

SUBVERSION FOR COMPILER DESIGN STUDENTS: A CRASH COURSE

Subversion is a version control system similar to CVS. It was designed by people who were annoyed by some of the shortcomings of CVS.

QUICK START

Log in to cvs.cs.mcgill.ca using ssh, then

```
svnadmin create /xtra/groupX/repo
```

Replace **X** by your group number. Replace “**repo**” by whatever you feel like. Now, put some files in the repository

```
svn import projectdir file:///xtra/groupX/repo -m "Initial import"
```

It helps if your project has the following directory structure:

```
projectdir/  
projectdir/tags/  
projectdir/branches/  
projectdir/trunk/      ⇐put your code here
```

You’ll see why once you’ve used subversion for a bit. After the initial import, check out your project with

```
svn checkout file:///xtra/groupX/repo/trunk project
```

Where **project** will be the local directory name.

svn commands have the following syntax:

```
svn command [options] [args]
```

VERY USEFUL COMMANDS

(Familiar to those of us who’ve struggled with CVS before...)

| | |
|--------|----------------------------------------------------------------|
| add | Adds files and directories. |
| blame | Shows detailed author and revision information for file(s). |
| commit | Send changes from working copy to the repository. |
| delete | Delete item from working copy or repository. |
| export | Create a clean copy of the repository. |
| log | Display commit log messages. |
| move | Move a file or directory. |
| status | Print status of working copy. |
| diff | Display difference between working copy and remote repository. |
| update | Update working copy from repository. |

You can also use svn from the labs or from home by substituting “file:///” for “svn+ssh://user@cvs.cs.mcgill.ca/”.

HOW TO USE

Here’s an example session, assuming that I’ve already created the repository with the **svnadmin** command on cvs.cs.mcgill.ca, and I’ve set up my project with the above directory structure. Try it to see what’s going on.

```
svn import joos svn+ssh://kwysoc@cvs.cs.mcgill.ca/xtra/group9/joos  
[ I can now rm -rf joos since it's on the cvs server ]  
svn checkout svn+ssh://kwysoc@cvs.cs.mcgill.ca/xtra/group9/joos/trunk joos  
cd joos  
[ I can now work in the joos directory. Some time passes. What have I done? ]  
svn diff  
[ Ooh, our groupmates have committed some code. Let's see what they did. ]  
svn update  
svn blame- r COMMITTED:HEAD *  
[ I've worked on the peephole optimizer for a bit... time to let my group-mates know ]  
svn commit -m "Added some more optimizer patterns"
```

RESOURCES

<http://subversion.tigris.org/> - Main svn site

<http://google.com> - There is tons of help to be found, including quick reference cards.

svn help [command]