# 

# Version Control Short Script

Mike Jackson, The Software Sustainability Institute

This work is licensed under the Creative Commons Attribution License

Copyright © The University of Edinburgh 2012

See http://software-carpentry.org/license.html for more information.



Derived from Chris Cannam’s original at, <https://code.soundsoftware.ac.uk/projects/easyhg/wiki/SC2012BootcampPlan>, but just using the command-line.

## Prerequisites

Mercurial, BitBucket.

## Introduction

Look at VersionControl.ppt

Use Mercurial command-line. EasyMercurial GUI as a visually appealing alternative you can try in your own time.

## Create a repository and add a file

hg init

hg status

hg add

hg commit

Create .hgrc and a [ui] entry.

Create .hgignore and a syntax: glob entry for Emacs scratch files if relevant.

## Log, status, difference and revert

hg log

hg status

hg commit

hg diff

hg revert

hg update 0

hg update N

hg update

Show above when more than one file in the directory.

hg diff –r M –r N

hg tag MY\_JOURNAL\_CODE

hg update 0

hg update MY\_JOURNAL\_CODE

No backups!

## Working by yourself with backups

Manual copy, DropBox etc.

BitBucket.

Bitbucket create repository.

Bitbucket repository URL.

hg push

Bitbucket Source and Commits.

BitBucket, .hgrc and [hostfingerprints] entry.

hg commit, push

rm –rf localrepository

hg clone for a complete download of the repository.

hg clone so two copies of the repository.

hg commit and push in one.

hg incoming, pull, history, diff, update in the other.

Ready to collaborate!

## Working with colleagues

Get volunteer’s username.

BitBucket, cog icon, Access Management, username Write permission.

Volunteer hg clone.

Volunteer edit, hg commit.

BitBucket URL structure, their username, your repository username.

hg pull volunteer’s changes.

Volunteer hg push.

hg pull volunteer’s changes.

hg history, update.

Volunteer and you edit same line, commit.

Volunteer hg push first.

hg push and abort message.

hg pull, history.

hg merge.

Conflict, resolve (keep mine ignore theirs, keep theirs ignore mine, resolve).

Edit to resolve conflict, note mark-up.

hg resolve –m (-m for “mark resolved”, not for “message”).

hg commit, push.

hg annotate.

Share when completed units of work, small enough to be reviewed within an hour.

## Practical

Show version-control-practical.html

Keep 10 minutes for the end…

## Summary

A complete history of the provenance of your code, configuration files, documents etc.

The ability to get the exact code you used to produce the exact data you used to produce the exact graph in a specific conference or journal paper, or thesis.

Back-ups

Collaborative working

Single most important tool we teach over these two days!

## Quickie practical

Create a new repository, SoftwareCarpentry.

Add your shell files to this directory.

Push this repository to BitBucket.

Throughout the rest of the boot-camp keep pushing your directories and files there!