LabVIEW™ NXG Roadmap

Next Release Includes:

Core Editor Enhancements
- Create dynamic plug-in architectures using additional VI Execution Control functionality
- Probe the elements within classes and clusters for improved debugging

User Interfaces
- Specify numeric representation with additional formatting options
- Employ programmatic graph image capture for reporting

Hardware Support
- Continued support to deploy to select CompactRIO and Real-Time PXI systems
- Quickly retarget code and resources to different Real-Time and FPGA based hardware models

Real-Time Programming
- Implement deterministic applications on a subset of NI hardware with LabVIEW NXG Real-Time
- Acquire DAQmx measurements on CompactRIO

FPGA Programming
- Acquire FPGA measurements on CompactRIO with most common C-Series module families (AI, AO, DIO)
- Support multiple measurement channels with FPGA IO Nodes
- Easier configuration and portability of I/O module properties when programming

Software Engineering
- Document and Generate class=based architectures with the VI Technologies UML Class Editor
- Ability to add File menu, Help menu, and Tools Launcher plugins
- Optimize project Command Line Interface operations like mass save and creating caches

Web Technology
- Reuse 3rd- party HTML controls in a desktop VI

Distributed Applications
- Debug remote executables
- Build packages for LabVIEW NXG example and template projects using NI Package Builder

Near Future Release:

Core Editor Enhancements
- Improved TestStand support

Interoperability
- Call .NET assemblies saved outside the Global Assembly Cache (GAC)

User Interfaces
- Customize tree behavior using additional events and properties
- Utilize additional UI property, events, and methods

Hardware Support
- Access additional C-Series modules from the FPGA of CompactRIO

Real-Time Programming
- Quickly get started with I/O using DAQmx soft front panels
- Set up and configure NI Real-Time hardware on SystemDesigner

FPGA Programming
- New Task-based IO API on FPGA, a DAQmx-like API for configuring IO tasks, on CompactRIO
- Simpler configuration and portability of FPGA resources (FIFOs, memory)

Future Release Features:

Core Editor Enhancements
- Abstract LabVIEW Real-Time code with object-oriented programming
- Discover add-ons within the IDE
- Perform advanced signal processing with time frequency, time series, and wavelet analysis
- Access advanced TDMS functionality, such as asynchronous write operations

Interoperability
- Support creating OPC UA Clients and Servers in LabVIEW (OPC UA Toolkit)
- Interface with MATLAB® code on RT targets

User Interfaces
- Create resizable UIs through a configuration-based workflow
- Integrate web technology into your desktop UI

Hardware Support
- Use RF instrumentation
- Complete FlexRIO support
- PCI/PXI Reconfigurable I/O FPGA support

Real-Time Programming
- Leverage OOP in LabVIEW Real-Time
- Implement additional network communication APIs
- Utilize tag-based, deterministic communication API

FPGA Programming
- New tools for FPGA hardware debugging
- User-defined Socketed CLIP
- Task-based IO API support for R-series, FlexRIO, and USRP hardware

Software Engineering
- Choose from additional Command Line Interface options
- Run static code analysis tools

Web Technology
- Debug WebVIs in IDE
- Create RESTful Web Services in LabVIEW NXG

Distributed Applications
- Define and manage exact package dependency versions used by the project
- Build LabVIEW applications into DLLs
- Publish packages directly to SystemLink feeds