Source Code Control

TortoiseSVN and VSI TSVN LabVIEW Toolkit

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Content

▶ Overview of Source Code Control

▶ TortoiseSVN

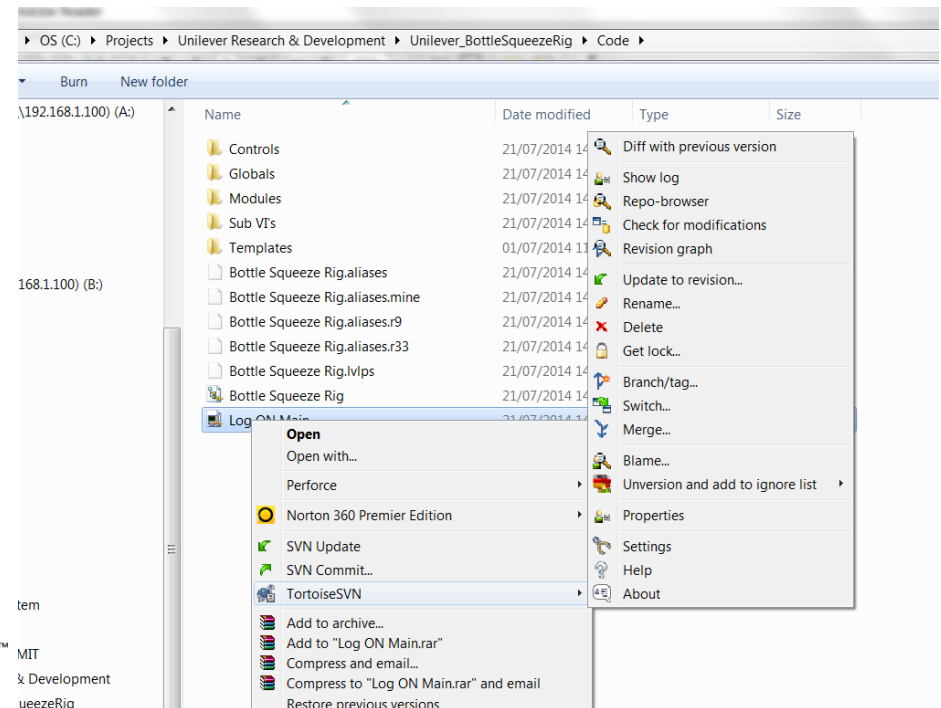▶ TSVN LabVIEW Toolkit

What is Source Code Control (SCC)?

▶ Software used to track changes to files

    ▶ Store files in a repository

    ▶ Stores all versions of files and a record of the changes

    ▶ Changes are made within a local workspace

    ▶ Access for multiple developers
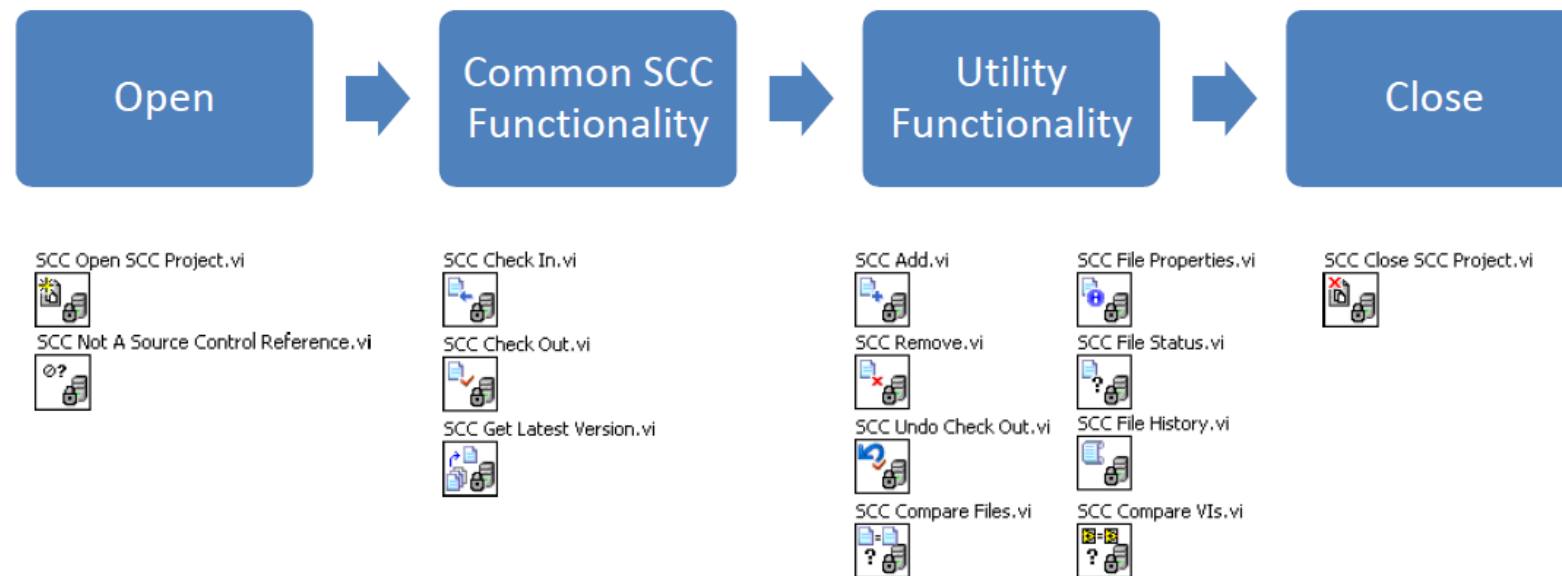
▶ Can be used in or outside of LabVIEW

SCC in LabVIEW

▶ Select the SCC software that you will be using, details of compatible software is on the NI website

▶ Configure the selected software (if applicable) through Tools > Source Control > Configure Source Control

▶ Configuration in LabVIEW is different for each SCC software, resources available online.

Argenta

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NATIONAL INSTRUMENTS
LabVIEW™

SCC outside LabVIEW

▶ Often SCC software have a standalone user interface to access files

▶ In most cases the standalone user interface offers more features than the LabVIEW integrated option
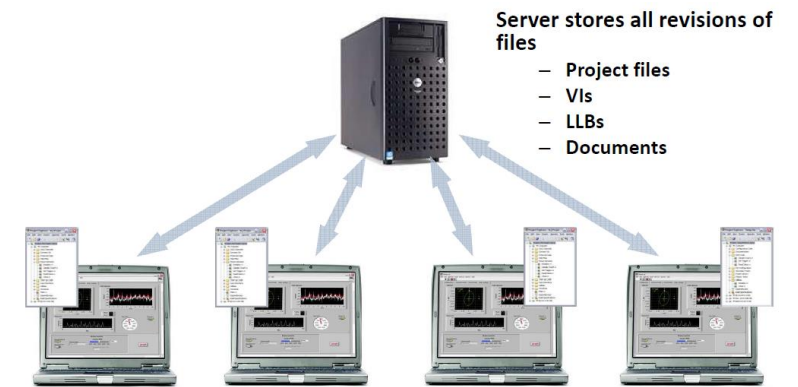
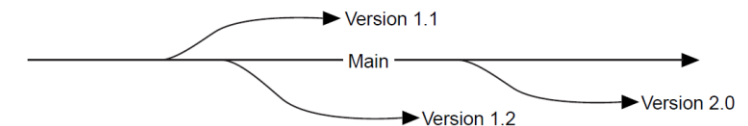▶ Again, each SCC software is different
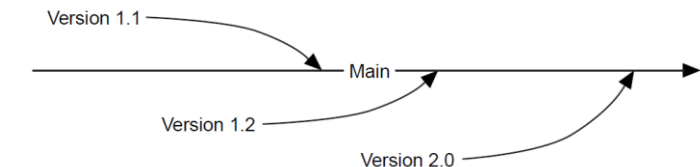
SCC LabVIEW VIs

Why use SCC?

- Revert to previous version
  - Undo mistakes
  - Retrieve code prior to last release to client
  - Retrieve code that was run a particular date
- Team based development
- Keep multiple machines up to date with latest file version
- Doesn't just apply to code, can be used for proposals etc.
- Branch and merge code

Server stores all revisions of files
- Project files
- VIs
- LLBs
- Documents

Branch—Split from the main development line to create a new version of the code

Version 1.1
Main
Version 1.2
Version 2.0

Merge—Integrate the development split into the main development line
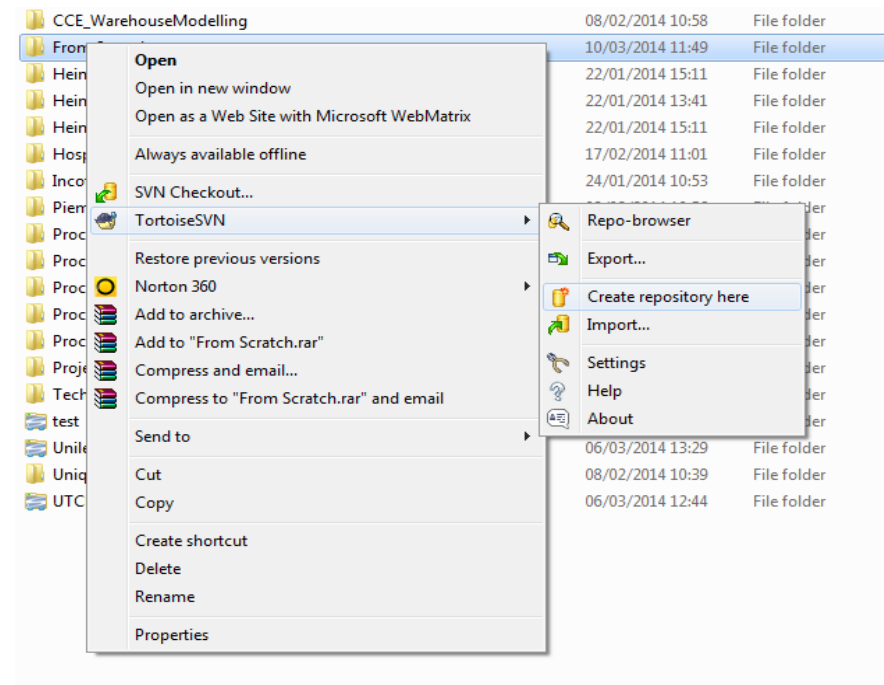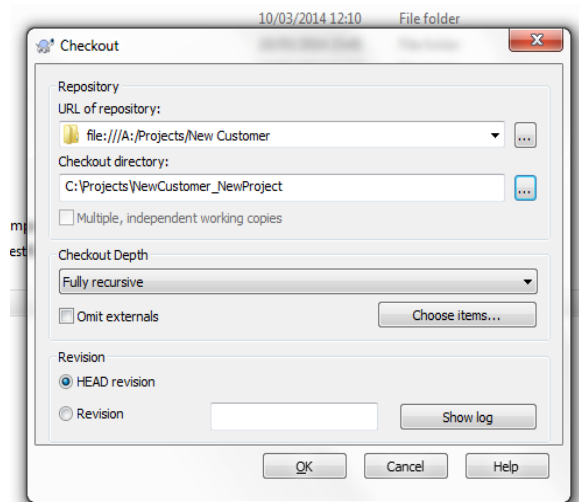
Version 1.1
Main
Version 1.2
Version 2.0

SCC Tips

- Maintain consistent file hierarchy
  - LabVIEW project, Windows explorer and SCC repository
- Avoid parallel development on the same module
- Only check out code you will be modifying
- Test code before checking in
- Document changes in the code

What is TortoiseSVN?

▶ A really easy to use revision control / version control / source control software for Windows

▶ It's an Apache™ Subversion (SVN)® client

▶ Free to all environments

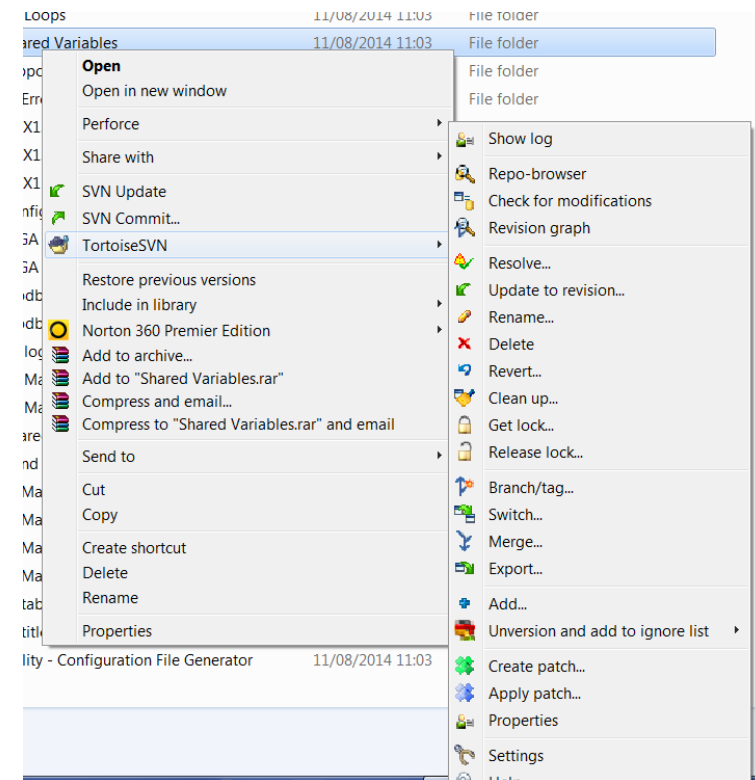▶ Can be used with all development tools and with any type of file

▶ Download from here
http://sourceforge.net/projects/tortoisesvn/?source=directory-featured

Getting started

- Create a repository
  - One for each project
  - One for all projects
- Check repository out to local workspace

Local Workspace

- Several options available when working in the local workspace

  - SVN Update

  - SVN Commit…

  - Get Lock…

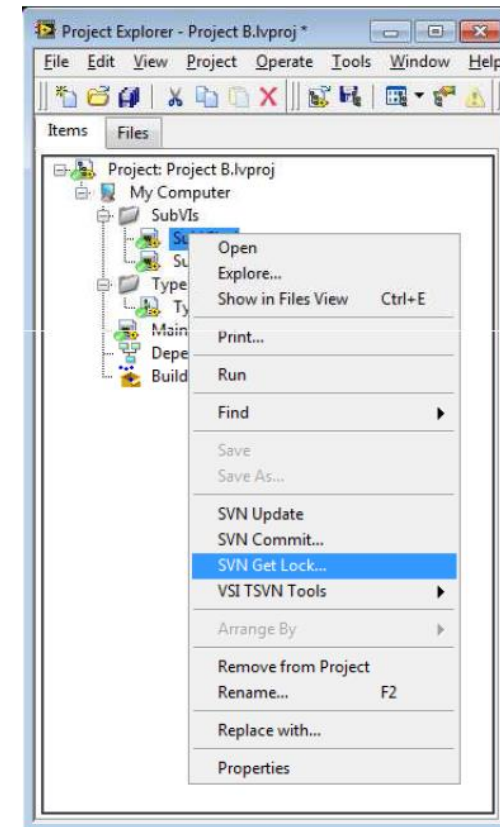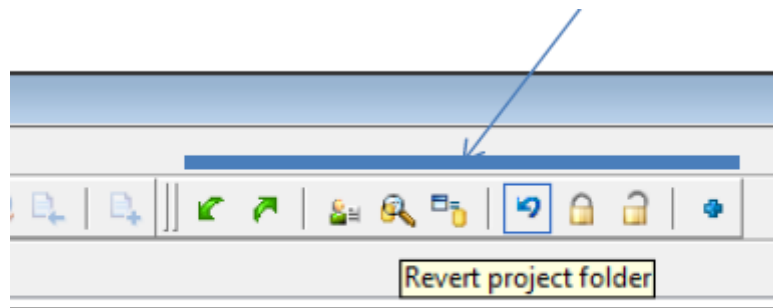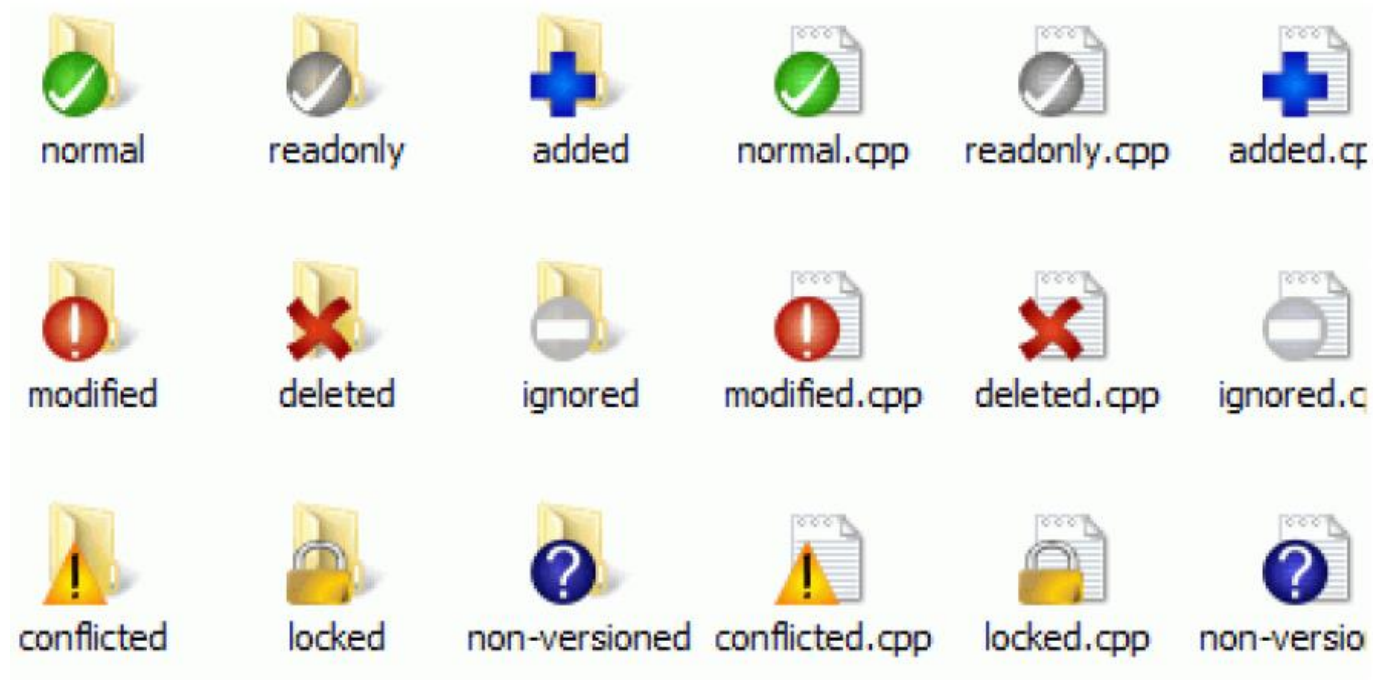 - ……….

TSVN Toolkit

▶ LabVIEW toolkit to enable smooth integration of TortoiseSVN

▶ Free download, http://sine.ni.com/nips/cds/view/p/lang/en/nid/211524

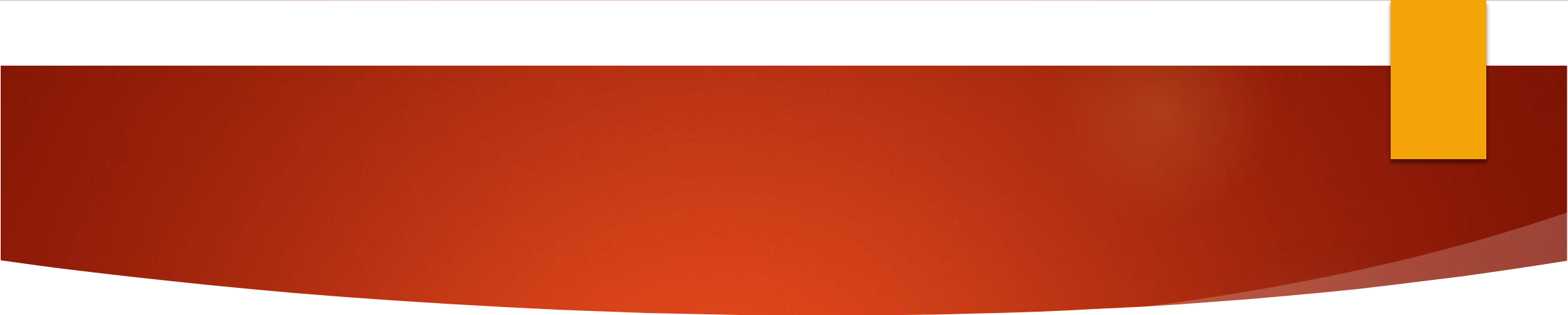▶ Works with 2010 or later

▶ Installs with JKI Package Manager

TSVN Toolkit

▶ Brings TortoiseSVN functionality into LabVIEW

▶ Toolbar added for quick function access

TSVN Toolkit Icons

▶ Thanks for listening!

▶ Any questions?