

A Quick start to HPSDR Software – Using TortoiseSVN to checkout HPSDR software from SVN.TAPR.ORG

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Note this is written for WindowsXP. I don't have Vista or 7, so if anything here needs changing or clarification for those operating systems, please send me an email so this document can be updated.

1. Download and install TortoiseSVN.
 - <http://tortoisesvn.net/downloads.html>
2. Do not create a repository on your computer, you don't need it. If you accidentally did, just delete it.
3. Create a folder where you will store the software you are going to get. I use C:\HPSDR
 - In SVN-speak, you want to Checkout a copy (make a working copy) from the repository. Don't worry the repository doesn't need to keep track of all the checked out copies.
 - Right-click the HPSDR folder (or whatever folder you want to use). You will see the windows context-sensitive popup appear, now with several new items. Select SVN Checkout...
4. You will now need to enter the repository URL from which you which to download software. This will be from svn.tapr.org
5. Exploring the svn.tapr.org repository.
 - There are two different interfaces to the TAPR repository, one that is for your browser, and a different one for your TortoiseSVN client to use. They both use http:// to identify their respective URLs.
 - <http://svn.tapr.org> is the web-friendly interface. You can look through it with your browser. You will see 3 main areas in the repository:
 - OpenHPSDR Main – documentation, pc boards and cpld code, Verilog code, etc. The W5WC PowerSDR branch is here also.
 - OpenHPSDR KISS – the KISS Konsole software
 - OpenHPSDR Windows –the PowerSDR software

SUBVERSION REPOSITORIES

 OpenHPSDR Main   calm   English - English 

ABOUT

You can customize this short message in the index.tmpl of this template in order to tell your visitors what they find in your repositories.

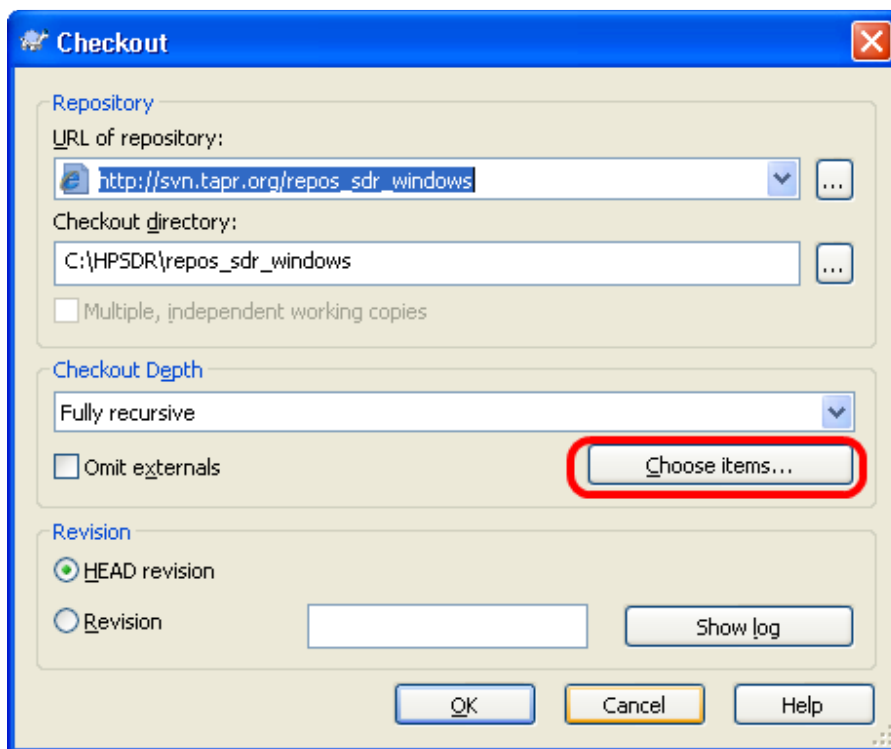
Visit www.websvn.info for more information about WebSVN.

Learn more about Subversion at subversion.tigris.org.

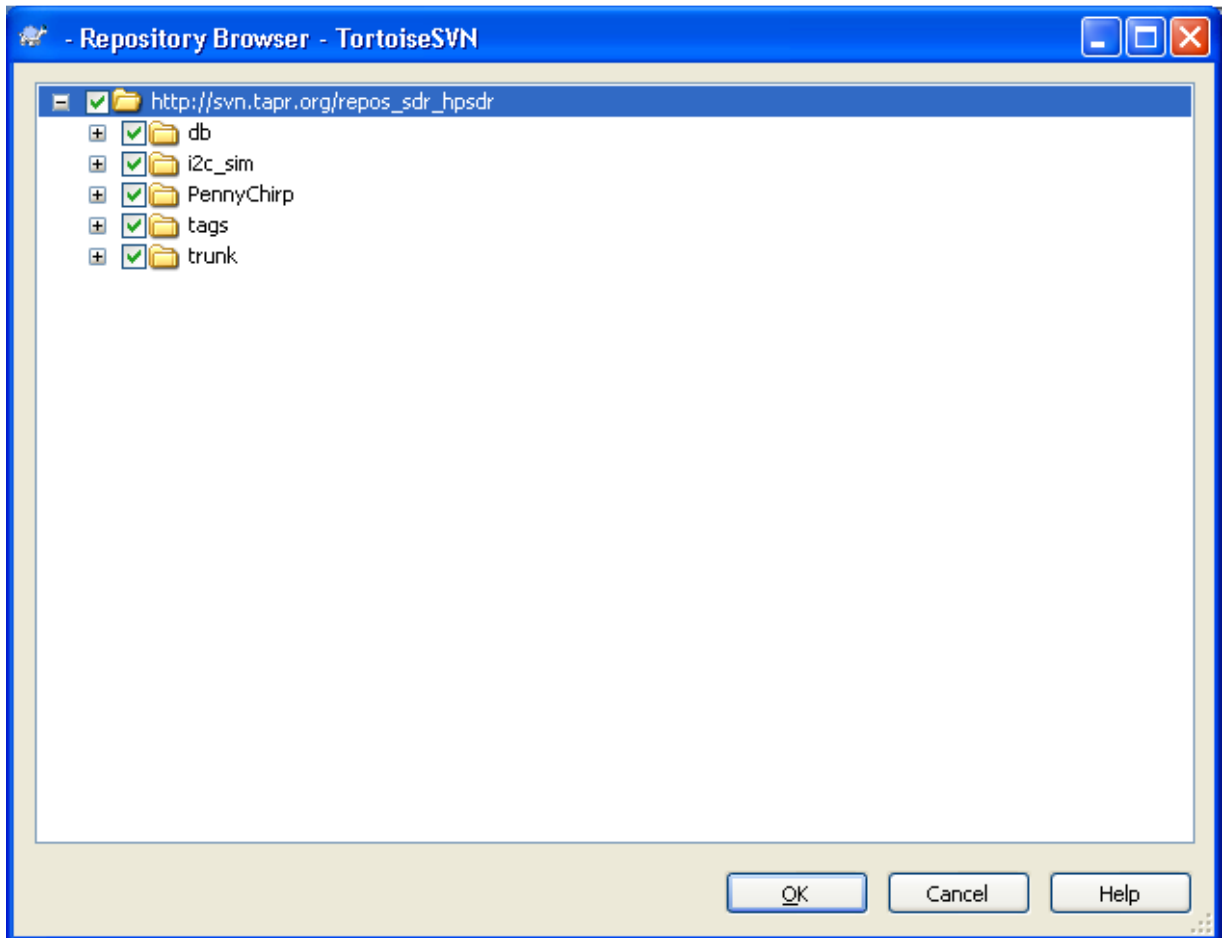
SUBVERSION REPOSITORIES

 OpenHPSDR Main	Rev 2316	2d 16h	w5wc
 OpenHPSDR KISS	Rev 412	1d 05h	k9trv
 OpenHPSDR Windows	Rev 3880	66d 20h	kd5tfd

6. The svn-accessible URL's for those three areas are (note underscores not spaces in these URLs – hard to see):
 - OpenHPSDR Main = http://svn.tapr.org/repos_sdr_hpsdr
 - OpenHPSDR KISS = http://svn.tapr.org/repos_hpsdr_kiss
 - OpenHPSDR Windows = http://svn.tapr.org/repos_sdr_windows
7. You do not want to checkout the whole subdirectory – each one is gigabytes in size and has a lot of stuff you will never need. You will want to focus on a subset of the specific directory. Use the Choose items... button to narrow the amount of material that you will checkout.



This will provide you with a tree selector. See below.



8. You will need to uncheck those items (most) that you don't want. This also means you need to travel down the directories selecting or unselecting material. Note: if you unselect the box then everything underneath it is unselected as well. Reselecting a box DOES NOT RESELECT the underlying folders and files, you will need to reselect just what you want.
9. SVN-speak... Note these are general concepts, there's a lot of exceptions to these general rules.
 - The 'trunk' carries the main development line of code.
 - The 'branches' carry software that has been forked off the main branch at some point. Normally there will be several parallel branches, each differing in some regard. In HPSDR, branches are usually identified by the callsign of the developer working on a specific branch. This is where you may find new code for experimenting, or perhaps a quick bug fix. These are what are generally used by most people during the development phase.

- The 'tags' carry snapshots in time of stable releases. Note that SVN makes tagging a release a very inexpensive process – the files in the release are not copied from the branch or trunk – the tag contains just a revision history of the files and folders at that instant in time. SVN reconstructs the actual files and folders on the fly when you checkout code.
 - Normally a branch will either be merged back into the trunk or snapshotted as a tag at some time if it is desired to have that code branch survive or become a release.
10. Click the OK button. TortoiseSVN will then start downloading code, creating directories, and building the working copy of the files on your computer. You'll get a progress indication.
 11. In addition to the files and folders, a hidden folder called .svn and some files are created in the top-level folder you created. These contain the revision numbers, a pristine copy of the files and folders, and the URL of the repository. **DON'T DELETE THESE FILES AND FOLDERS** if you want to keep the checked out files. The pristine copy allows you to Revert any changes you may have made to your local checked-out copy back to the pristine state. SVN remembers when you have changed files – but not when you have changed folders, file locations, etc.
 12. The folders and files that are being managed by SVN will have a green checkmark on them. Any that you have changed will have a red mark on them, and anything with a blue mark is a folder or file that you moved or created and did not tell SVN about.
 13. SVN Update checks the repository, and brings your local checked out copy up the latest revision of whatever exact branch or tag you checked out. SVN required you to manually pull and update – it never pushes updates.
 14. If you intend to submit your code changes back to the repository (merge your branch) then it is important that you do several things:
 - Commits and merges must be approved. You may need to create a new branch to hold your revisions.
 - Remember to update your checked-out material frequently. If someone alters the repository while you are altering your checkout copy, it can be very messy to clean up the conflicting changes. SVN won't let you merge a file if independent changes have occurred. You will be forced to update, then resolve any conflicts prior to a merge.
 15. Make sure to download a copy of the free book "Version control with Subversion" version 1.7 and browse it for more details on how the Subversion version control system works, trunks, branches, tags, etc.

<http://svnbook.red-bean.com/>

16. Congratulations, you now have the basics for using TortoiseSVN to checkout code from svn.tapr.org.

END OF DOCUMENT