

# THE TOOLS WE USE – SUBVERSION EVERYWHERE



A title like “subversion everywhere” is not a call to undermine your friends and profs. It is a call to manage the electronic copies of your work. More specifically, subversion is the name of a popular source control system that is available to all students in the Faculty of Computer Science (FCS).

Source control, often called *version control* or *revision control*, speaks of the processes and the tools that manage changes to code and documents over time. Source control software allows multiple developers to work on common program files independently of one another, merge their updates with changes from other developers, and make their changes available to others. Every software development company uses some form of source control software so it is time to become familiar with the concepts now!

Subversion is commonly used in open source projects. It maintains a master copy of the code in a “repository” along with a history of all changes made to the code. Developers retrieve copies of the code to modify locally. When code changes in their local copy are stable, the developers return their updates to the repository for others to retrieve. Developers can also retrieve prior versions of their code from the repository, which is useful when you have made changes that you want to undo.

You can have your own FCS subversion repository, thanks to our tech support team. Create your own repository by directing a web browser to <https://svn.cs.dal.ca> (note the “https” prefix) and providing your Bluenose login and password. Once you have claimed your repository, use it to:

- track changes to code from your assignments -- as you reach some stable point, send the code to the repository for safekeeping;
- coordinate projects between several FCS students -- e-mail [cshelp@cs.dal.ca](mailto:cshelp@cs.dal.ca) to make a subdirectory of your repository available to other students in your project group;
- store different versions of experiment data; and
- maintain versions of text files, like thesis files or figures.

To get started with subversion, read the first three chapters of [svnbook.red-bean.com/en/1.1/index.html](http://svnbook.red-bean.com/en/1.1/index.html) or get your questions answered at [subversion.apache.org/faq.html](http://subversion.apache.org/faq.html). Start by learning the following commands: “checkout” to retrieve a project, “add” to add files to a project, “commit” to send your changes to a repository, and “update” to retrieve changes from the repository. Subversion commands on Bluenose all begin with the command “svn”. GUI interfaces to subversion also exist for many IDEs. The key to using subversion is to send stable updates from your working directory to the repository regularly rather than treat the repository as just a place for polished code.

In the New Year, add a little subversion to your life!

Dr. Michael McAllister, *Professor*