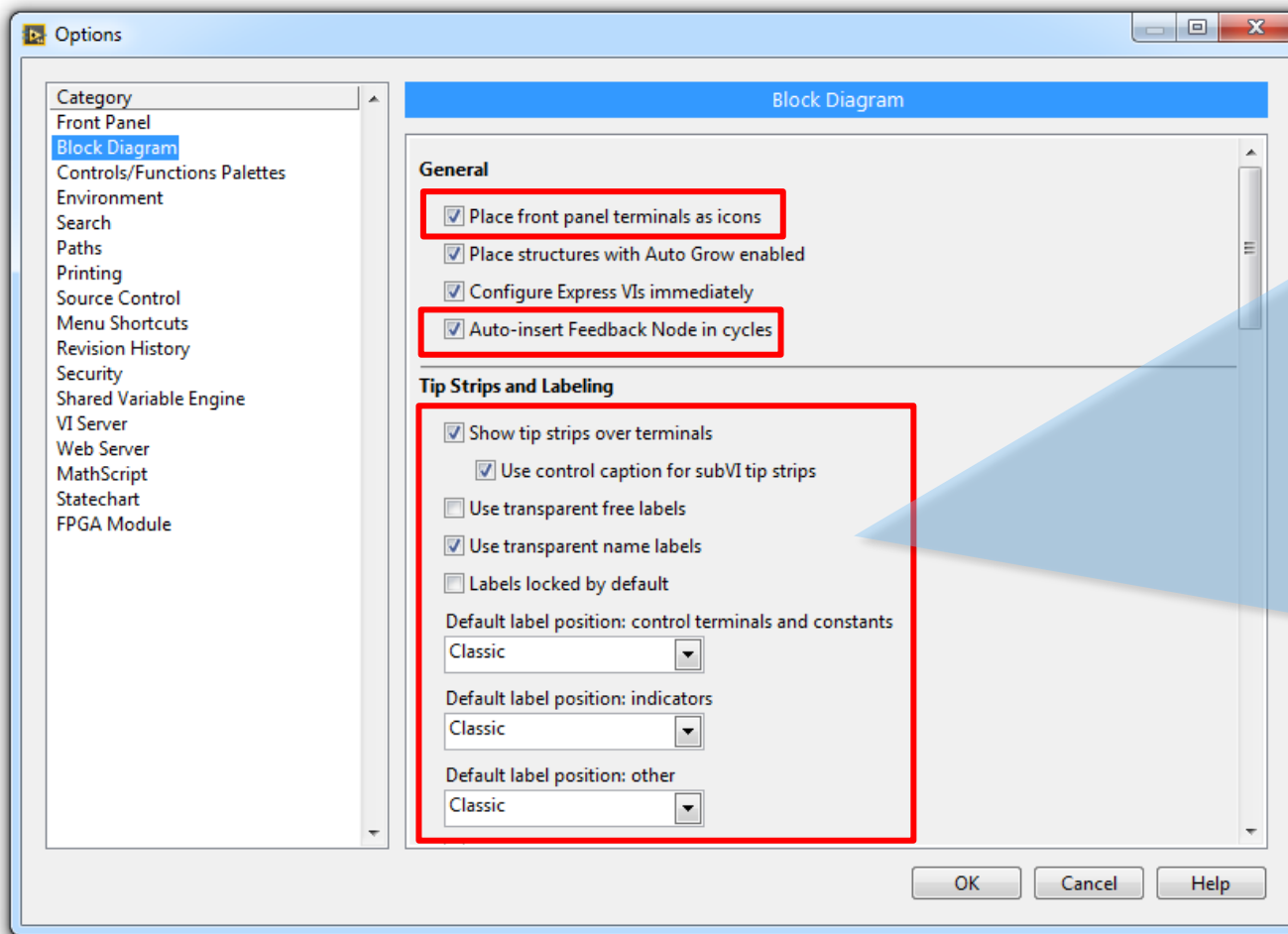


Tools -> Options



Demo

Tools -> Options



file path (dialog if empty)

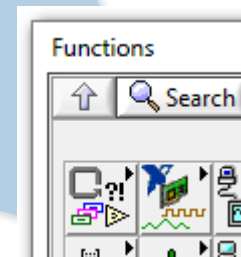
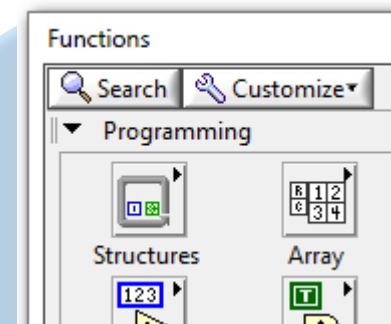
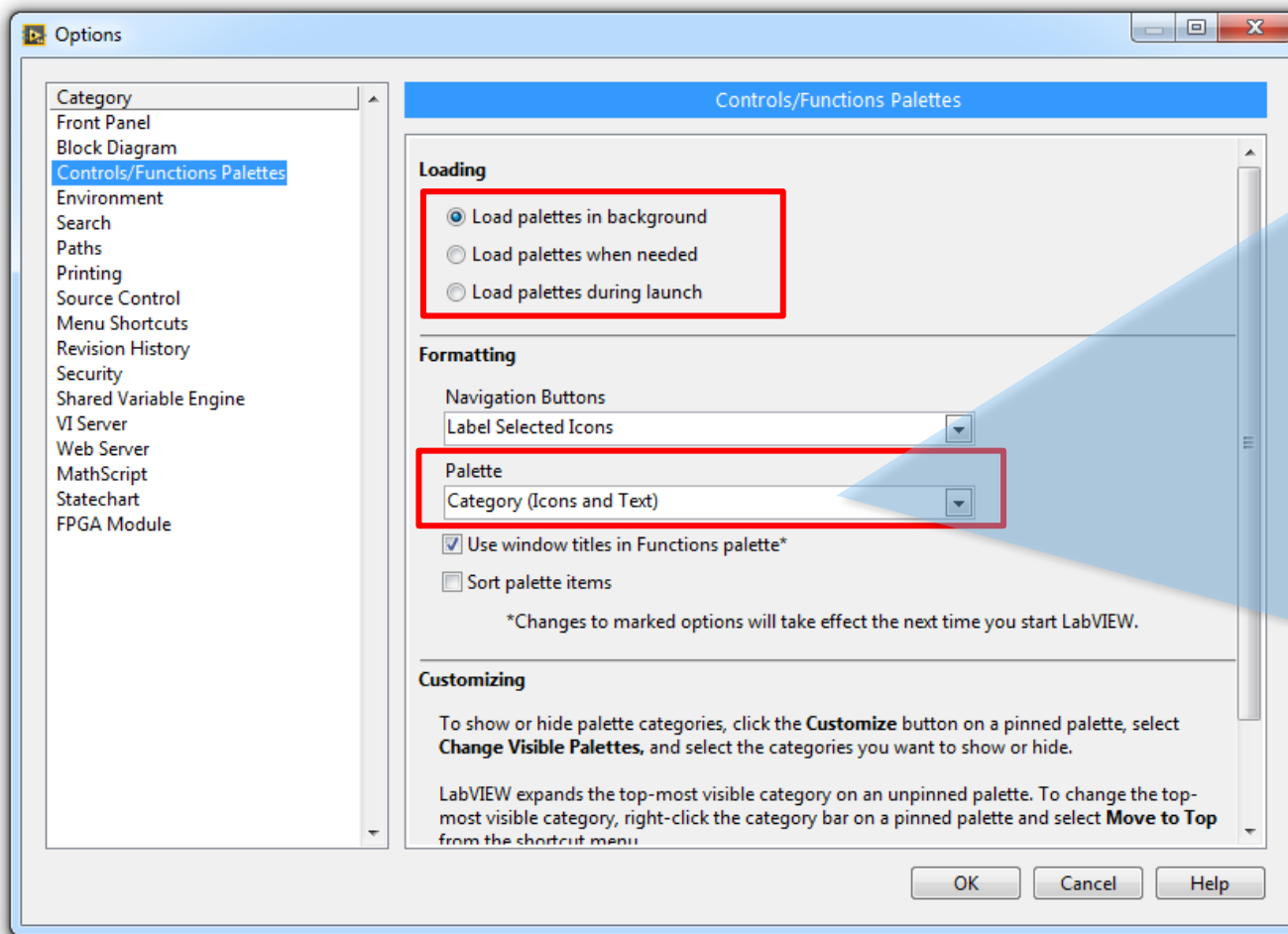
Numeric Control 2



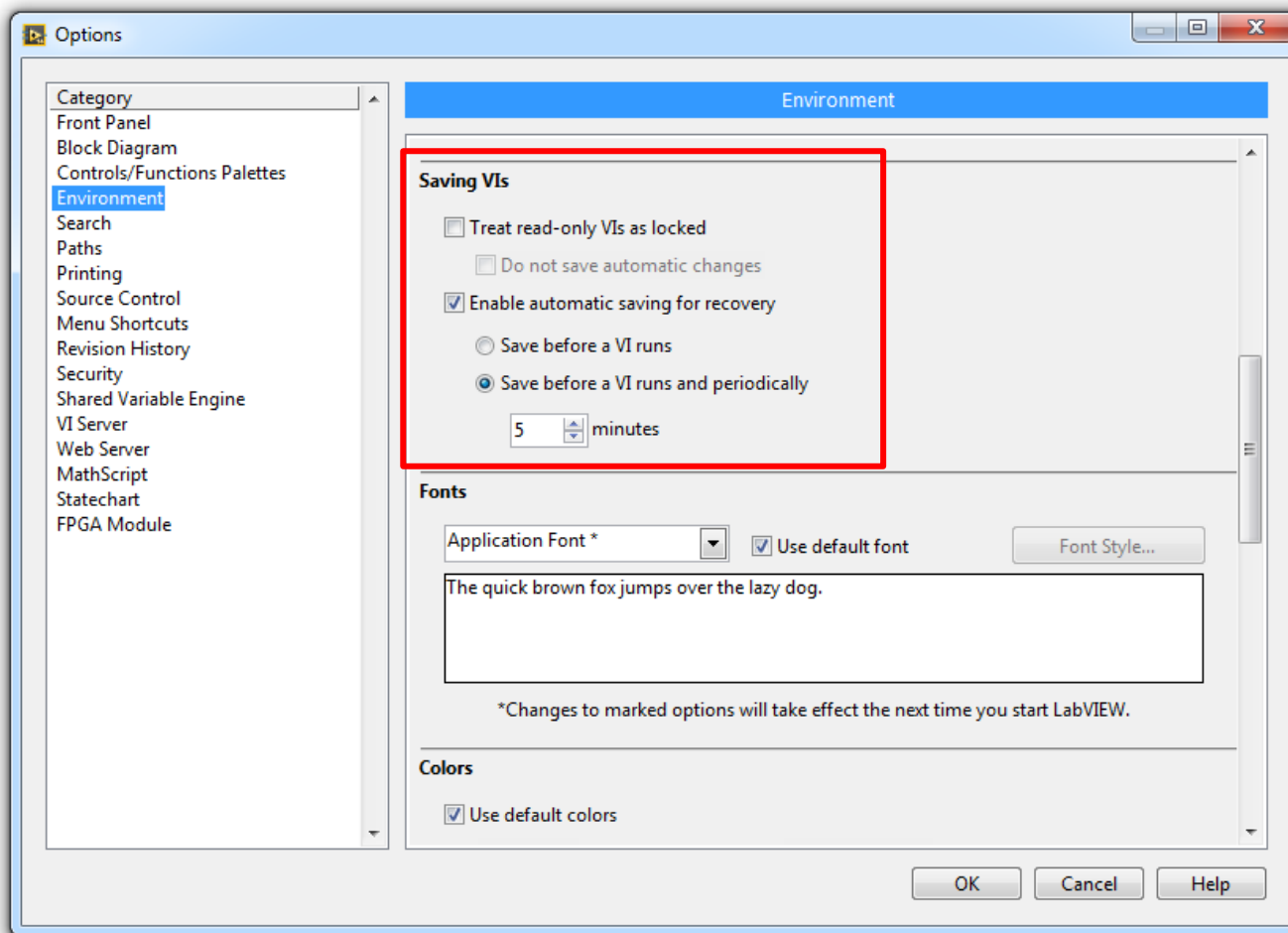
Numeric Control 3



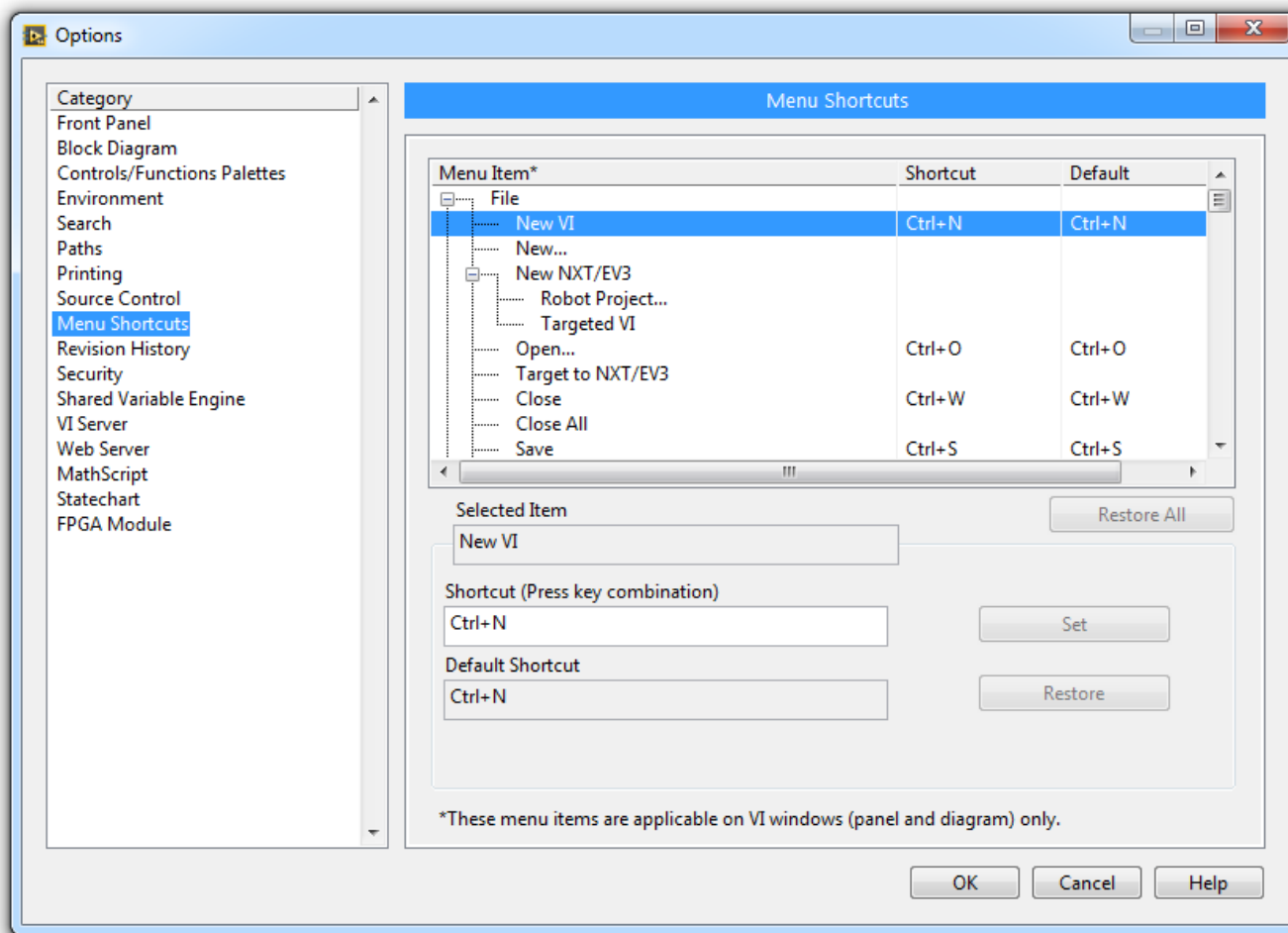
Tools -> Options

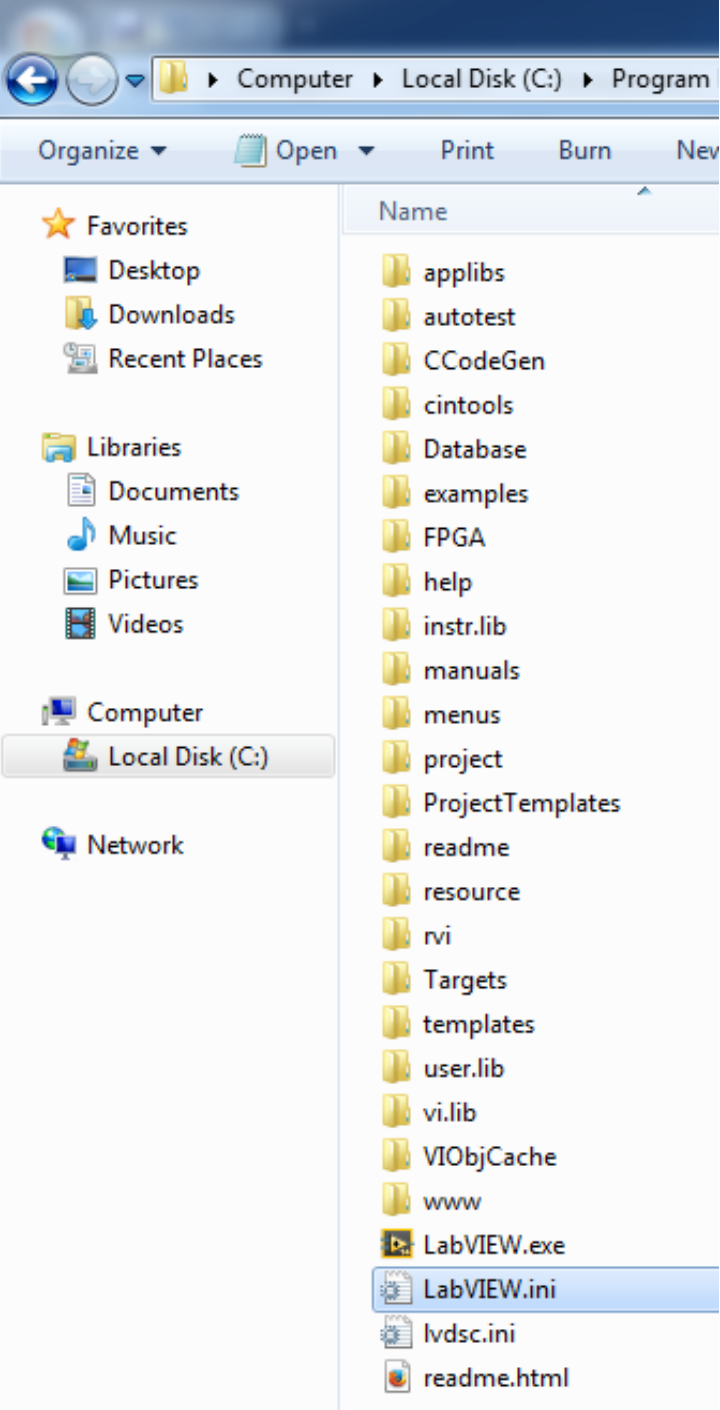


Tools -> Options



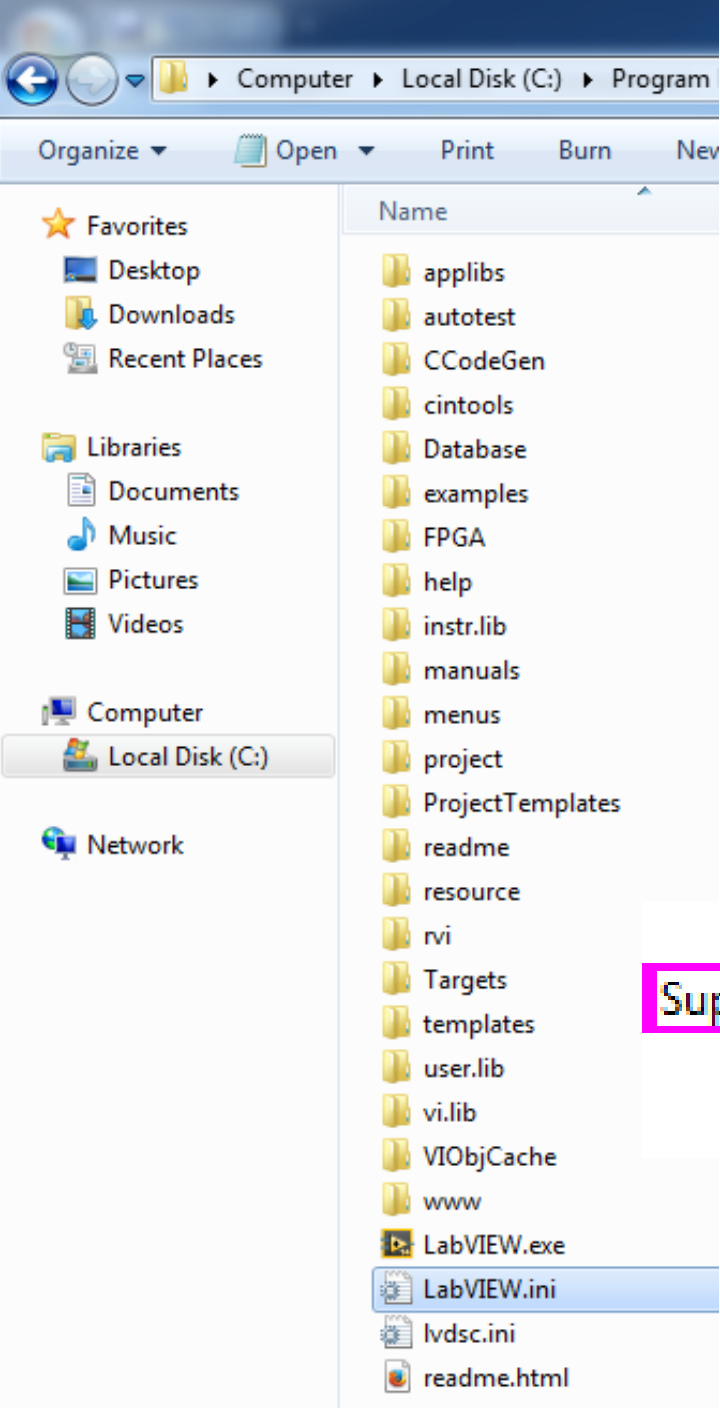
Tools -> Options





LabVIEW.ini

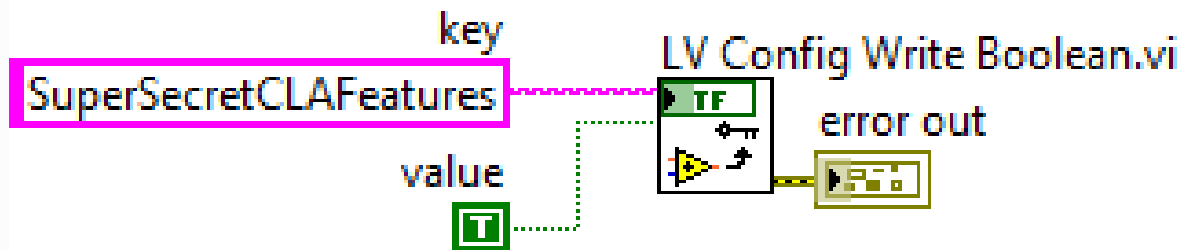
The LabVIEW.ini holds your customization preferences in a key / value configuration.

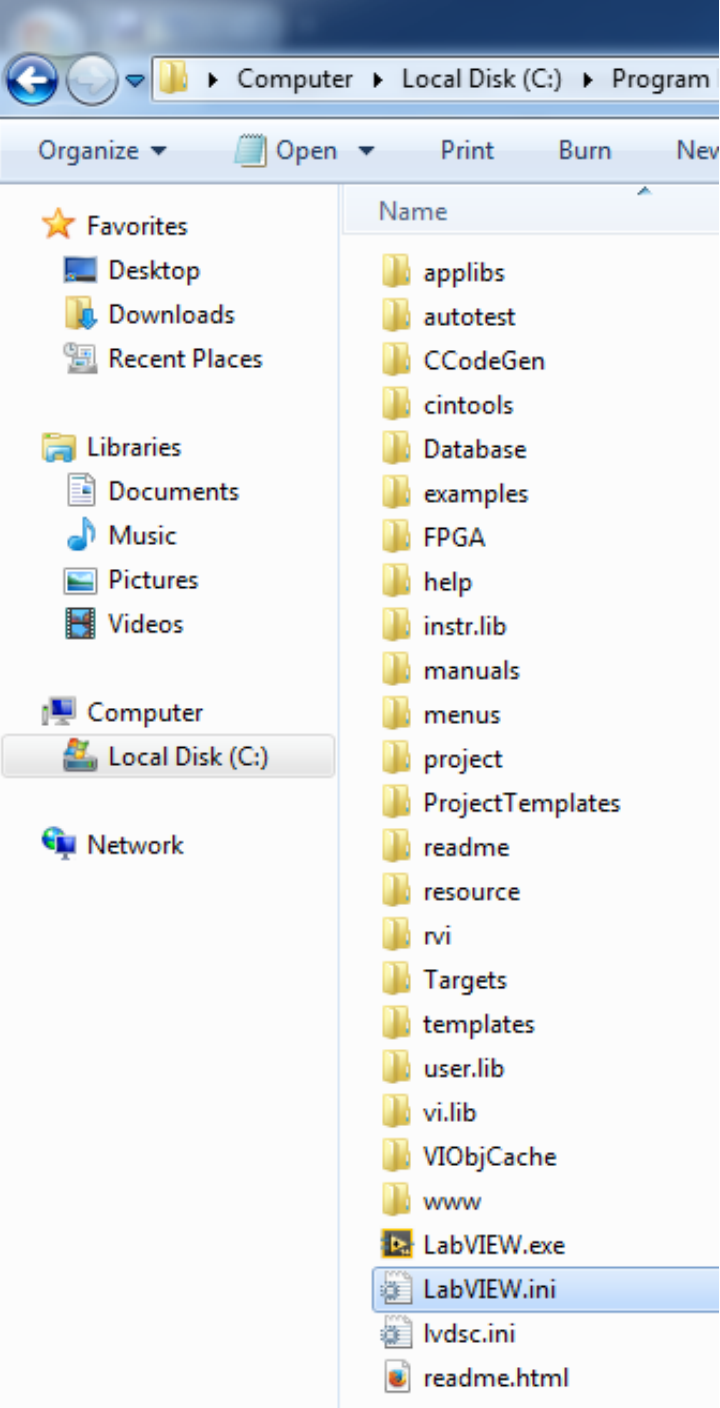


LabVIEW.ini

API to read and write keys to
LabVIEW.ini

Located at
LabVIEW\resource\dialog\Lvconfig.llb





LabVIEW.ini

Undocumented INI tokens:

1. QuickBold
2. BookmarkManager.ShowVILIB
3. BookmarkManager.ShowRESOURCE
4. Many more...

Demo

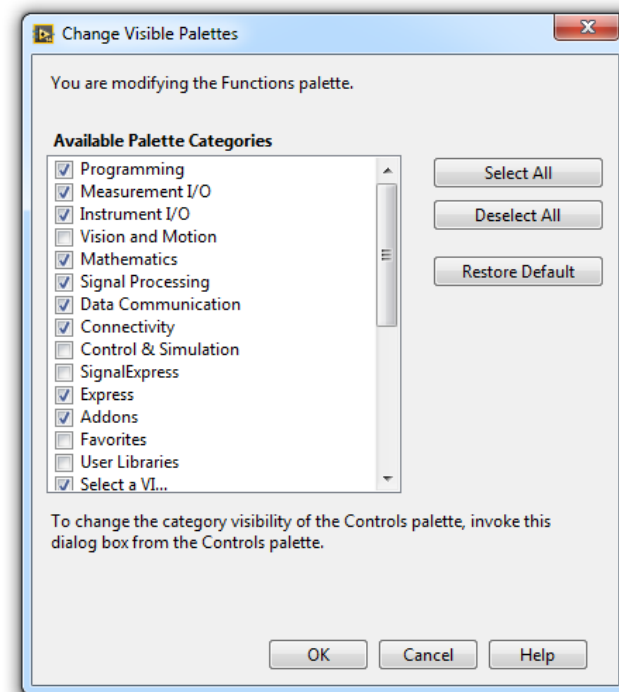
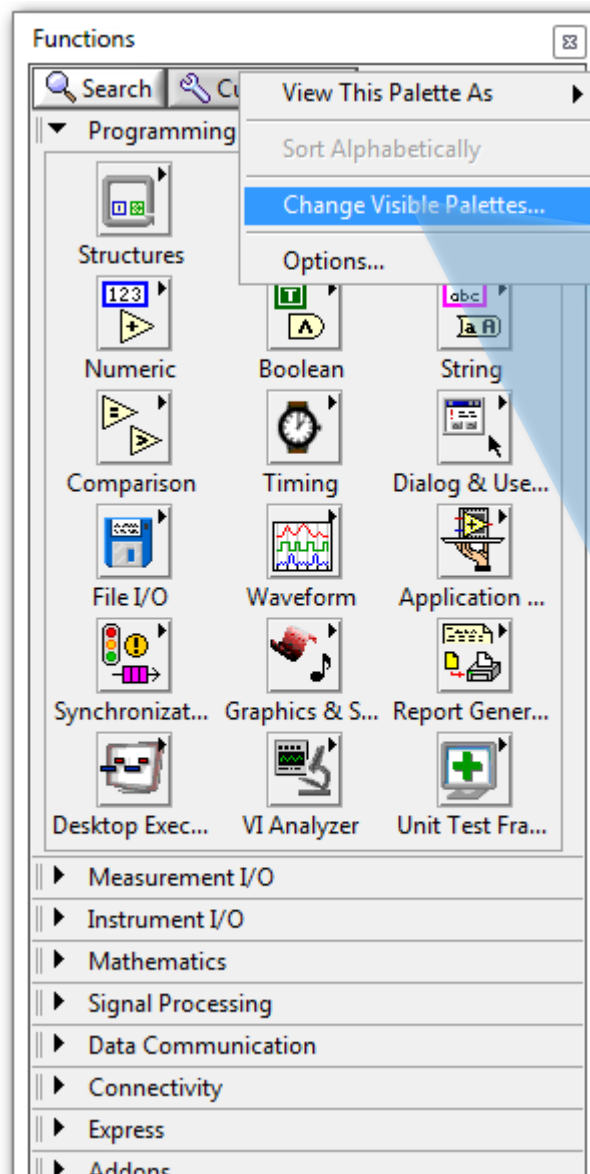
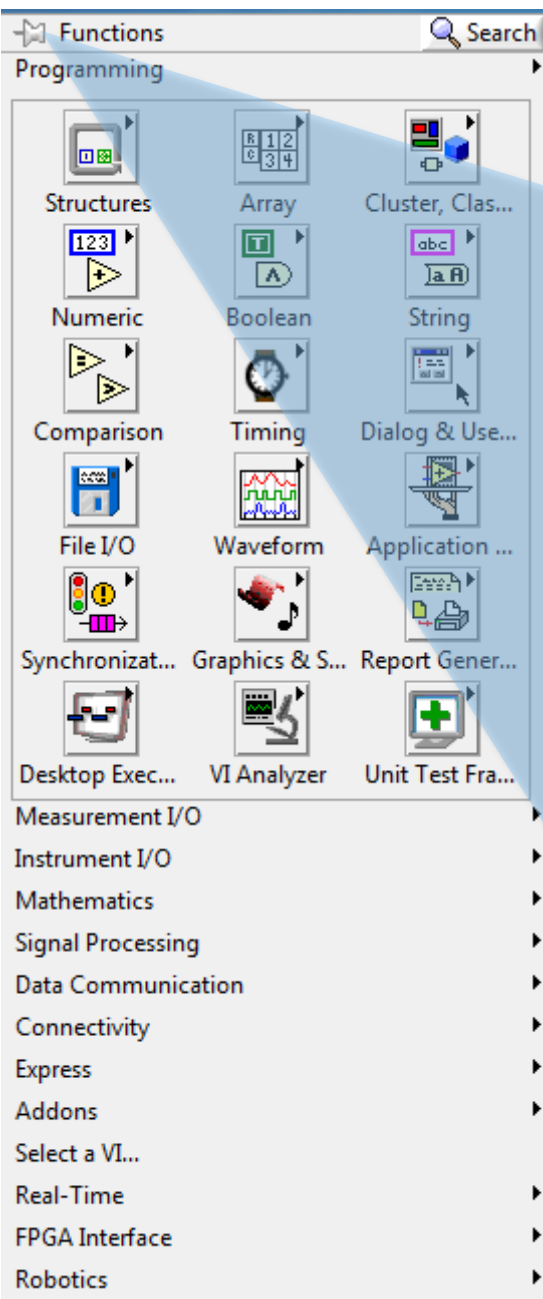
Agenda

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Additional tools and their modifications

Palettes



LabVIEW.vi Block Diagram

File Edit View Help

Choose Environment
Measurement & Automation Explorer...
Instrumentation
Real-Time Module
FPGA Module
MathScript Window...
DSC Module
Compare
Merge
Profile
Security
User Name...
Build Application (EXE) from VI...
Convert Build Script...
Source Control
VI Analyzer
LLB Manager...
Import
Shared Variable
Distributed System Manager
Find VIs on Disk...
Prepare Example VIs for NI Example Finder...
Remote Panel Connection Manager...
Web Publishing Tool...
Actor Framework Message Maker...
Control and Simulation
Create Data Link...
Find LabVIEW Add-ons...
NI VeriStand
NXT/EV3 Application Browser...
NXT/EV3 Preferences...
NXT/EV3 Terminal...
Navigate to Requirements Gateway...
Robot Simulation Model Builder...
SignalExpress
VI Package Manager...
Vision Assistant...
Advanced
Options...

Tools -> Advanced -> Edit Palette Set...

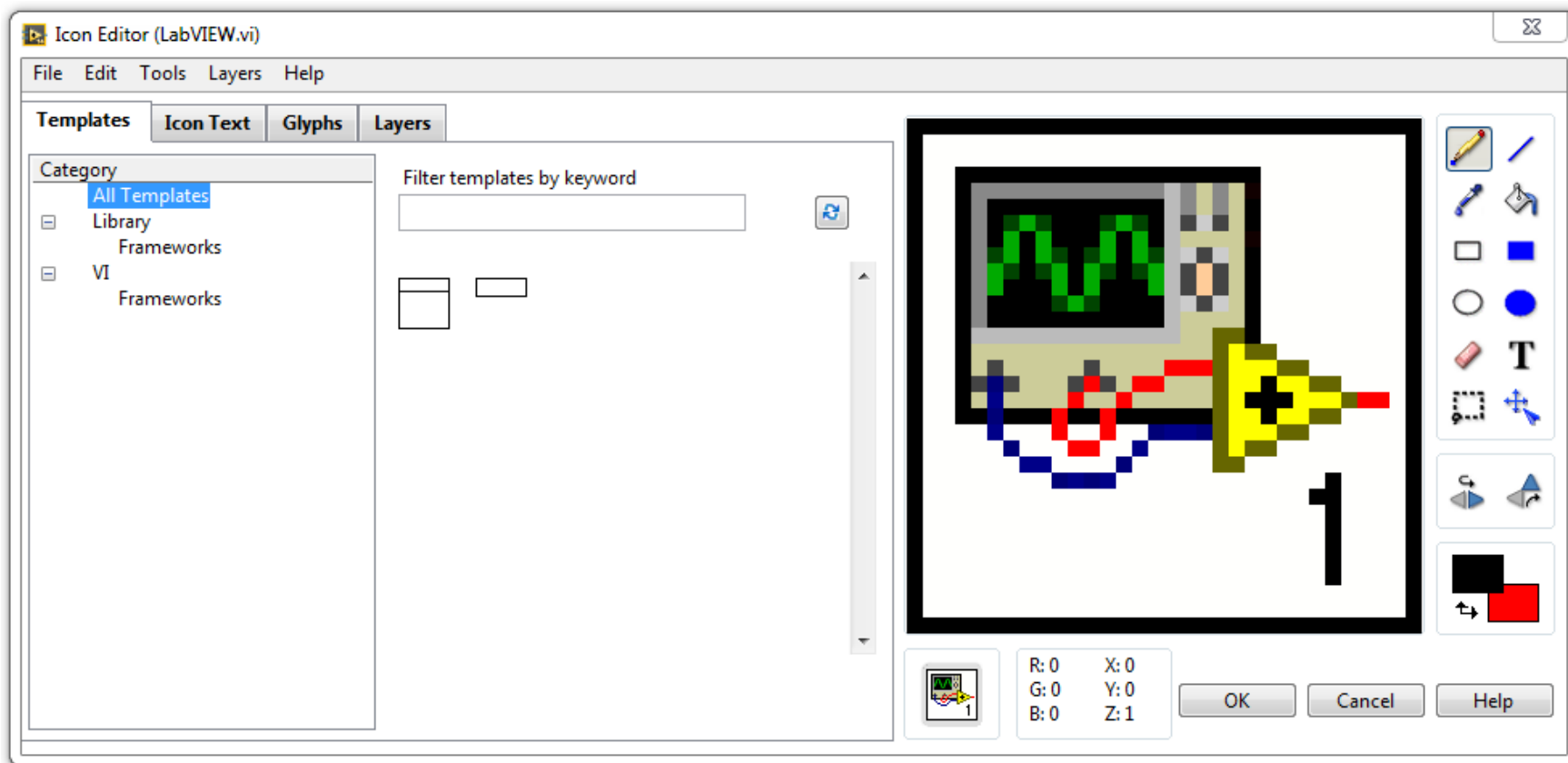
Create your own palettes.
Drop code instead of a VI.

Be Careful!

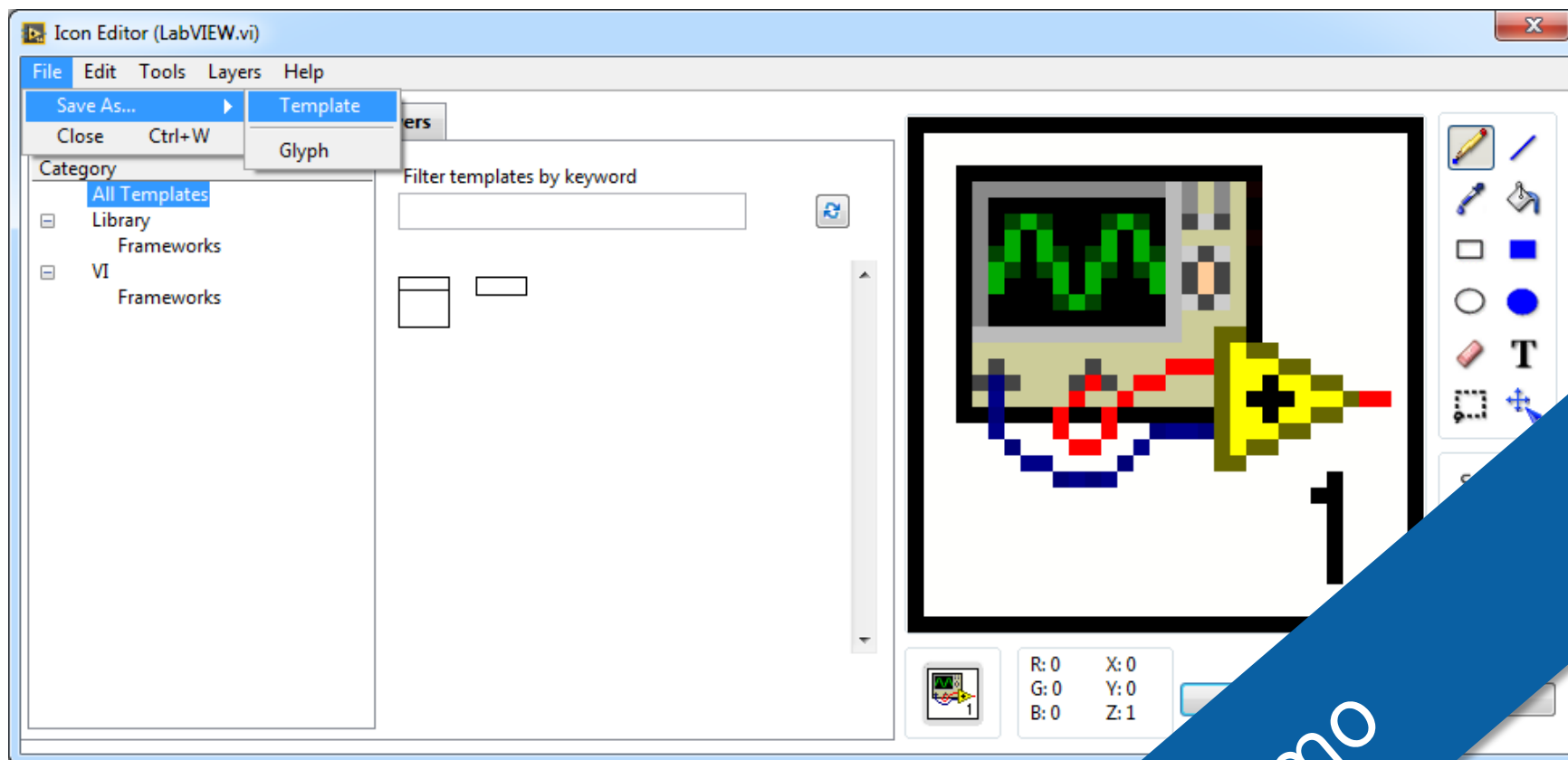
Demo

Mass Compile...
Clear Compiled Object Cache...
Edit Error Codes...
Edit Palette Set...
Create or Edit Express VI...
Export Strings...
Import Strings...

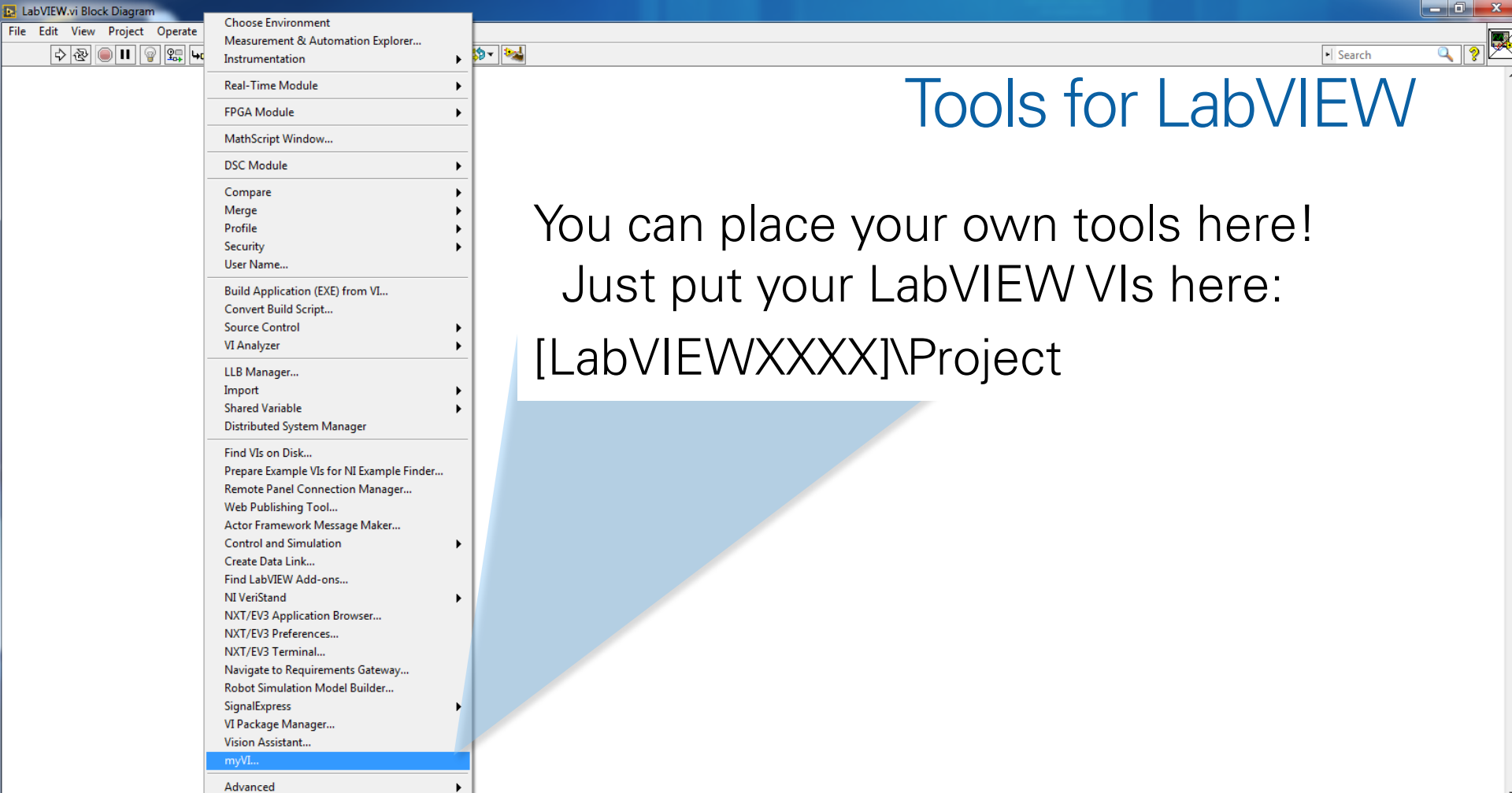
Icon Editor



Icon Editor

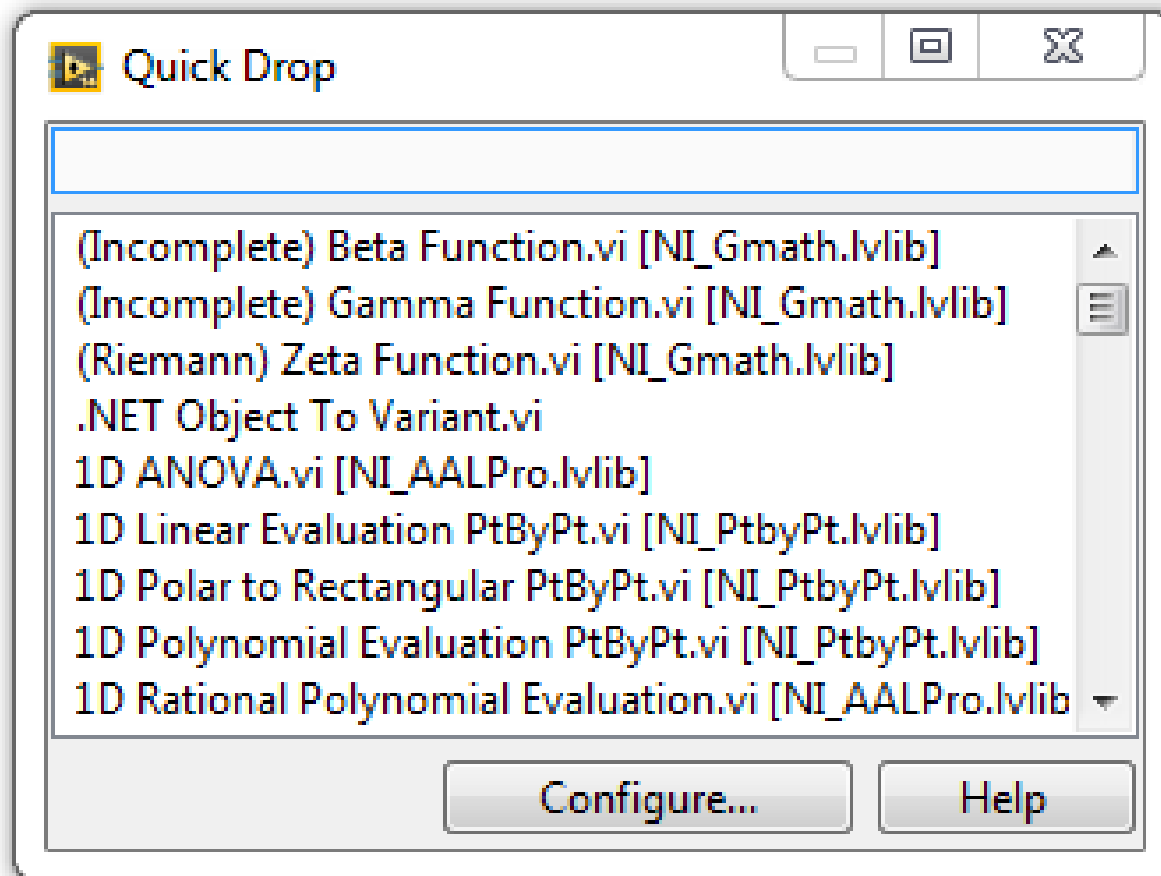


Demo

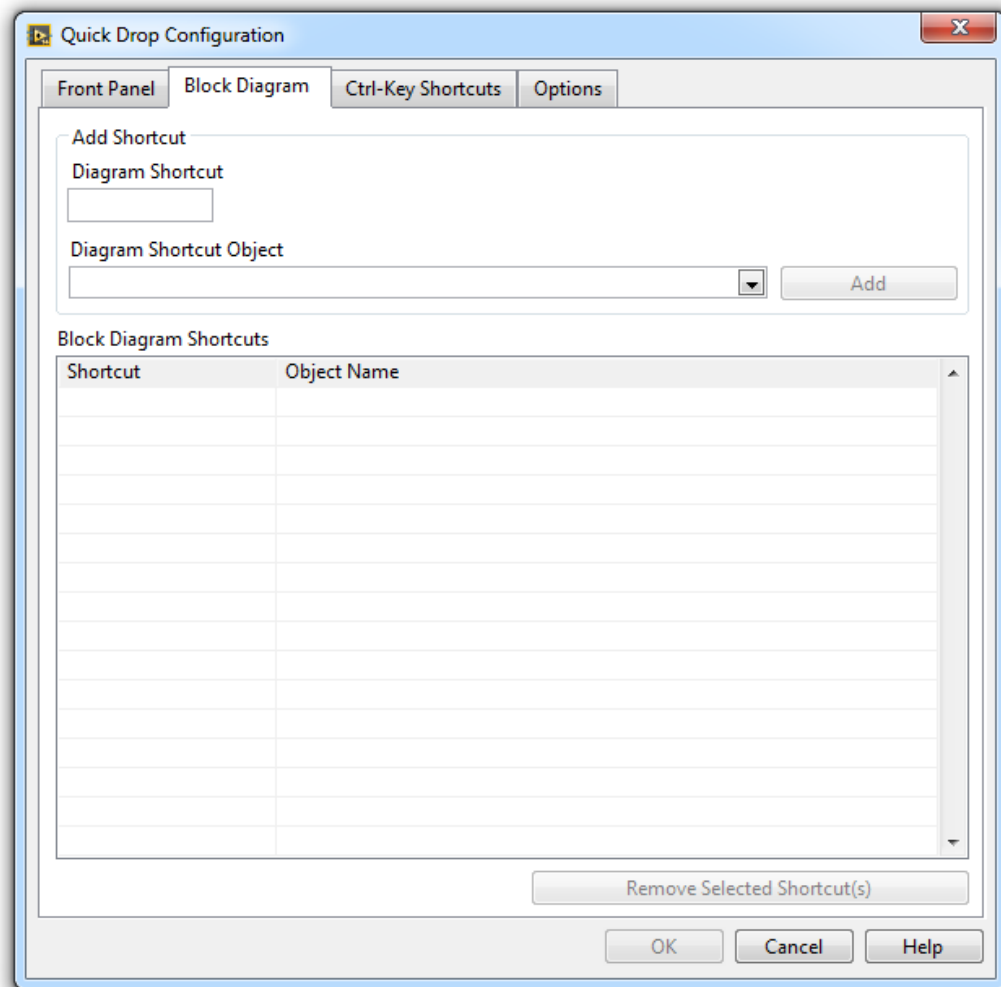
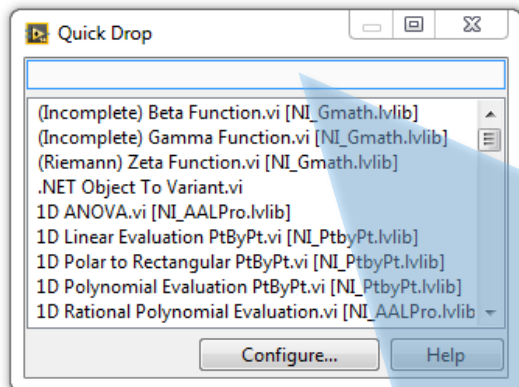


Folders or VIs with underscore at the beginning will not be named here.

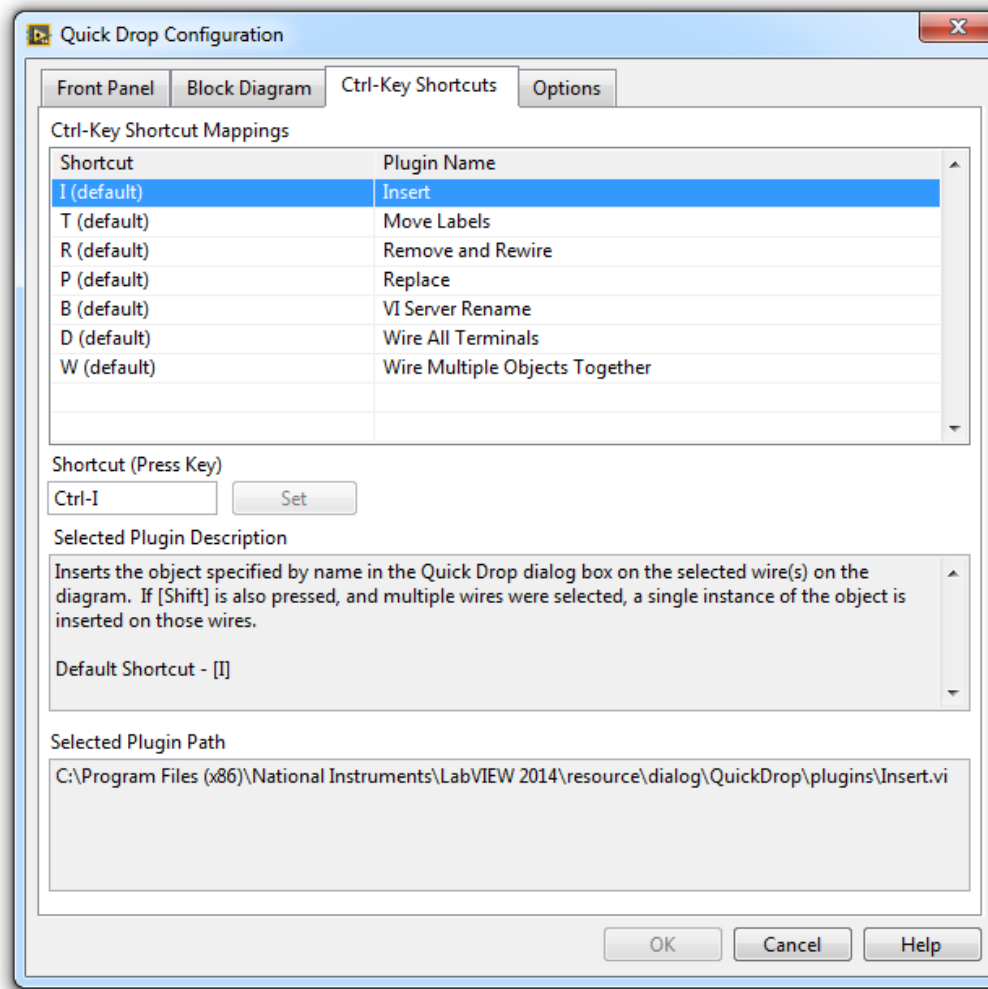
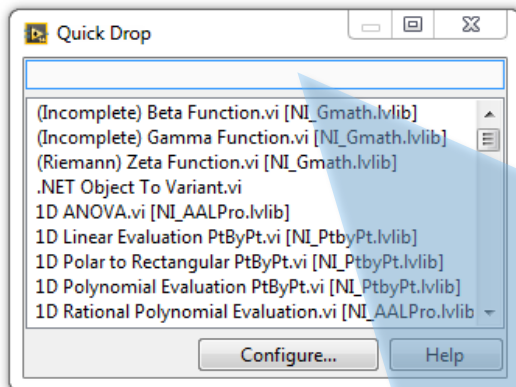
Quick Drop



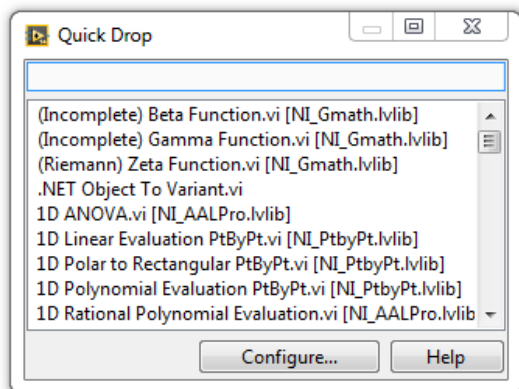
Quick Drop



Quick Drop



Quick Drop



Standard Quick Drop Plugins:

Strg+I Insert

Strg+T Move labels

Strg+R Remove and rewire

Strg+P Replace

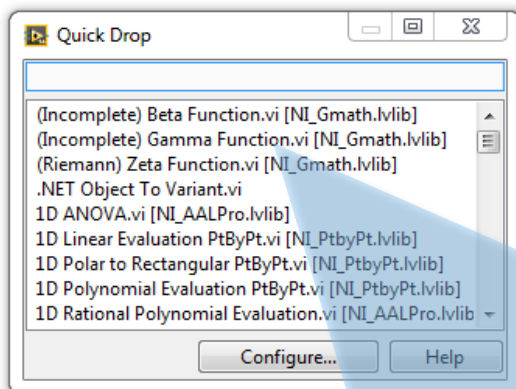
Strg+B VI server rename

Strg+D Wire all terminals

Strg+W Wire multiple objects
together

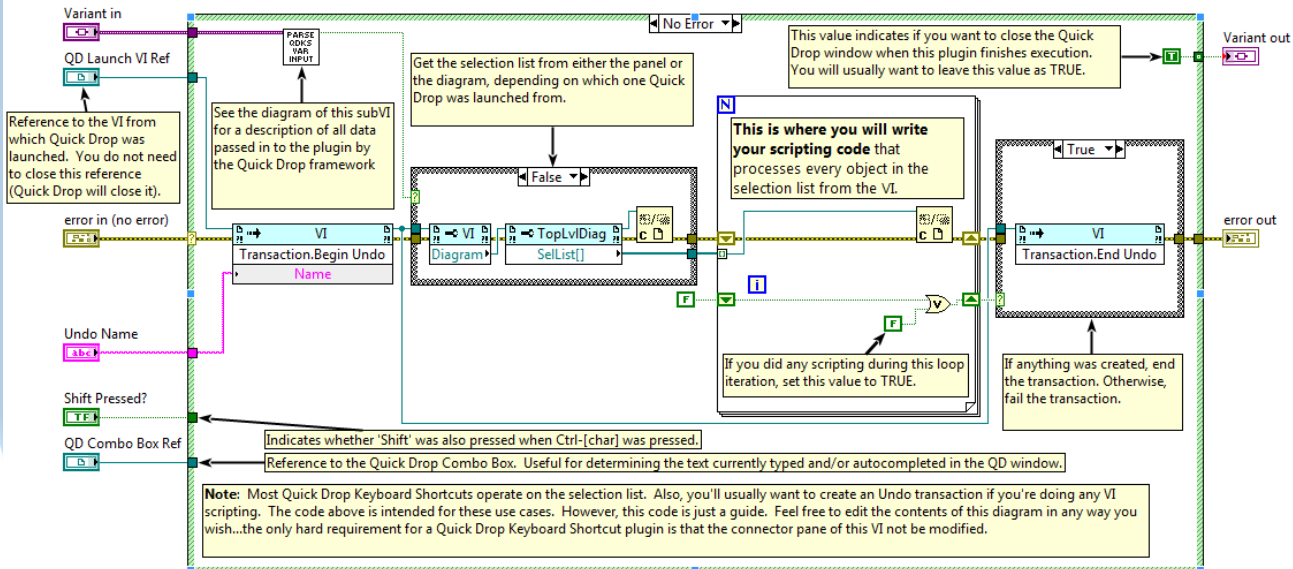
Quick Drop

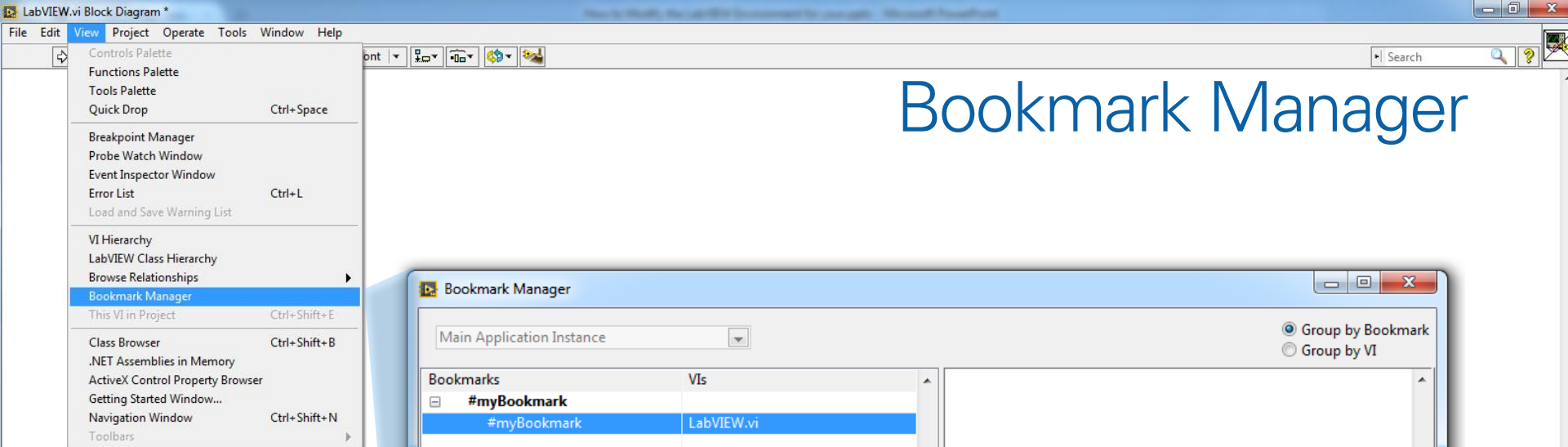
Quick Drop Plugin Template: [LabVIEWXXXX]\resource\dialog\Quick Drop



INSTRUCTIONS:

1. Save a copy of this VI with a descriptive name in [LabVIEW]\resource\dialog\QuickDrop\plugins or in [LabVIEW Data]\Quick Drop Plugins.
2. Edit the VI Description to include a description of your plugin and specify a default shortcut.
3. Write code to execute when you press Ctrl-[char] or Ctrl-Shift-[char] while Quick Drop is visible.





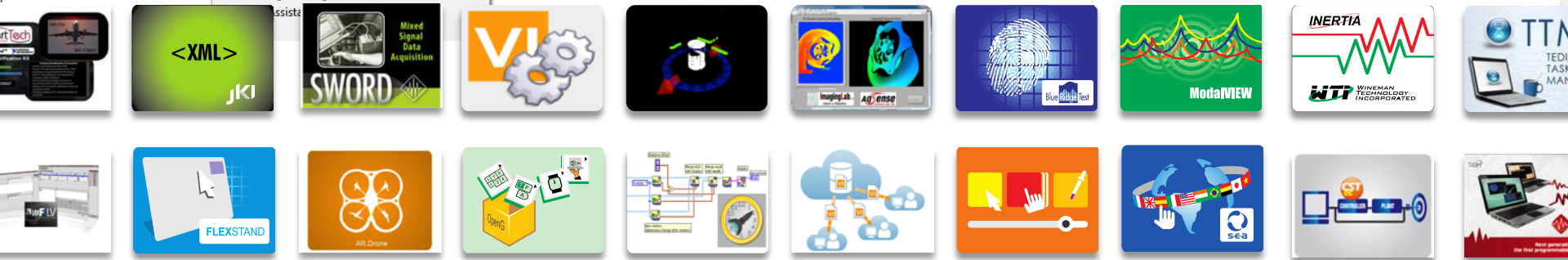
Create your own!

Agenda

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Additional tools and their modifications



LabVIEW.vi Block Diagram *

File Edit View Project Operate

Choose Environment

Measurement & Automation Explorer...

Instrumentation

Real-Time Module

FPGA Module

MathScript Window...

DSC Module

Compare

Merge

Profile

Security

User Name...

Build Application (EXE) from VI...

Convert Build Script...

Source Control

VI Analyzer

LLB Manager...

Import

Shared Variable

Distributed System Manager

Find VIs on Disk...

Prepare Example VIs for NI Example Finder...

Remote Panel Connection Manager...

Web Publishing Tool...

Actor Framework Message Maker...

Control and Simulation

Create Data Link...

Find LabVIEW Add-ons...

NI VeriStand

NXT/EV3 Application Browser...

NXT/EV3 Preferences...

NXT/EV3 Terminal...

Navigate to Requirements Gateway...

Robot Simulation Model Builder...

SignalExpress

VI Package Manager...

Vision Assistant...

myVI...

Find LabVIEW Add-ons...

JKI VIPM - LabVIEW Tools Network

File Window Help

LabVIEW TOOLS NETWORK

Featured

LabSocket System - Bergmans ...

GTT LTE RBS Toolkit - ...

INERTIA - Wineman ...

More...

Top Downloads

NI cRIO Waveform Reference ...

FPGA IP (IPNet): LabVIEW ...

NI Labs: LabVIEW Scripting - ...

More...

Top Rated

vibDag Transient Software - ...

Wirebird Labs: Deploy - ...

WF ProgressBar - WireFlow

More...

Latest

SignalPad DAQ and Analysis ...

Pedometer for NI myRIO - ...

Visual Edge Detector for NI ...

More...

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LabSocket

LabSocket System - Bergmans

Mechatronics LLC

Access LabVIEW VIs Over the Web or a LAN From Any Browser

\$2950 Buy

★★★★★

Install

GTT LTE RBS Toolkit

GTT LTE RBS Toolkit - GefleTestteknik

Complete Toolkit for RBS Testing 3GPP Measurements

\$18,250 Buy

★★★★★

Install

INERTIA

INERTIA - Wineman Technologies

Test Cell Control and Automation

\$5,499 Buy

★★★★★

Download

XLR8

XLR8 - Data Ahead GmbH

XLR8 is a library to read and write Microsoft Excel(R) files without using ActiveX calls and without the need of an Excel license.

\$249 Buy

★★★★★

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myRIO LockInAmp

myRIO LockInAmp - Delacor, LLC

Turn Your myRIO Into a Precision Measurement Instrument

Free

★★★★★

Install

SCOPE FGEN

Oscilloscope and Function Generator App for myRIO - Choose Movement Consulting, LLC

Oscilloscope and Function Generator App for NI myRIO

Free

★★★★★

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LINX

LINX - LVH

Interface With Common Embedded Platforms

Free

★★★★★

Install

ModalVIEW

ModalVIEW - ABSignal

Turnkey Application for Modal Testing and Analysis

\$5000 Buy

★★★★★

Download

GDataBase for SQLite Toolkit

GDataBase for SQLite Toolkit - SAPHIR

GDataBase for MySQL Toolkit

GDataBase for MySQL Toolkit - SAPHIR

ni.com

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NATIONAL INSTRUMENTS™

LabVIEW.vi Block Diagram *

File Edit View Project Operate

Choose Environment

Measurement & Automation Explorer...

Instrumentation

Real-Time Module

FPGA Module

MathScript Window...

DSC Module

Compare

Merge

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Find LabVIEW

NI VeriStand

NXT/EV3 Application

NXT/EV3 Preferences

NXT/EV3 Terminal

Navigate to Repository

Robot Simulation

SignalExpress

VI Package Manager

Vision Assistant

myVI...

JKI VIPM - LabVIEW Tools Network

File Window Help

Show VI Package Manager

Top Downloads Top Rated Latest

JKI VI Package Manager

File Edit View Package Tools Window Help

2013

All

Name \	Version	Repository	Company
ModBusVIEWoTCP	2.1.0.47	NI LabVIEW Tools Network	SAPHIR
NI Asynchronous Message Communication (AMC) Library	3.3.0.20	NI LabVIEW Tools Network	National Instruments
NI Bandwidth Power IP	1.0.0.6	NI LabVIEW Tools Network	National Instruments
NI Bookmark Manager with Block Diagram Preview	1.0.0.4	NI LabVIEW Tools Network	National Instruments
NI CompactRIO Information (CRI) Library	2011.0.3.7	NI LabVIEW Tools Network	National Instruments
NI CompactRIO Waveform Library	4.1.0.9	NI LabVIEW Tools Network	National Instruments
NI Current Value Table	3.3.0.13	NI LabVIEW Tools Network	National Instruments
NI CVT Client Communication (CCC)	3.0.0.3	NI LabVIEW Tools Network	National Instruments
NI Event Logger Library	1.0.0.8	NI LabVIEW Tools Network	National Instruments
NI GXML	1.4.2.8	NI LabVIEW Tools Network	National Instruments
NI I2C Host Example for the PXIe-5644/45R	1.0.0.2	NI LabVIEW Tools Network	National Instruments
NI Icon Library Update Tool	1.0.0.13	NI LabVIEW Tools Network	National Instruments
NI Instruction Sequencer and SPI Host Example for the NI PXIe-5644R/45R	1.0.0.15	NI LabVIEW Tools Network	National Instruments
NI Instruction Sequencer IP	1.0.0.2	NI LabVIEW Tools Network	National Instruments
NI JTAG Host Example for the PXIe-5644/45R	1.0.0.1	NI LabVIEW Tools Network	National Instruments
NI Keyed Array Library	2.0.0.11	NI LabVIEW Tools Network	National Instruments
NI LabVIEW Scripting	1.0.1.18	NI LabVIEW Tools Network	National Instruments
NI LCD Module Driver	1.1.0.15	NI LabVIEW Tools Network	National Instruments
NI LogRotate	1.0.0.18	NI LabVIEW Tools Network	National Instruments
NI Noise Generation Example for the PXIe-5644/45R	1.0.0.4	NI LabVIEW Tools Network	National Instruments
NI Noise Generation IP	1.0.0.7	NI LabVIEW Tools Network	National Instruments
NI Open Sound Control	1.0.2.16	NI LabVIEW Tools Network	National Instruments
NI Power Servoing Host Example for the NI PXIe-5644R/45R	1.0.0.15	NI LabVIEW Tools Network	National Instruments
NI Power Servoing IP	1.2.0.16	NI LabVIEW Tools Network	National Instruments
NI Programmable Filter IP	1.0.0.4	NI LabVIEW Tools Network	National Instruments
NI RFFE Host Example for the PXIe-5644/45R	1.0.0.2	NI LabVIEW Tools Network	National Instruments

Ready ...

Find LabVIEW Add-ons...

Find LabVIEW Add-ons...

The screenshot shows the NI LabVIEW Tools Network interface. The main window is titled "JKI VI Package Manager" and displays a list of available packages. The package "NI Bookmarks Manager with Block Diagram Preview" is highlighted in blue. The interface includes a menu bar (File, Edit, View, Package, Tools, Window, Help), a toolbar with icons for various actions, and a search bar. The package list has columns for Name, Version, Repository, and Company.

Name \ /	Version	Repository	Company
ModBusVIEWoTCP	2.1.0.47	NI LabVIEW Tools Network	SAPHIR
NI Asynchronous Message Communication (AMC) Library	3.3.0.20	NI LabVIEW Tools Network	National Instruments
NI Bandwidth Power IP	1.0.0.6	NI LabVIEW Tools Network	National Instruments
NI Bookmarks Manager with Block Diagram Preview	1.0.0.4	NI LabVIEW Tools Network	National Instruments
NI CompactRIO Information (CRI) Library	2011.0.3.7	NI LabVIEW Tools Network	National Instruments
NI CompactRIO Waveform Library	4.1.0.9	NI LabVIEW Tools Network	National Instruments
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NI JTAG Host Example for the PXIe-5644/45R	1.0.0.1	NI LabVIEW Tools Network	National Instruments
NI Keyed Array Library	2.0.0.11	NI LabVIEW Tools Network	National Instruments
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NI RFFE Host Example for the PXIe-5644/45R	1.0.0.2	NI LabVIEW Tools Network	National Instruments

Find LabVIEW Add-ons...

The screenshot shows the LabVIEW VI Package Manager window with the following data:

Name /\	Version	Repository	Company
TLB - Top Level Baseline	1.2.0.17	Unpublished	National Instruments
Toshiba Machine Robotics Library	1.1.0.14	NI LabVIEW Tools Network	ImagingLab
TTM	1.1.0.88	NI LabVIEW Tools Network	TOOLS for SMART MINDS
UI Control Suite: Metallic Theme	1.0.0.5	NI LabVIEW Tools Network	NI
UI Control Suite: NI Themed Custom Control Suite	1.0.0.2	NI LabVIEW Tools Network	NI
UI Control Suite: System Controls 2.0	1.0.0.1	NI LabVIEW Tools Network	NI
UI Tools	1.3.0.70	NI LabVIEW Tools Network	LAVA
Variant_Probe	2.4.1	Unpublished	LAVA
VI Helpeks	1.1.1.81	NI LabVIEW Tools Network	Konstantin Shifershteyn
VI Properties Editor	1.0.0.7	Unpublished	NI Labs
ViBox - Probes	1.3.0.21	NI LabVIEW Tools Network	SAPHIR
ViBox - XControls	2.1.0.60	NI LabVIEW Tools Network	SAPHIR
VIPM API	2012.0.0.36	NI LabVIEW Tools Network	JKI
Visual Components Robotics Library	1.0.0.68	NI LabVIEW Tools Network	ImagingLab
VSI TSVN Toolkit	1.8.0.1	NI LabVIEW Tools Network	Viewpoint Systems, Inc
WebPager - Put Front Panels Online	0.60.0.0-downloa	Unpublished	VFP Soft
WebPager - Put Front Panels Online	0.59.0.2-downloa	NI LabVIEW Tools Network	Labicom.net
WF ProgressBar	1.0.1.50	NI LabVIEW Tools Network	WireFlow
WF-SecuritySuite: Authentication	2.0.0.80	NI LabVIEW Tools Network	WireFlow
WF-SecuritySuite: WF USB Security Dongle	2.0.1.92	NI LabVIEW Tools Network	WireFlow
WF3144 ResEmul	2.0.1.21	NI LabVIEW Tools Network	WireFlow
WF_AppBuilderSupport	1.0.0-79	NI LabVIEW Tools Network	WireFlow
What's New in LabVIEW 2013	1.0.0.17	Unpublished	NI
XLR8	1.1.1.46	NI LabVIEW Tools Network	DATA AHEAD
Yaskawa Motoman Robotics Library	1.1.3.34	NI LabVIEW Tools Network	ImagingLab

Choose Environment
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Robot Simulation Model Builder...

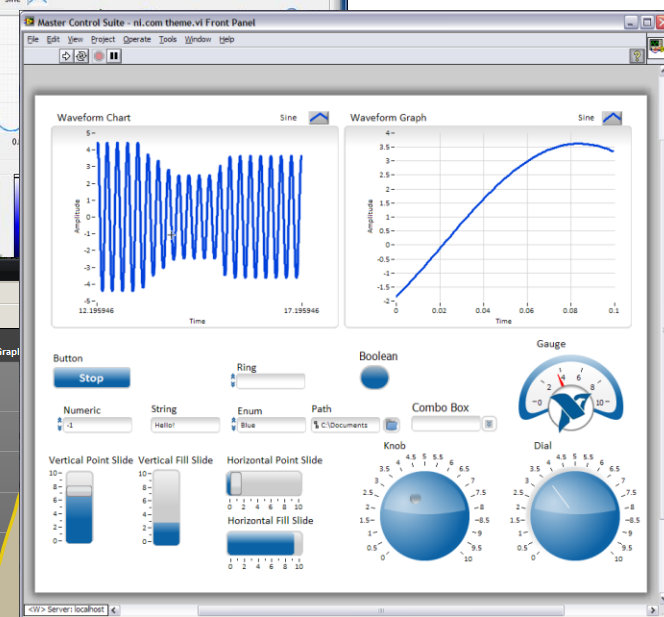
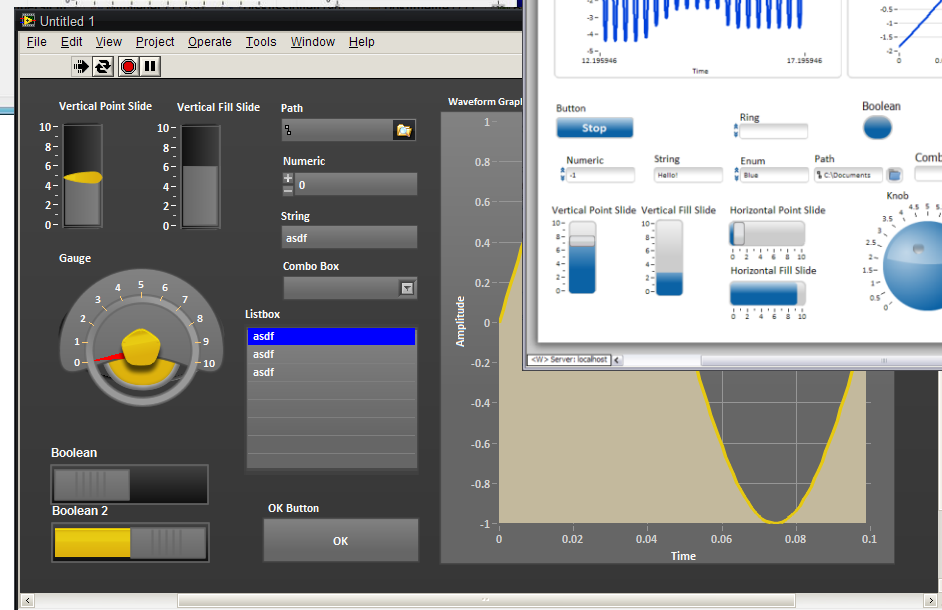
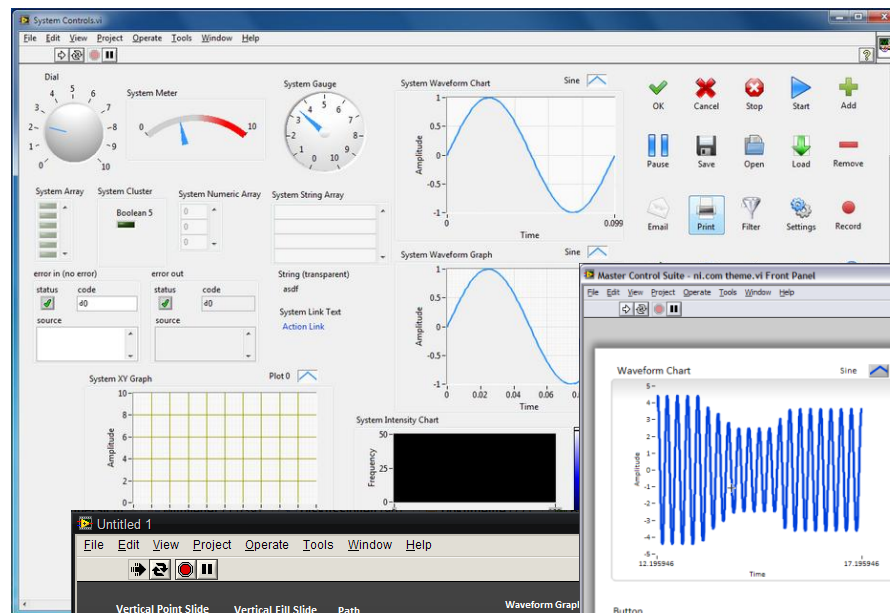
SignalExpress

VI Package Manager...

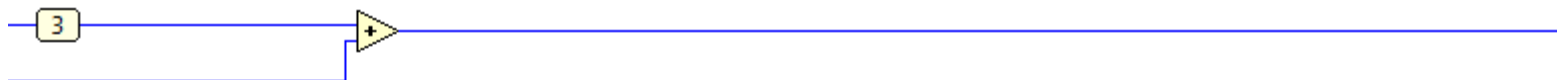
Vision Assistant...

myVI...

Find LabVIEW Add-ons...



Probes

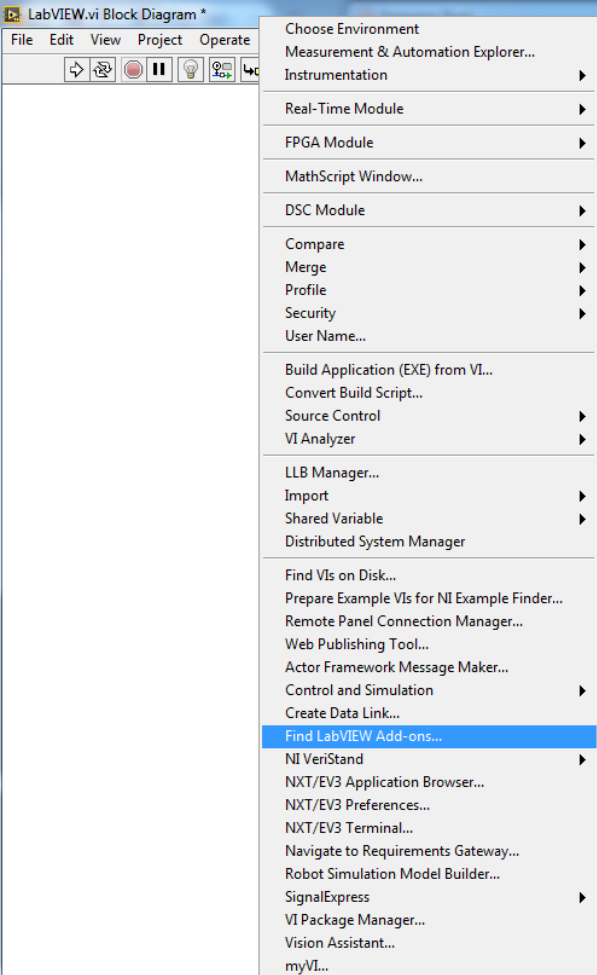


Probe Watch Window

Probe(s)	Value	Last Update
LabVIEW.vi (La		
[3] Probe	Not Executed	

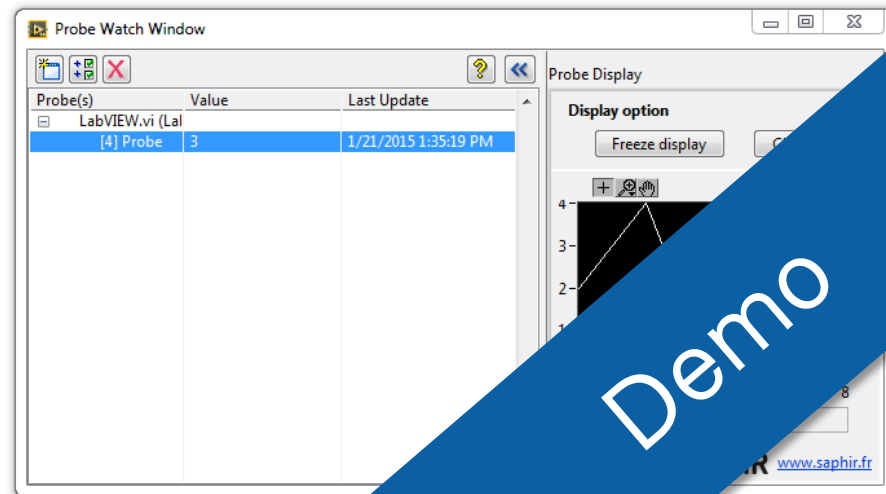
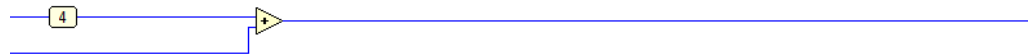
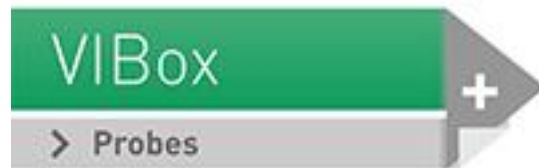
Probe Display

0

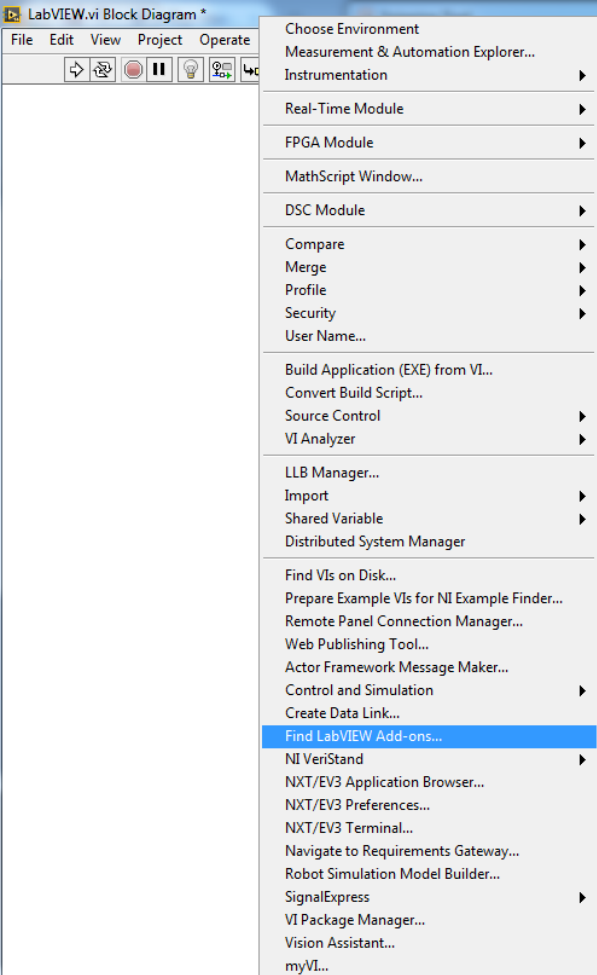


Find LabVIEW Add-ons...

VI Box Probes - SAPHIR

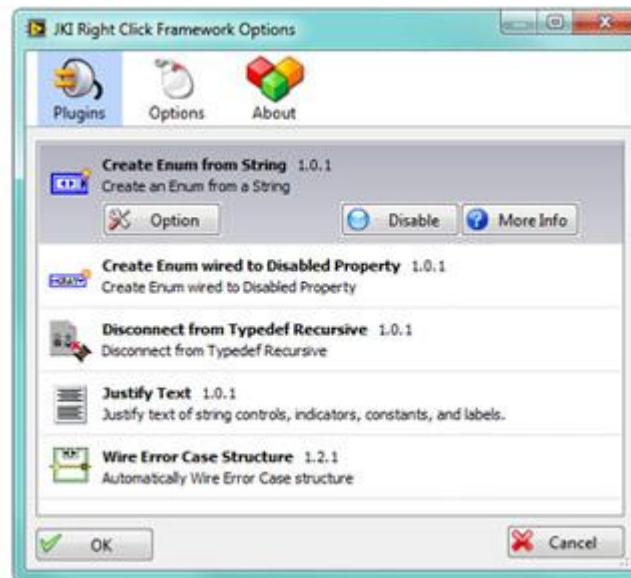


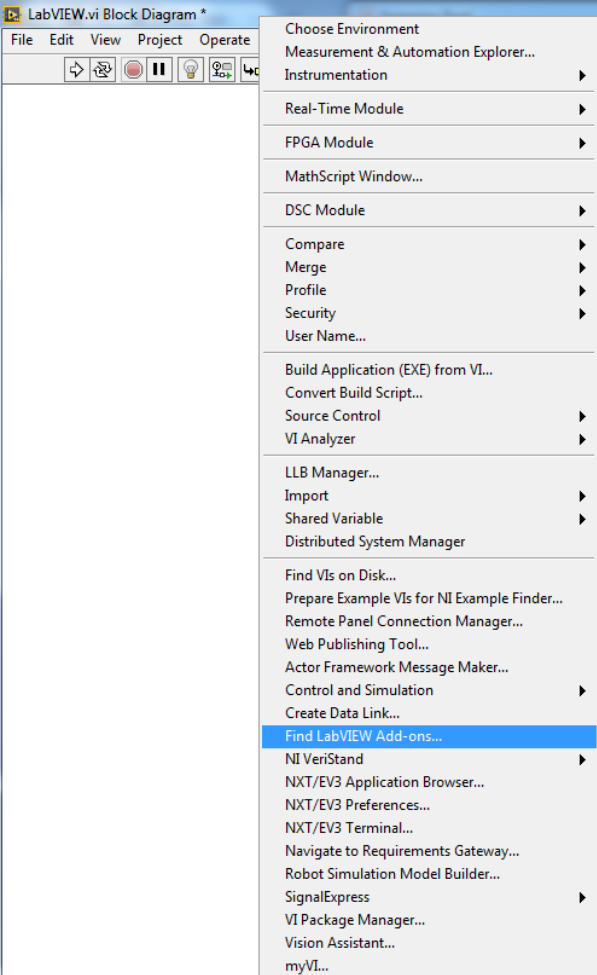
Demo



Find LabVIEW Add-ons...

JKI Right-Click Framework



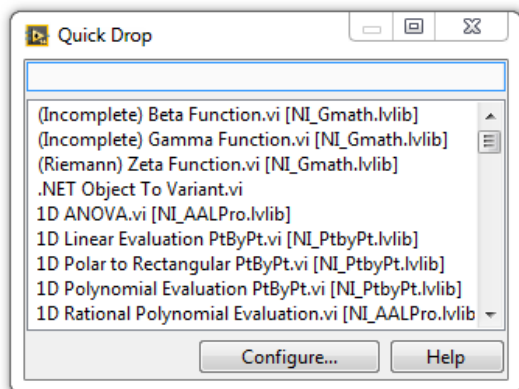


Find LabVIEW Add-ons...

NI GOOP Development Suite



Quick Drop – Plugins in the Community



- VI snippet Quick Drop plugins
- Wire label
- Clear array
- Mission control for multi-frame structure
- Create multiple wire labels automatically from first element of wires
- Align front panel controls to connector pane pattern

Demo

Sources

- ni.com
- www.labviewwiki.org
- <http://labviewartisan.blogspot.de/>
- www.ni.com/labview-tools-network