

Why Version Control?

Version control (also called *source control* or *revision control*) is a software tool that helps you keep track of changes made to files:

- A version control system remembers the *history* of your files. If you stuff something up, you can get an earlier version back again.
- A version control system helps you *share* changes. It makes things easier to manage if several of you are working together, or if you are working in more than one location.

A common scenario

Imagine that you're working on code or a paper with a colleague...

- How do you find out when they change something?
- How do you merge your changes without getting in a mess?
- How can you find out which of you introduced a bug, and when?

What can version control do for you?

A version control system...

- Records your files' history for you
- Shows differences between different versions
- Handles synchronization between copies on different computers
- Allows you to go back to the exact code you used for that 'great looking plot' a couple of hours ago...

Isn't this too much trouble for my little experimental program?

Honestly, no. Setting up and using version control has possibly the best payoff, in terms of improving your research effectiveness and general happiness *straight away*, of any change you could make in your working practices. There's no better time to get started than right now.

Version control reassures you and the people you collaborate with, gives you the confidence to carry out more ambitious experimental work, and makes your everyday working processes more enjoyable.

Kinds of version control system

Distributed (Mercurial, git)

- every working copy has complete history
- commits are local, then push/pull between computers

Centralised (Subversion, CVS)

- one server, one repository database
- every commit is straight to the server

Getting started with version control

Find a hosting service:

- your IT department?
- code.soundsoftware.ac.uk? (UK researcher)
- GitHub or Bitbucket?

Create your project:

- commit your current code
- push to the hosting service
- ... and you're on your way

Read the full article: <http://soundsoftware.ac.uk/why-version-control>

Read "Get started with your software and our project site":

<http://soundsoftware.ac.uk/getting-started-soundsoftware-code-site>