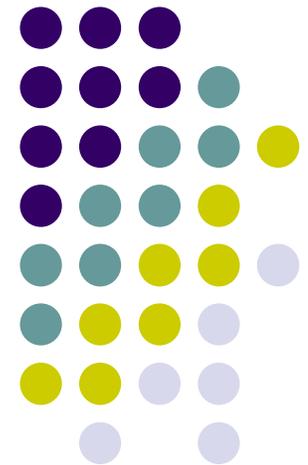# Bring your Questions and Find Solutions at your LabVIEW User Group
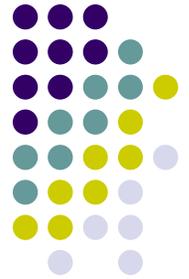
Presented by Nick Golas

Telephonics Corp.

& Robert Berger

National Instruments

IEEE I&M Society LI Section &

Long Island LabVIEW Users Group (LILUG)
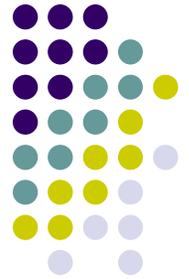
Thursday 12/11/2008

Should I Update to the Latest?

ø *Q:* I just received the latest update to LabVIEW. Should I update my project to the latest LabVIEW version?

ø *A:* If you are happy with the current LabVIEW version and there are not any "MUST HAVES" in the new update stay with the current version. Most of the time if you update the new version will be incompatible with the previous and cause the dreaded broken arrow to be displayed!

Only update if you have plenty of time & your company has plenty of money!
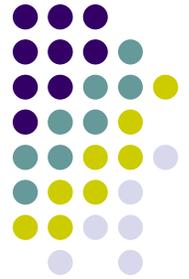
Find Instrument Drivers

ø *Q:* I need to integrate this new instrument in my test setup. Where can I find drivers?

ø *A:* Check the Manufacturer's website first. Some provide LabVIEW drivers, some DLLs. You should always ask their support team for drivers.

Go to the National Instruments Instrument Driver Network at: http://www.ni.com/idnet/

They have instrument drivers for over 6,000 instruments from over 275 different manufacturers.

Discussion Forums, Tutorials and Example Code

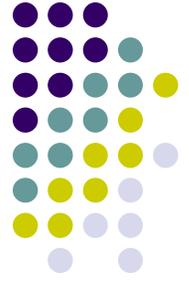ø <u>NI Discussion Forums</u> - Ask questions, share answers, and learn from your peers

http://forums.ni.com/ni/

ø <u>Tutorials</u> - Expand your product knowledge with thousands of tutorials, white papers, and demonstrations. Over 6300 items in English.

http://zone.ni.com/devzone/fn/p/sn/n15:Tutorial,n16:en

ø <u>Example Code</u> - Find example code to get started quickly or add new functionality to your applications. Over 5500 examples in English
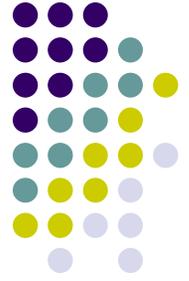
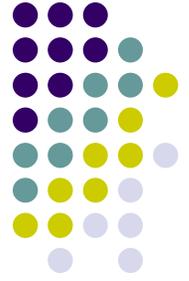ø http://zone.ni.com/devzone/fn/p/sn/n15:EXAMPLE,n16:en

Multiple LabVIEW Versions on PC

ø *Q:* Can I have and run multiple versions of LabVIEW from the same computer?

ø *A:* Since I need to support multiple projects that were developed under different versions of LabVIEW I have multiple versions installed. The versions are: LabVIEW 6.1, 7.0, 7.1, 8.0, 8.2, 8.5 and 8.6. If you need to re-install or upgrade to new computer start by loading the earliest version first and increment accordingly.

Multiple LabVIEW Toolkit Versions on PC

ø *Q:* Can I have and run multiple versions of LabVIEW toolkits from the same computer?

ø *A:* While a user can multiple versions of LabVIEW on the computer it can only have one version of LV drivers or LV toolkits on that drive because of common DLLs that are registered during the MS Install process. One way to get around this, would be to partition your hard drive and have several combinations of LV and drivers each on a different drive...
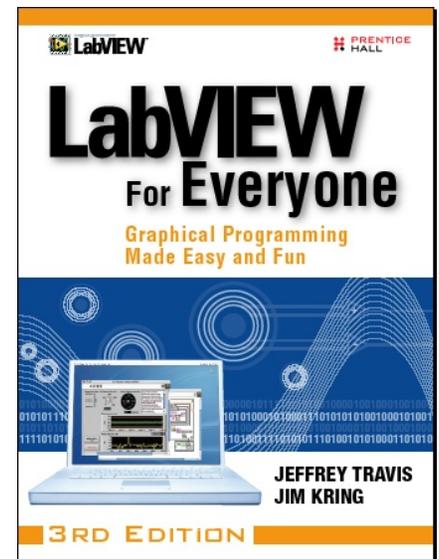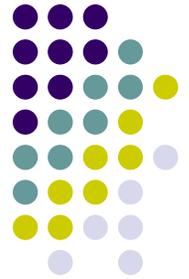
Best Book for New User

- *Q:* I am new to LabVIEW which book should I buy?

- *A: Labview For Everyone,* by Jeffrey Travis and Jim Kring. This book contains a lot of good examples and is a good source of information for both beginner and advanced users.

  Here the Amazon link for the book:

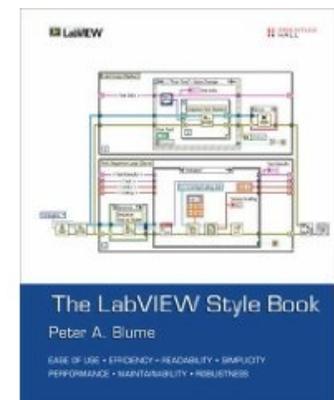 www.amazon.com/gp/product/0131856723

Best Book for Intermediate/Advanced User

ø *Q:* I am Intermediate/Advanced LabVIEW user. Any books for me?

ø *A:* If you want to program in LabVIEW and do it right buy *The LabVIEW Style Book* by Peter A. Blume from Bloomy Controls. Find out how good style improves quality and actually saves time over the full LabVIEW project life cycle
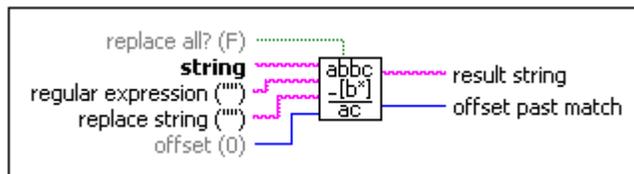
Here the Amazon link for the book:

www.amazon.com/LabVIEW-National-Instruments-Virtual-Instrumentation/dp/0131458353
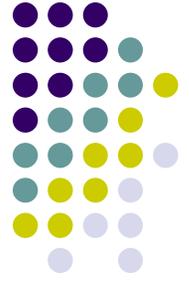
Documentation for VIs

ø *Q:* How much documentation should I provide with each one of my VIs?

ø *A: As much as possible! The more* documentation you provide the better in the long run for you or anyone else assigned to support that project. Never heard of over-documentation.

Search and Replace Pattern.vi
Searches string for substrings that match regular expression and replaces those substrings with replace string

Collect and Store Large Amounts of Data

ø *Q:* What is the best way to collect and store large amounts of data in memory?

ø *A:* The recommended way to store large sets of data is to stream the data directly to disk using the TDMS file data type. There are several white papers on this technology including the 'Introduction to LabVIEW Streaming VIs tutorial' at:
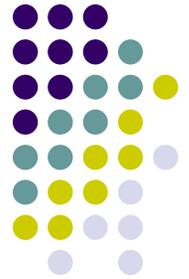
http://zone.ni.com/devzone/cda/tut/p/id/3539

Allocating Memory in LabVIEW

ø *Q:* How do I allocate memory in LV?

ø *A:* The 'Managing Large Data Sets in LabVIEW'
tutorial is an excellent source to delve into memory
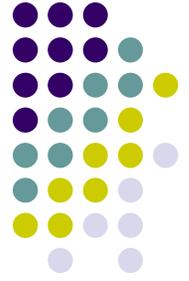allocation, as well as the LabVIEW help file and can
be found at:

http://zone.ni.com/devzone/cda/tut/p/id/3625

Timing Issues when Upgrading Computer or LabVIEW Version

ø **Q:** If I upgrade my computer or LV version and reinstall an existing program, will I run into timing issues running the code?

ø **A:** If you are using a faster processor and you have not specified any loops to run at a certain speed (via timed loops and waits), then certain facets of your program may run faster as your operating system should be more powerful. Also, you may run into issues on this type of upgrade if your program has race conditions caused by the improper use of global or local variables.
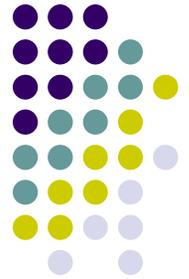
Printing VIs

ø *Q:* What is the best way to print a VI or subvi?

ø *A:* Using the Ctrl-Prt Scr is the easiest way to save a copy to Paint. There are also options in the File menu by selecting File»Print Window to print the contents of the active window

In addition, by selecting File»Print you can print more comprehensive information about a VI, including information about the front panel, block diagram, subVIs, controls, VI history, and so on.
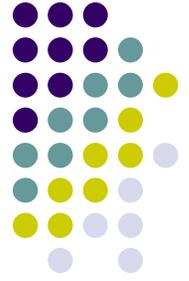
Zooming in LabVIEW

ø *Q:* Can I zoom into the block diagram? How can I view the block diagram easier?

ø *A:* There is not a zoom feature in LabVIEW. One can change the screen resolution to its maximum to see the block diagram easier, or use the Navigation Window (Ctrl+Shift+N key combination) to see a portion of the large front panel or block diagram or from the menu select View»Navigation Window.

Presentation Material

ø *Q:* Where can I find all the Presentations and sample code VIs from the Long Island User Group?

ø *A:* Check the IEEE Long Island Section website, Instrumentation & Measurement Society page at:

www.IEEE.LI/ims

ALE System Integration website User Group page

www.aleconsultants.com