LabVIEW™ 2014

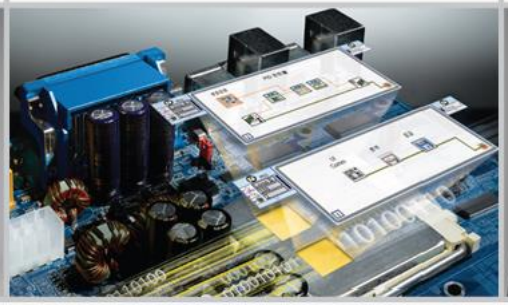
What's New in 2014

Chris Mead

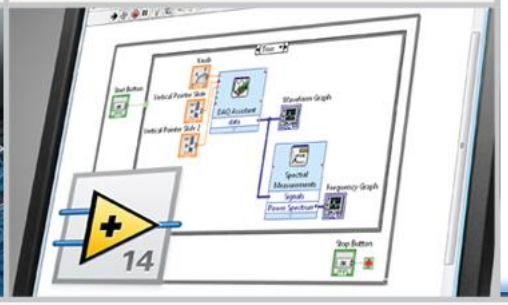
District Sales Manager, National Instruments

Accurate Data Acquisition With the Latest Technology

Extended Deployment Options for Built-in Analysis Routines



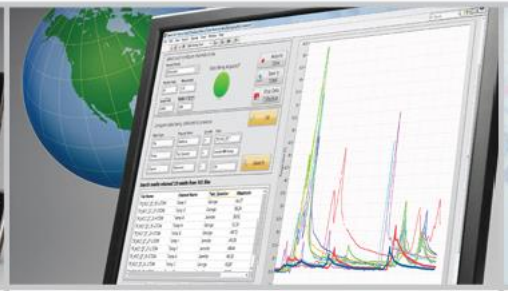
13 Coding Productivity Enhancing Features



LabVIEW™ 2014

Acquire, analyze, and visualize any data set to make informed decisions fast.

Expanded Interface Development and Deployment Options

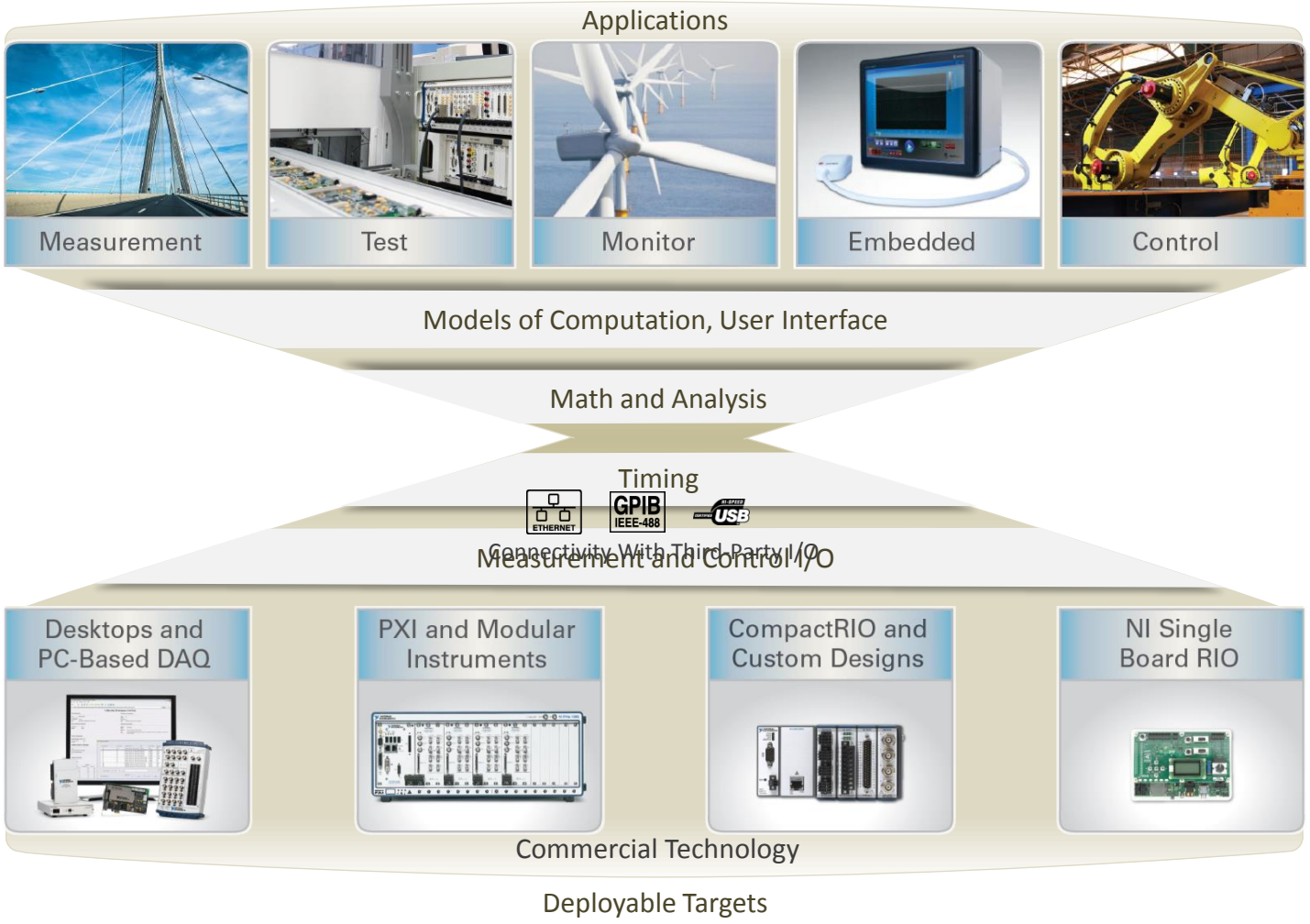


Global Solutions to Mine and Search Data

Innovate With a Community

Graphical System Design

A platform-based approach for measurement and control



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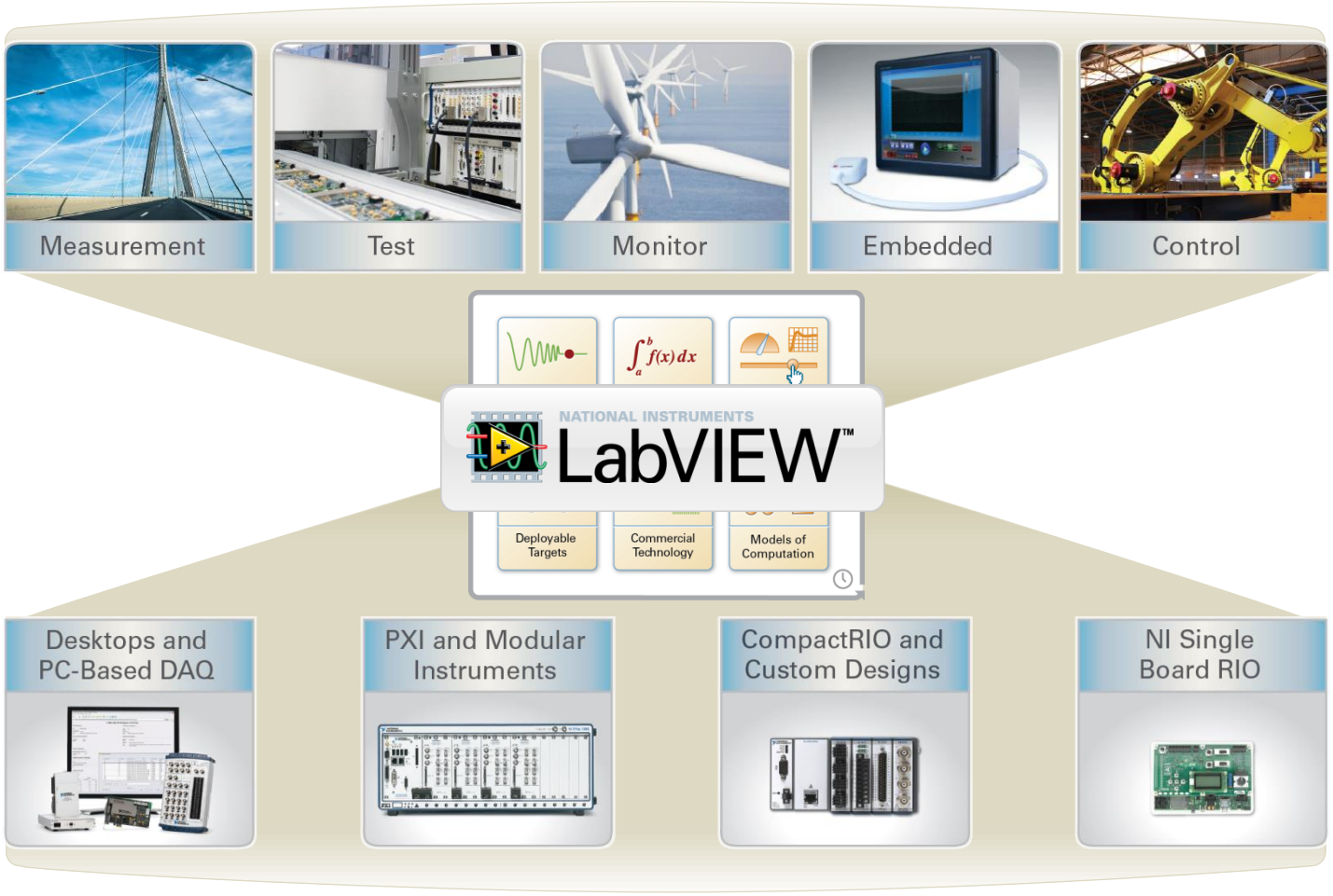
A platform-based approach for measurement and control



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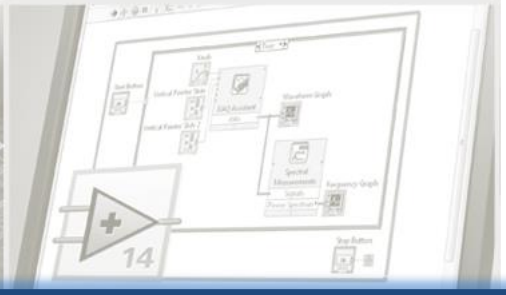

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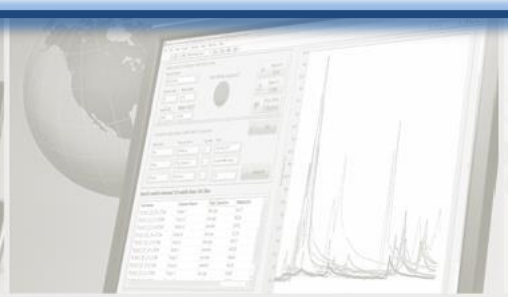
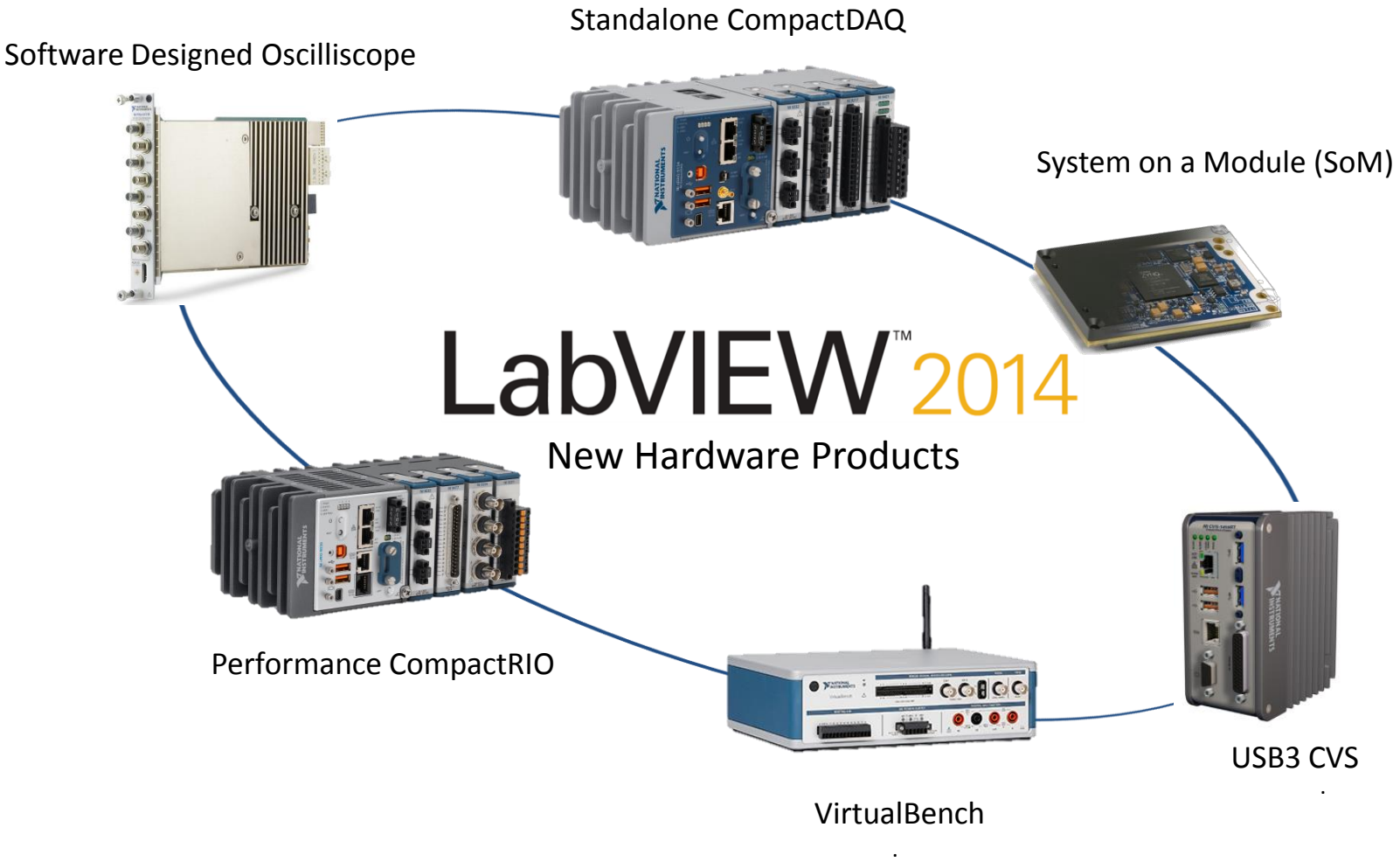


Global Solutions to Mine and Search Data

Innovate With a Community

Unrivaled Integration with the Latest Technology



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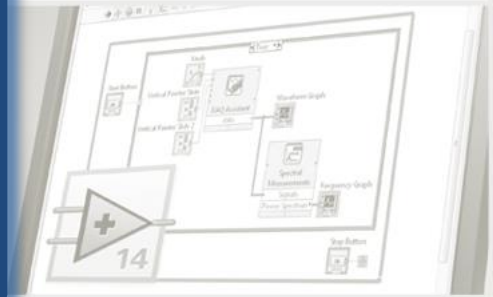

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Innovate With a Community

Value Added to Existing LabVIEW Editions

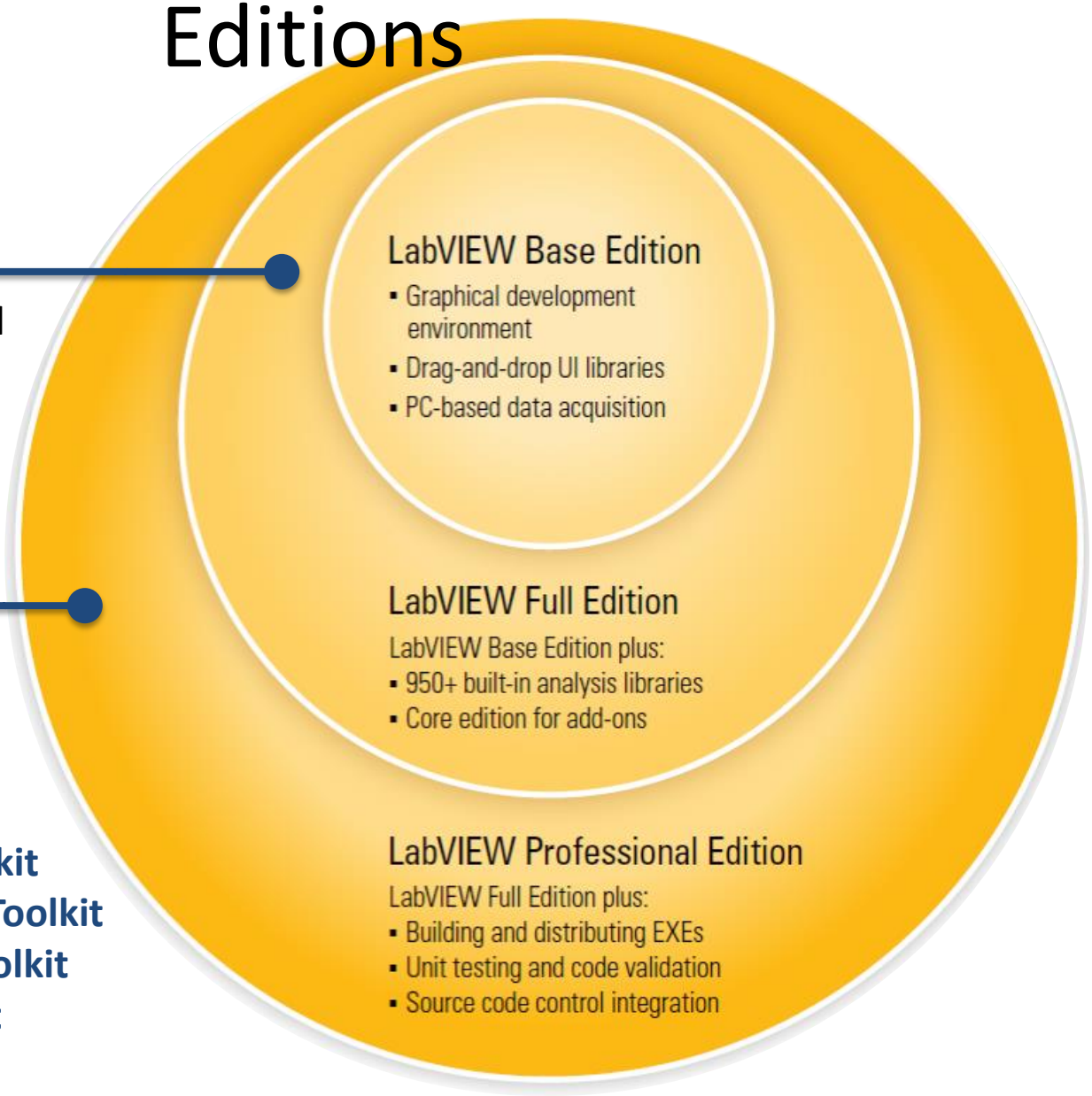
Full Edition

Make advanced control applications through included **PID and Fuzzy Logic** palettes

Professional Edition

Trace low-level bugs, validate coding practices, and manipulate data through the now included:

- **VI Analyzer Toolkit**
- **Unit Test Framework Toolkit**
- **Desktop Execution Trace Toolkit**
- **Database Connectivity Toolkit**
- **Report Generation Toolkit**



Application-Specific LabVIEW Suites

LabVIEW Embedded Control and Monitoring Suite

Includes NI LabVIEW Real-Time and FPGA Modules

LabVIEW Automated Test Suite

Includes NI TestStand and Switch Executive

LabVIEW HIL and Real-Time Test Suite

Includes NI VeriStand and LabVIEW Real-Time and FPGA Modules

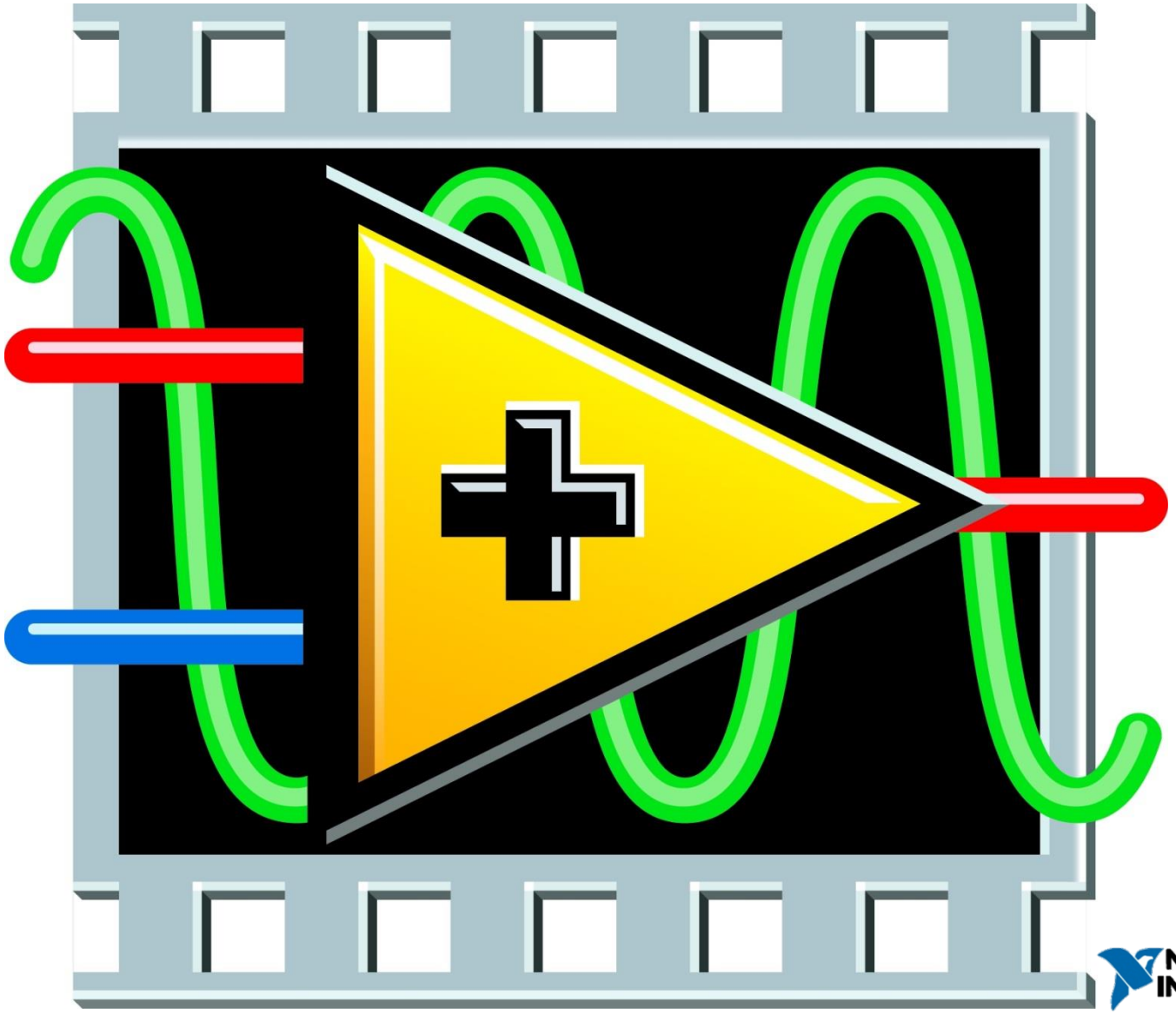
The Tools You Need

New **LabVIEW Suites** group LabVIEW Professional with all the tools you will likely need for your application

Convenient USB Install

Suites are distributed on a **USB 3.0 flash drive** with all the software and drivers you need already included

LabVIEW Taskbar Icon



LabVIEW Taskbar Icon

- **Users upgrade every 1-3 years**

NATIONAL INSTRUMENTS

LabVIEW Taskbar Icon

- Users upgrade every 1-3 years
- **Identical task bar icons create confusion**

New Taskbar Icon

NATIONAL INSTRUMENTS

New Taskbar Icon

- Easily Differentiate between LabVIEW versions

NATIONAL INSTRUMENTS

New Taskbar Icon

32-bit

64-bit

64-bit for Mac and Linux Desktop OS

Windows

Mac OS X

Linux

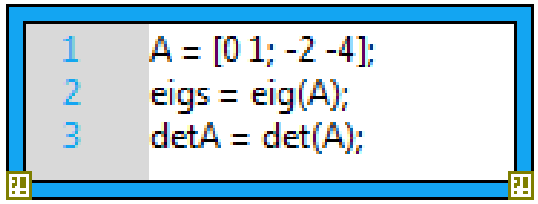
Run Algorithms and Models on NI Linux Real-Time

Add-on Modules with LabVIEW Real-Time Capability

- Native LabVIEW solution
- No code generation or 3rd party software required

MathScript RT Module

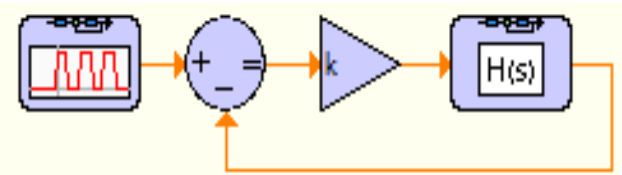
Re-use **.m scripts** that you developed in MathWorks Inc. MATLAB ® or GNU Octave



Control Design & Simulation Module

Move beyond PID for **advanced control** and dynamic system simulation

Model your system with the included **System Identification Toolkit**

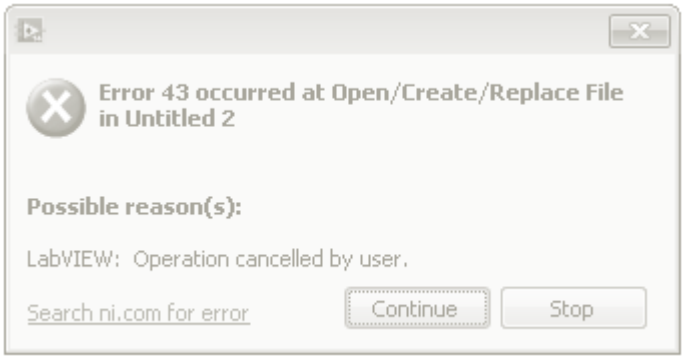


MATLAB® is a registered trademark of The MathWorks, Inc..

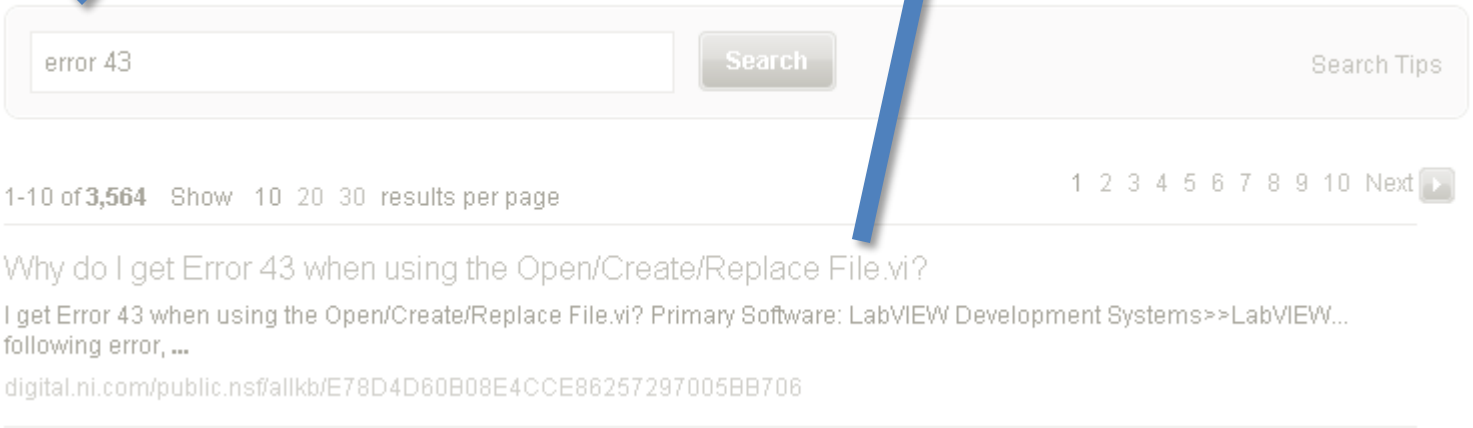
Troubleshoot Faster with Guided Error Debugg

Embedded Resource Links

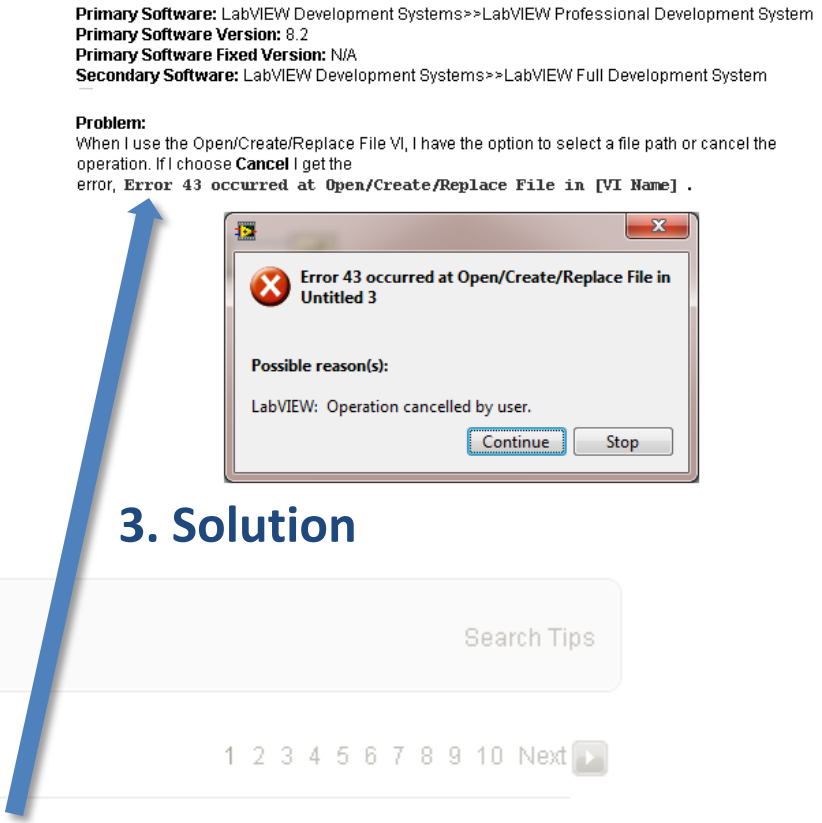
1. Error Dialog



2. Search Result



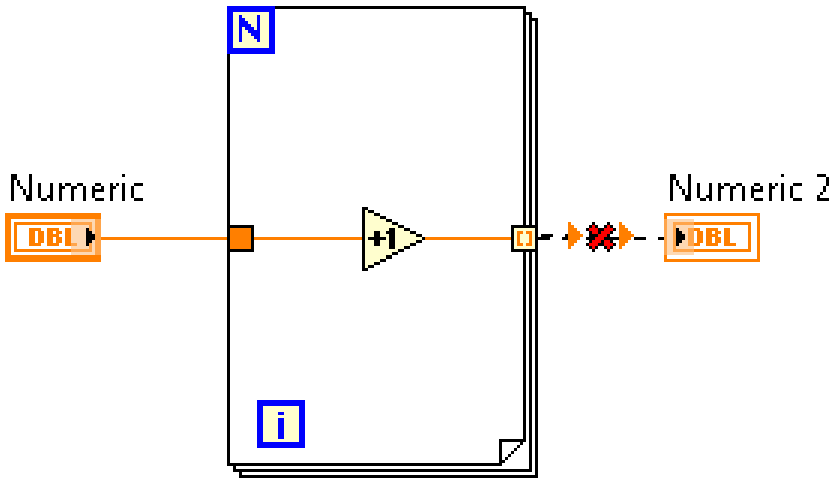
3. Solution



Time-Saving Development Tools

Automatic Shift Register Creation

- For Loops output Arrays by default



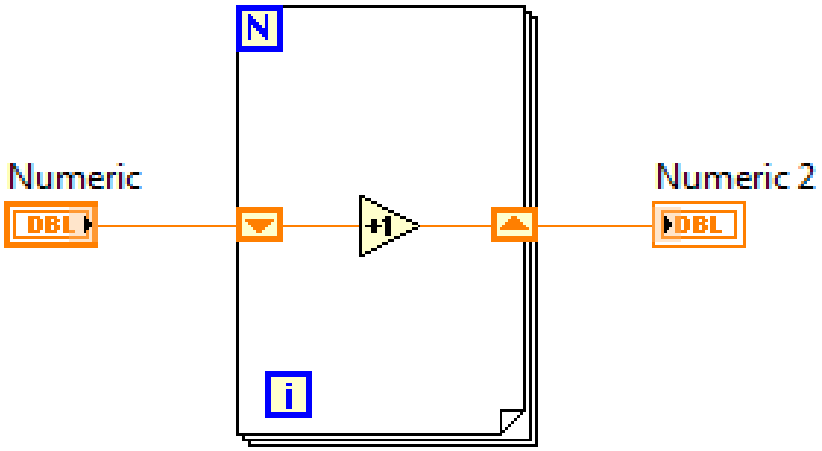
LabVIEW 2013

LabVIEW Idea Exchange

Time-Saving Development Tools

Automatic Shift Register Creation

- For Loops output Arrays by default
- Context-sensitive to wired outputs
- Shift register creation matches logical flow

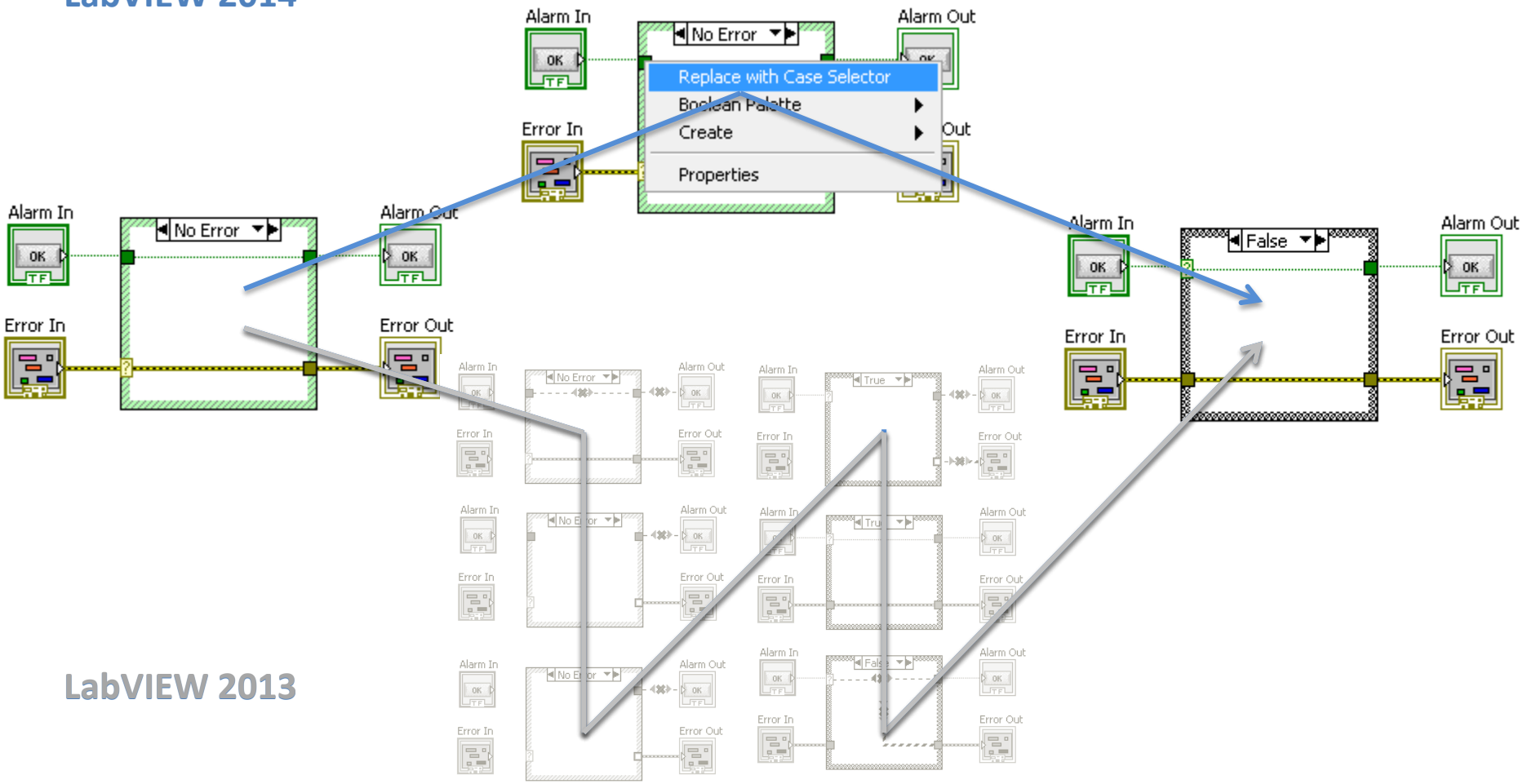


LabVIEW 2014

Time-Saving Development Tools

Replace Case Structure Tunnel with Selector

LabVIEW 2014



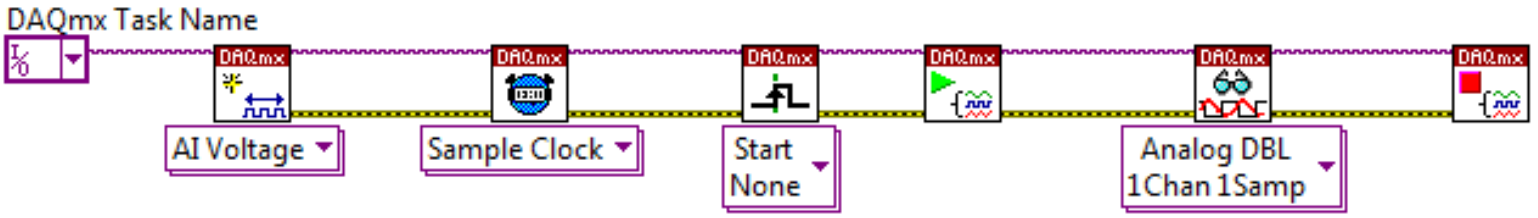
LabVIEW 2013

Time-Saving Development Tools

Auto-Wire Quick Drop Shortcut

Ctrl + Space

Ctrl + W

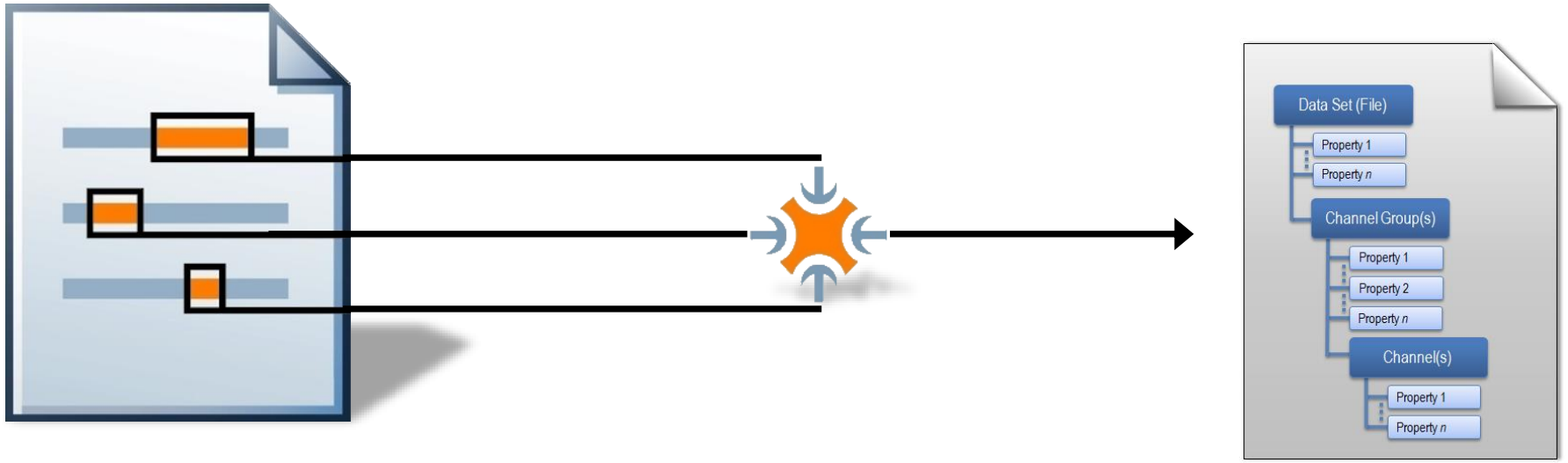


DataPlugins

Any Arbitrary Data File

DataPlugin

Mapped to TDM



Load Any Data

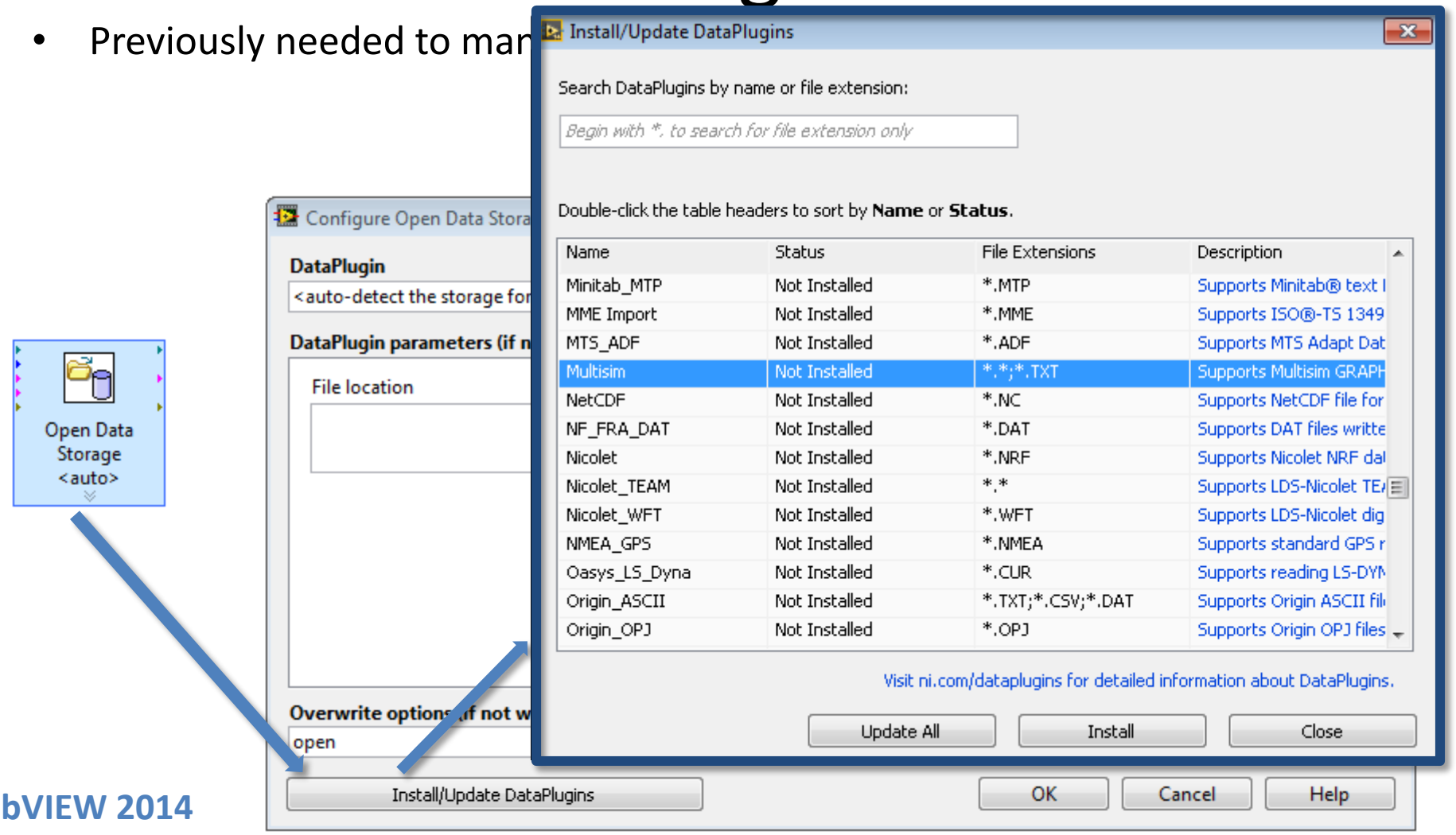
Load a huge variety of data formats with **1000+ DataPlugins** or submit a sample file to make a new one

Universal Format

Get all your data in one **standard format** that also includes properties such as average and extreme values

Seamless DataPlugins Installation

- Previously needed to mar



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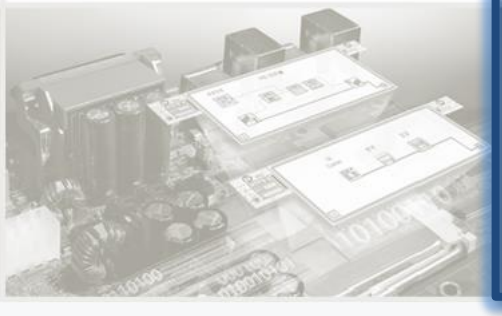

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Data Dashboard for LabVIEW 2.2

Alternate Servers

Now you can set up one dashboard to monitor multiple targets and use the drop down menu to switch where the data is streaming from while the dashboard is running

Multi-Plot

Data Dashboard now supports 2D array of numerics as a datatype for charts and graphs.

Android Tablets

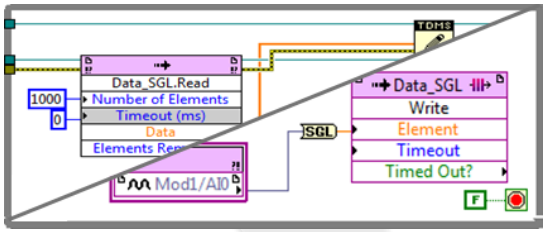
Data Dashboard on Android tablets now supports monitor and control applications and free canvas customizations.

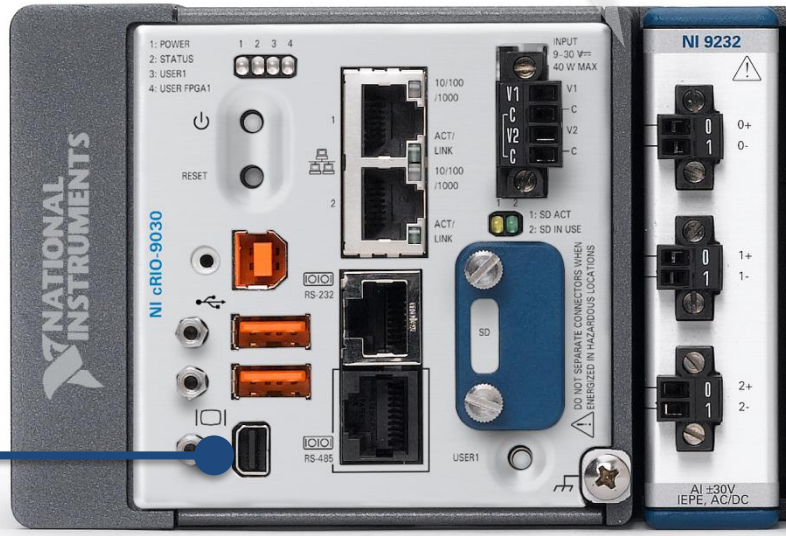
Transparency

Adjust the transparency of images, controls, and indicators on your dashboard

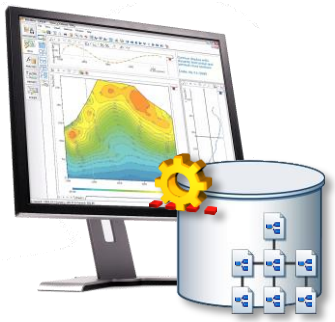
LabVIEW 2014 Real-Time with Embedded UI

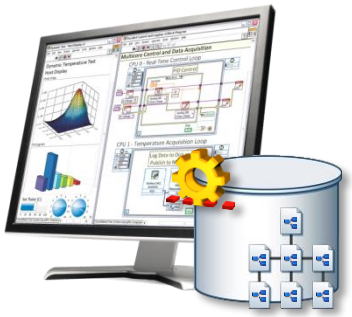
Simplify system complexity by implementing a local HMI on the cRIO

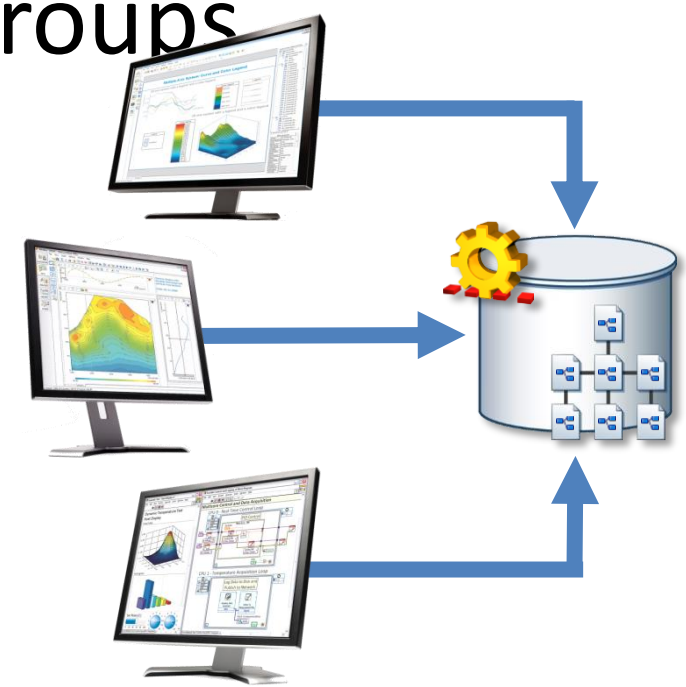




NI DataFinder for Individuals or Working Groups







Each client accessing
local “My DataFinder”

Designed for individuals

My DataFinder included with DIAdem or DataFinder Toolkit for LabVIEW

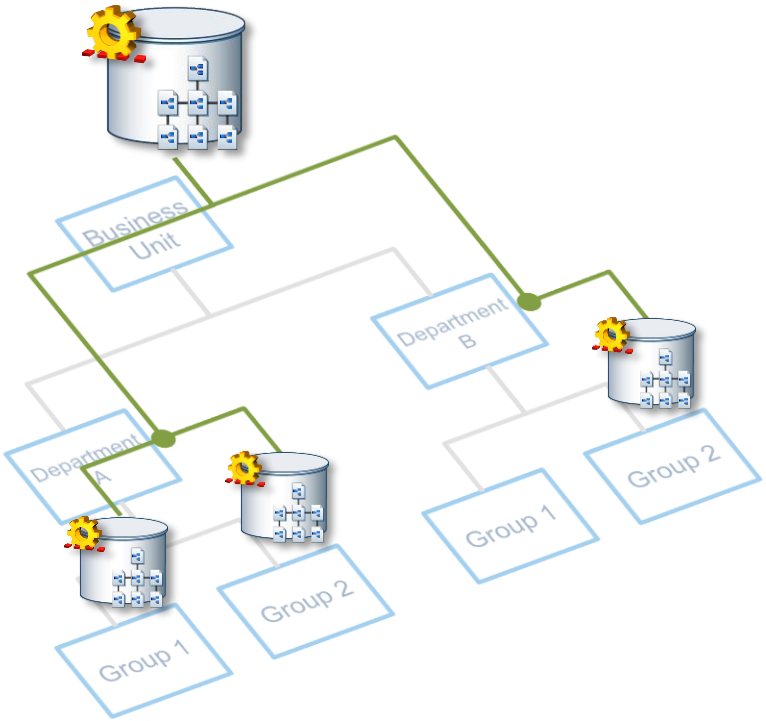
Each client accessing
NI DataFinder Server Edition

Designed for collaboration

Benefits include consistent results for data analysis and reporting, built-in user management and security, archiving system and more

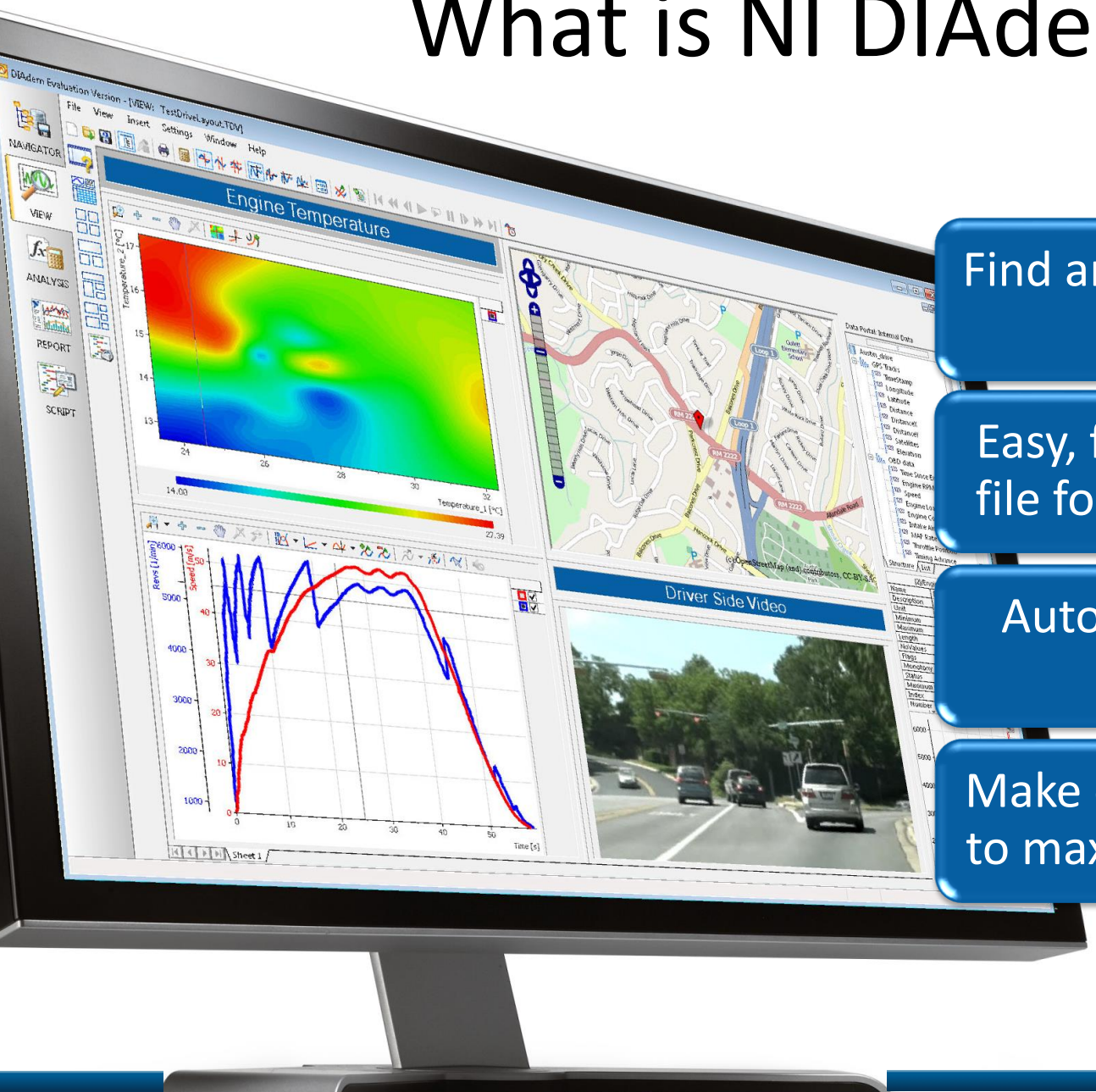
DataFinder Federation: Sharing Data…

…across the organization



…across dispersed locations

What is NI DIAdem?



Find and load the right data in seconds

Easy, flexible access to any file formats and databases

Automated analysis and reporting

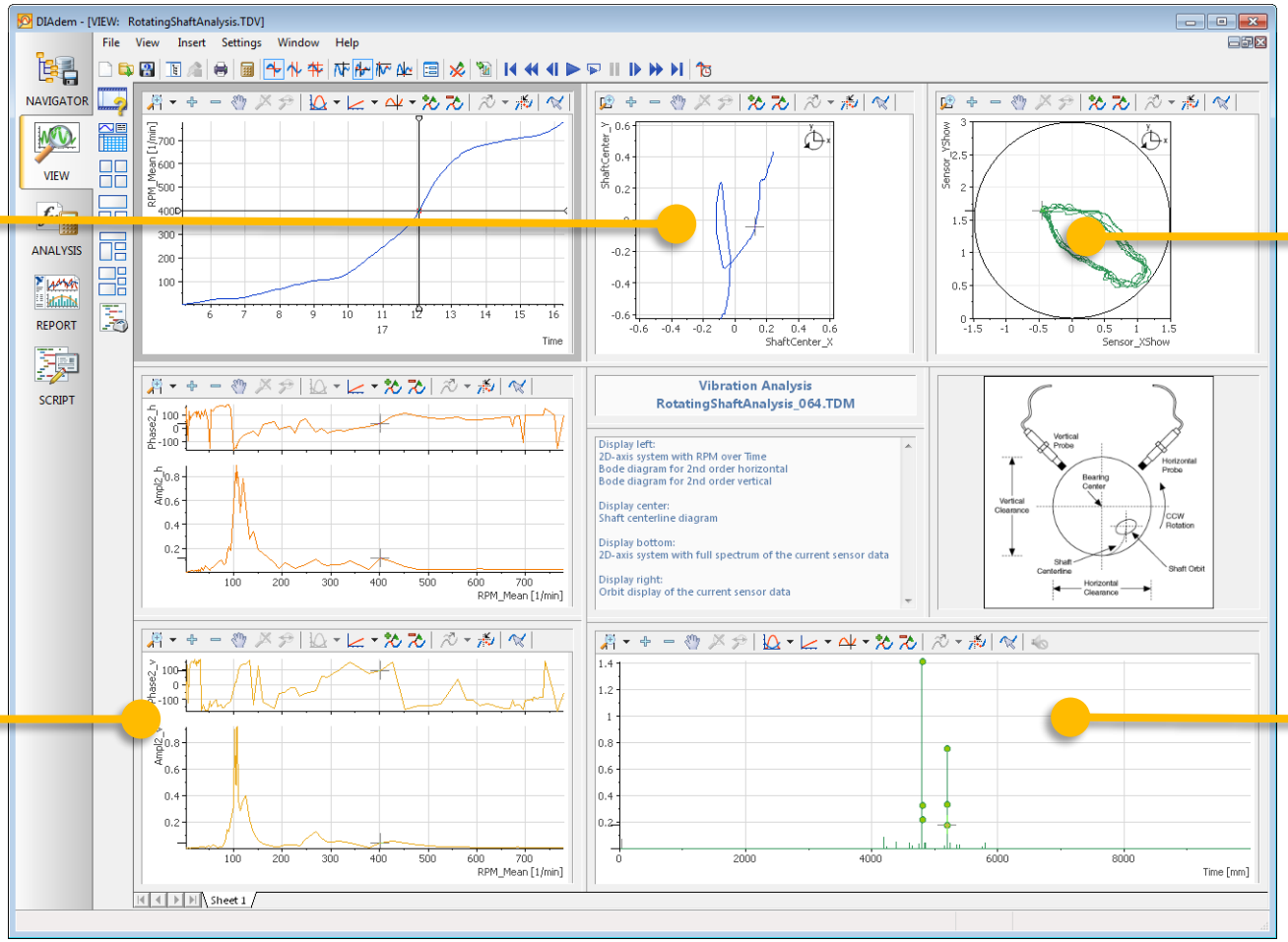
Make data-driven decisions to maximize your efficiency

What's New in DIAdem – Vibration Analysis

Ideal for Machine Condition Monitoring and Energy Applications

Shaft centerline plots and analysis

Bode plots and analysis



Orbit plots and analysis

Full spectrum FFT, resampling, and other analysis

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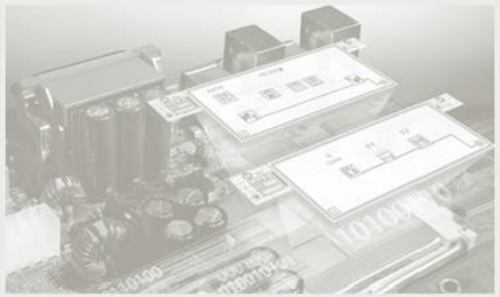

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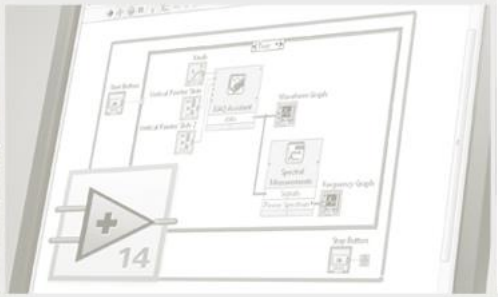

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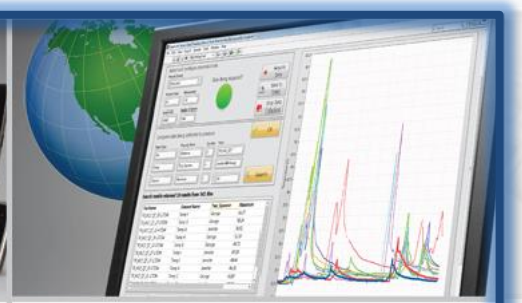

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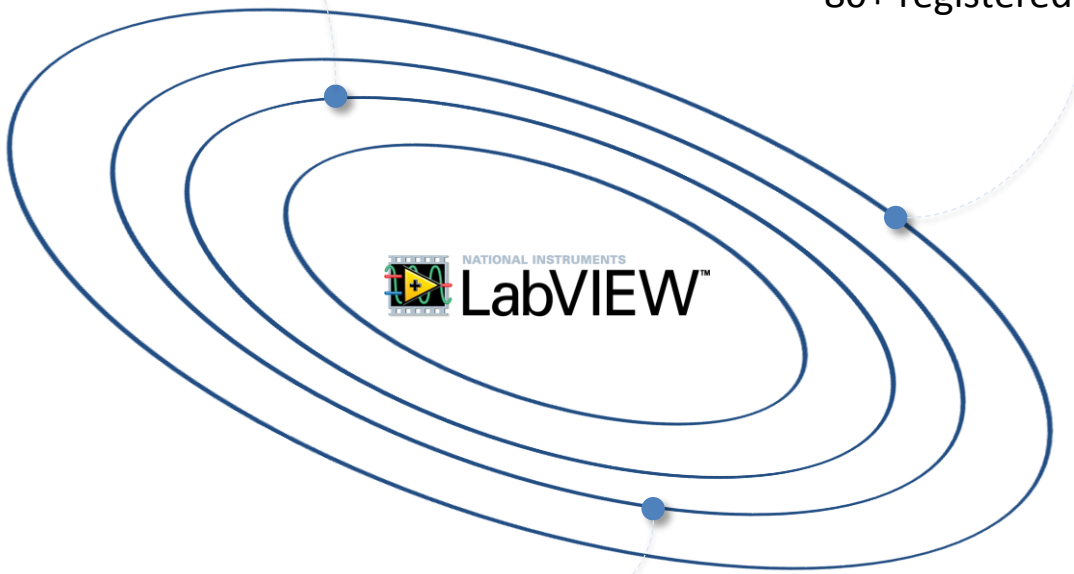
Growing LabVIEW Ecosystem

LabVIEW Tools Network
3,000,000 add-ons downloaded
Over 250 add-ons

User Community
Over 10,000 certified users
Over 800 alliance partners
80+ registered user groups



Connectivity
Over 10,000 instrument drivers
Any bus, any protocol, any platform
Integration with third-party languages

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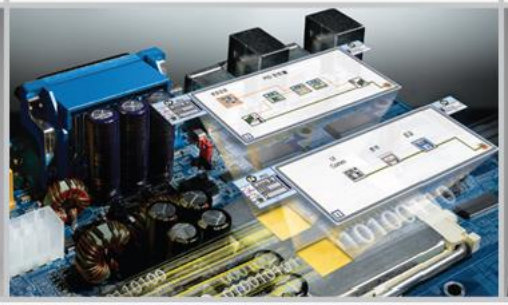

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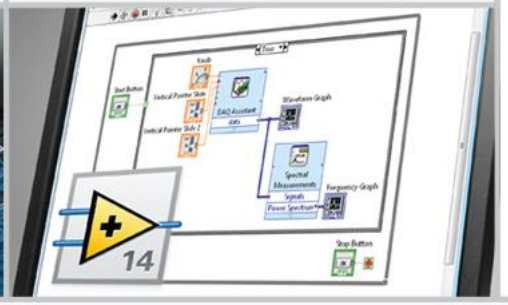

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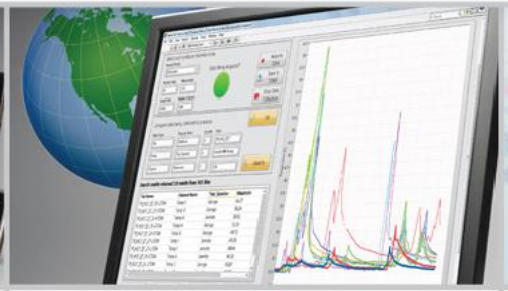

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