



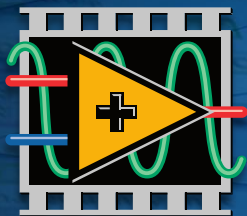
NIDays

WORLDWIDE GRAPHICAL SYSTEM DESIGN
CONFERENCE

Samuli Bergström

Marketing Engineer

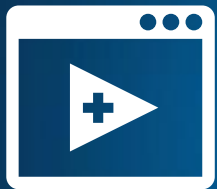
Certified LabVIEW Architect, NI



NATIONAL INSTRUMENTS

LabVIEW™ 2013

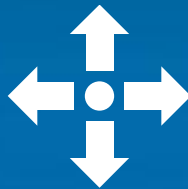
LabVIEW 2013 – New Features



Code
Management



Software
Engineering



Deployment
Experience



Mobile
and Web



Overhauled
Resources



LabVIEW 2013 – New Features



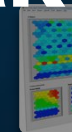
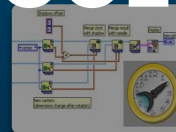
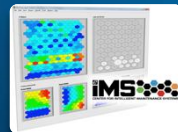
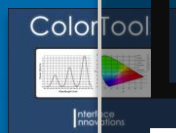
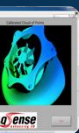
Idea Exchange Features

- ✓ Bookmarks
- ✓ Attached Comments
- ✓ Mouse Wheel Support for Controls & Indicators
- ✓ High Priority User Events
- ✓ Installers Automatically Include Necessary Drivers & Runtimes
- ✓ Open Accessor VI for LVOOP
- ✓ Desktop Execution Trace Toolkit Updates (many)
- ✓ Unit Test Framework Updates (many)

LabVIEW 2013 – New Features

New Features Demonstrations





175+ Products

LabVIEW
TOOLS NETWORK

LabVIEW Add-Ons of the Year

INNOVATION

Deploy



DATA ACQUISITION

Chameleon



EMBEDDED CONTROL AND MONITORING

Raima Database
for LabVIEW



AUTOMATED TEST

Tool Qualification Kit



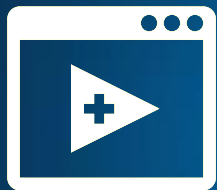
COMMUNITY

TortoiseSVN Plugin





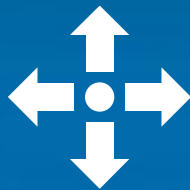
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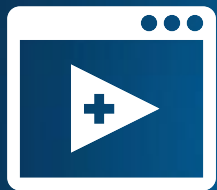


Mobile
and Web

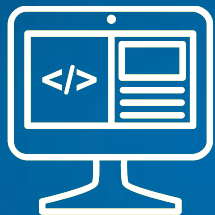


Overhauled
Resources

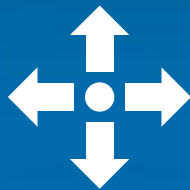
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Resources

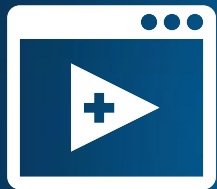


COMMUNITY

TortoiseSVN Plugin



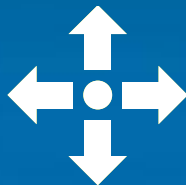
LabVIEW 2013 – New Features



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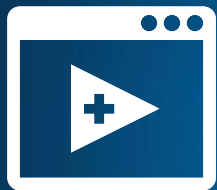


INNOVATION

Deploy



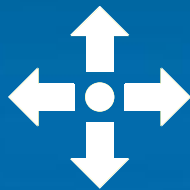
LabVIEW 2013 – New Features



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Data Dashboard for LabVIEW 2.2



Data Dashboard for LabVIEW 2.2

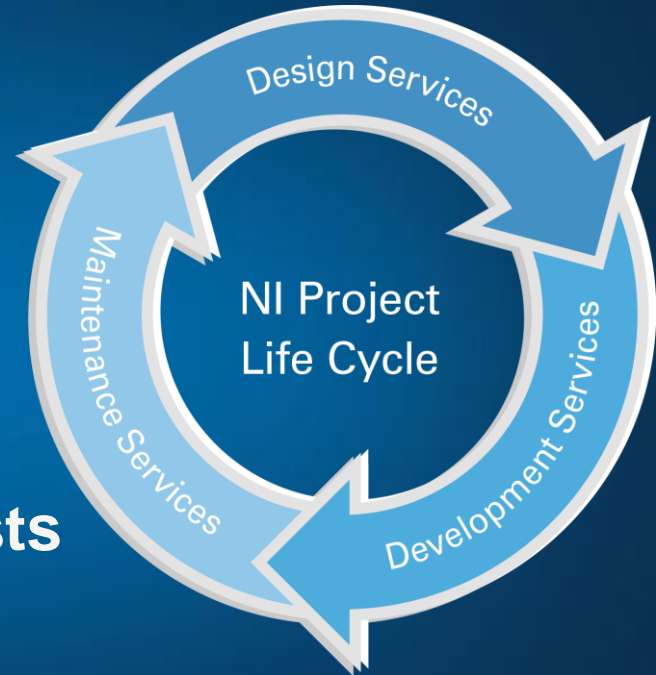


Joeri Wingelinckx

Services Manager, NI

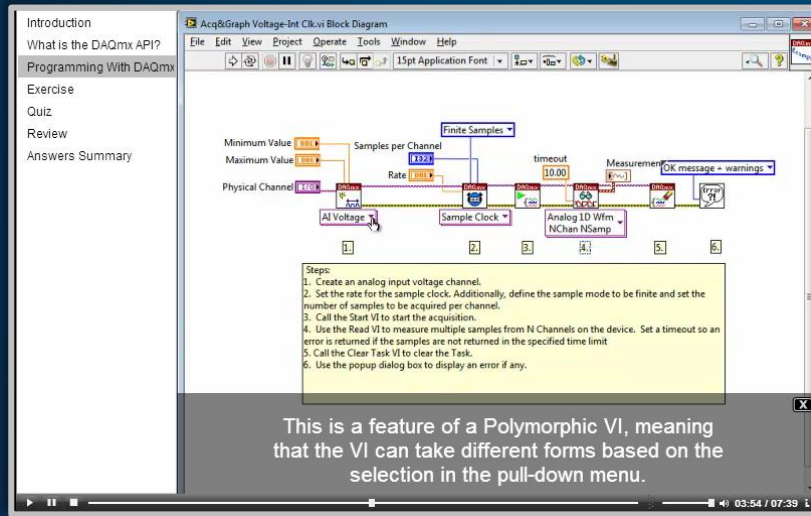
Services and Support Throughout Life Cycle

- **Innovate with Confidence**
- **Reduce Development Time**
- **Reduce Long-Term Maintenance Costs**



Expanded LabVIEW Online Training

Core LabVIEW skills included with your software purchase



The screenshot shows a LabVIEW training video player. The main window displays a block diagram titled "Acq8iGraph Voltage-Int Cbk.vi Block Diagram". The diagram includes controls for "Minimum Value", "Maximum Value", "Physical Channel", "Samples per Channel", "Rate", "Finite Samples", "Sample Clock", "Analog I/O Wfm", "NChan NSamp", "timeout", and "Measurement". A yellow box at the bottom of the diagram contains a list of steps:

1. Create an analog input voltage channel.
2. Set the rate for the sample clock. Additionally, define the sample mode to be finite and set the number of samples to be acquired per channel.
3. Call the Start VI to start the acquisition.
4. Use the Read VI to measure multiple samples from N Channels on the device. Set a timeout so an error is returned if the samples are not returned in the specified time limit.
5. Call the Clear Task VI to clear the Task.
6. Use the popup dialog box to display an error if any.

Below the steps, a text box states: "This is a feature of a Polymorphic VI, meaning that the VI can take different forms based on the selection in the pull-down menu."

LabVIEW Online Training

- LabVIEW Core 1
- LabVIEW Core 2
- LabVIEW Core 3
- Advanced Architectures in LabVIEW
- Object Oriented Design and Programming in LabVIEW
- LabVIEW FPGA
- LabVIEW Real-Time 1 & 2

LabVIEW Proficiency

Certified LabVIEW Developers in Denmark

Rasmus Ejlersen, CCM Electronic Engineering Aps

Ulrik Flyndersøe, DSE A/S

Marck Hansen, DSE A/S

Ulrik Karlsson, CIM Industrial Systems A/S

Rudi Larsen, CIM Industrial Systems A/S

Michael Lund Friis, CIM Industrial Systems A/S

Claus Moos, CCM Electronic Engineering

Stinus Olsen, CIM Industrial Systems A/S

Hans Joergen Petersen, CCM Electronic Engineering

Hoang Huy Phan, DSE A/S

Claus Soerensen, DSE A/S

Benjamin Thomsen, Danfoss Polypower A/S

Jeffrey Vale Cruz, CCM Electronic Engineering

Kasper Vestergaard, CIM Industrial Systems A/S

Stephan Winther, Prevas AB

LabVIEW Proficiency

Certified LabVIEW Architects in Denmark

Jens Christian Andersen, CIM Industrial Systems A/S

Morten Kahr Nielsen, CIM Industrial Systems A/S

Henrik Molsen, CIM Industrial Systems A/S

Steen Secher Schmidt, Gpower

Simon Stenfeldt, CIM Industrial Systems A/S

CLA Summit 2014 @CERN



18-20 March 2014

Proficient in G programming!

...minimum certification of CLD required...

“Engineers explain what it takes to
get a job at Elon Musk's SpaceX.
...LabVIEW developers needed.

for Launch Engineering – awesome LabVIEW +
great algorithm and data structure knowledge.”
LabVIEW FPGA programming experience

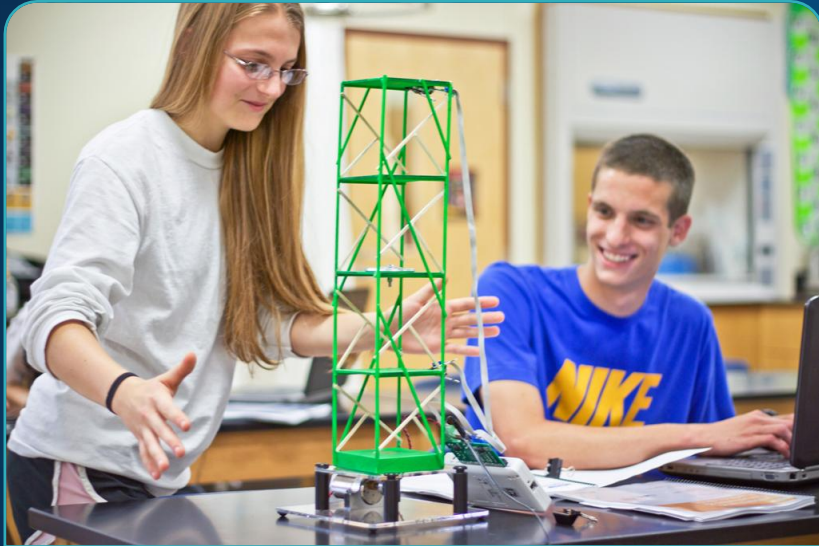
...test engineer with LabVIEW experience.

–Business Insider

...must know LabVIEW!

David Baker

Academic Program Manager, NI



Students learn about the effects of earthquakes



Researchers measure the effects of earthquakes

The Tools to “Do Engineering”



2004

NI ELVIS:
Lab Instrumentation



2010

NI myDAQ:
Student Instrumentation



2011

NI USRP™:
RF/SDR

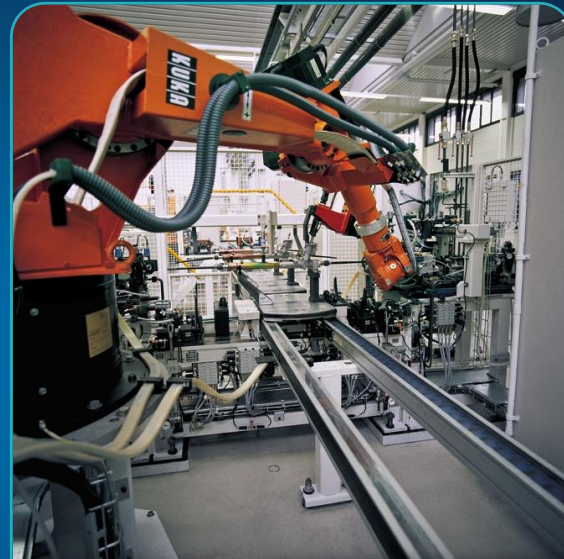
Design Real Systems, Fast



Student
Design



Embedded
Systems



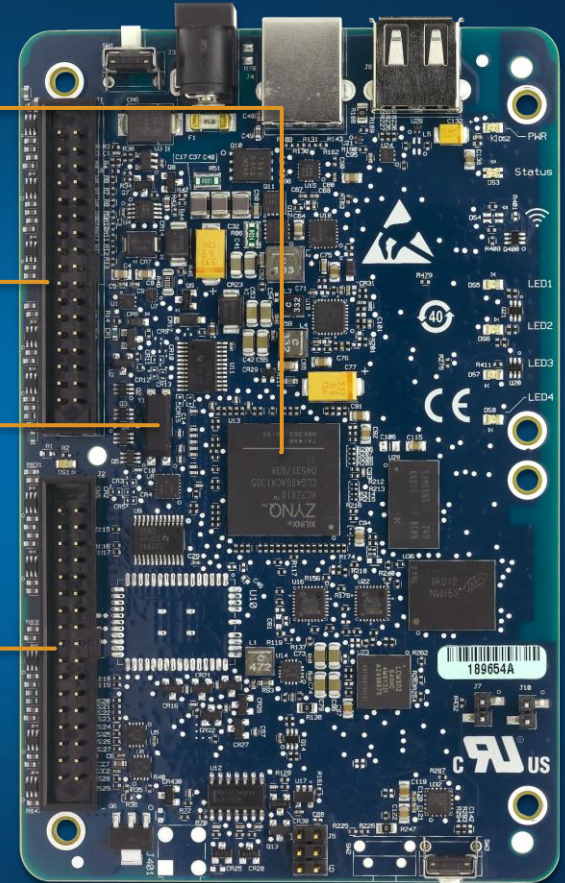
Control, Robotics, and
Mechatronics

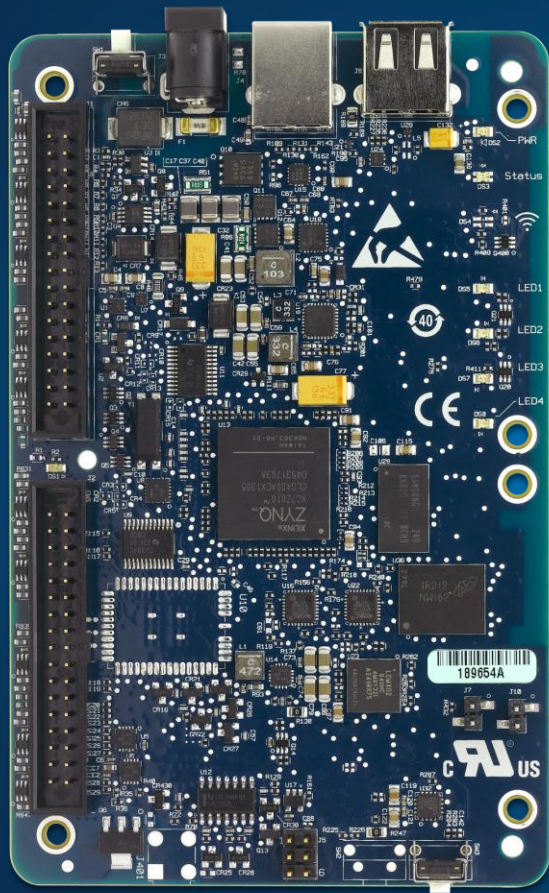
Xilinx Zynq SoC (Artix-7 FPGA
and dual-core ARM Cortex-A9)

Onboard 3-axis
accelerometer

Two 34-pin headers

User-defined button

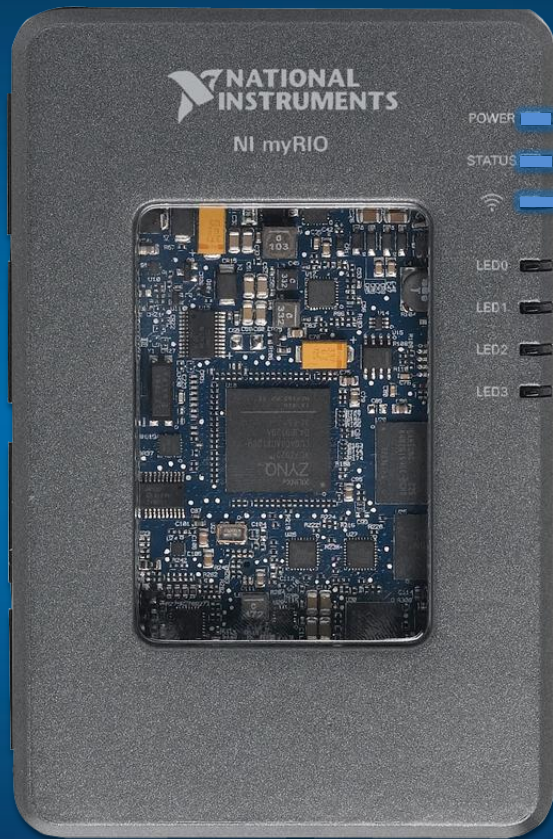




Integrated WiFi

40 lines of digital I/O
(SPI, I²C, UART,
PWM, encoder)

Stereo audio I/O





Graphical System Design



Measurement



Test



Monitoring



Embedded



Control



Desktops and
Laptops



NI CompactDAQ



PXI and Modular
Instruments



NI CompactRIO



KUKA youBot Robotics Platform



LEGO MINDSTORMS



Graphical System Design



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NI CompactDAQ



PXI and Modular
Instruments



NI CompactRIO





NIDays

WORLDWIDE GRAPHICAL SYSTEM DESIGN

CONFERENCE