1967-7

Advanced School in High Performance and GRID Computing

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Working with svn.

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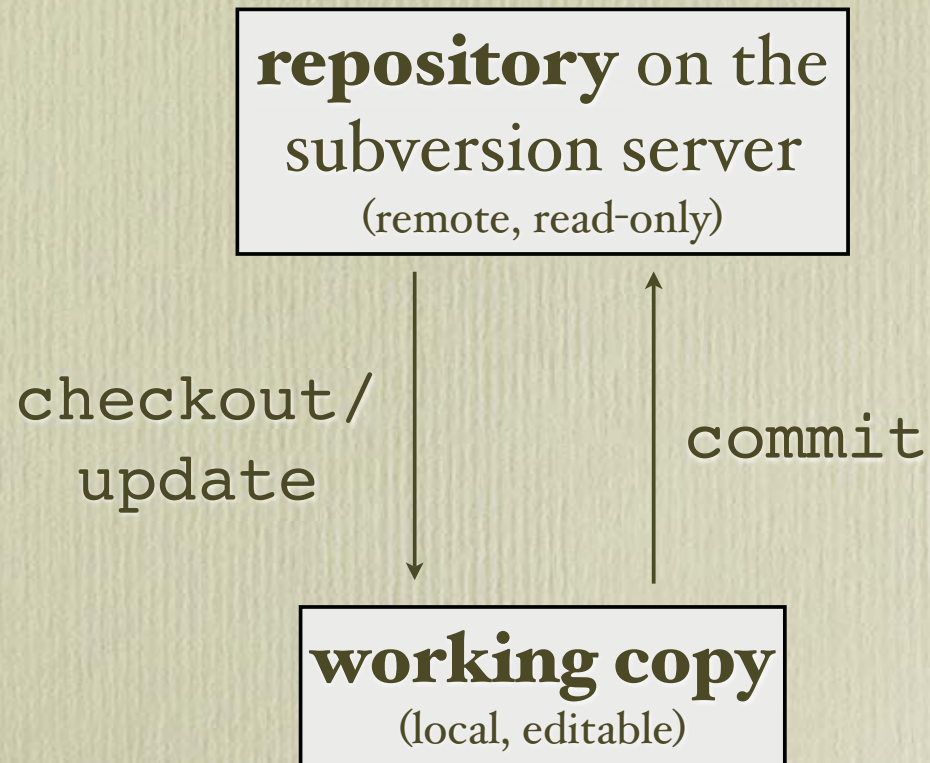# Working with Subversion

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What is version control?

Version control is a methodology in which changes between different versions of your file are logged and stored:

Content   (what has changed?)

Date   (when did it change?)

Reason   (why has it changed?)

Author   (who changed it?)

Subversion basics

repository on the
subversion server
(remote, read-only)

checkout/
update

commit

working copy
(local, editable)

bootstrapping

upload your project

`svn import localdir https://pcfs1.ictp.it/svn/smr1967/test/MYLOGIN`

create the working copy

`svn checkout https://pcfs1.ictp.it/svn/smr1967/test/MYLOGIN`

now, you are ready to work on
the new directory **MYLOGIN**

day to day work

- update your working copy (`svn update`)

- check the status of your files (`svn status`)

- check changes made by friends (`svn log` or `svn diff`)

- change the contents (vi-emacs war is open!)

- add/remove/rename files (`svn add/delete/rename`)

- update the repository (`svn commit`)
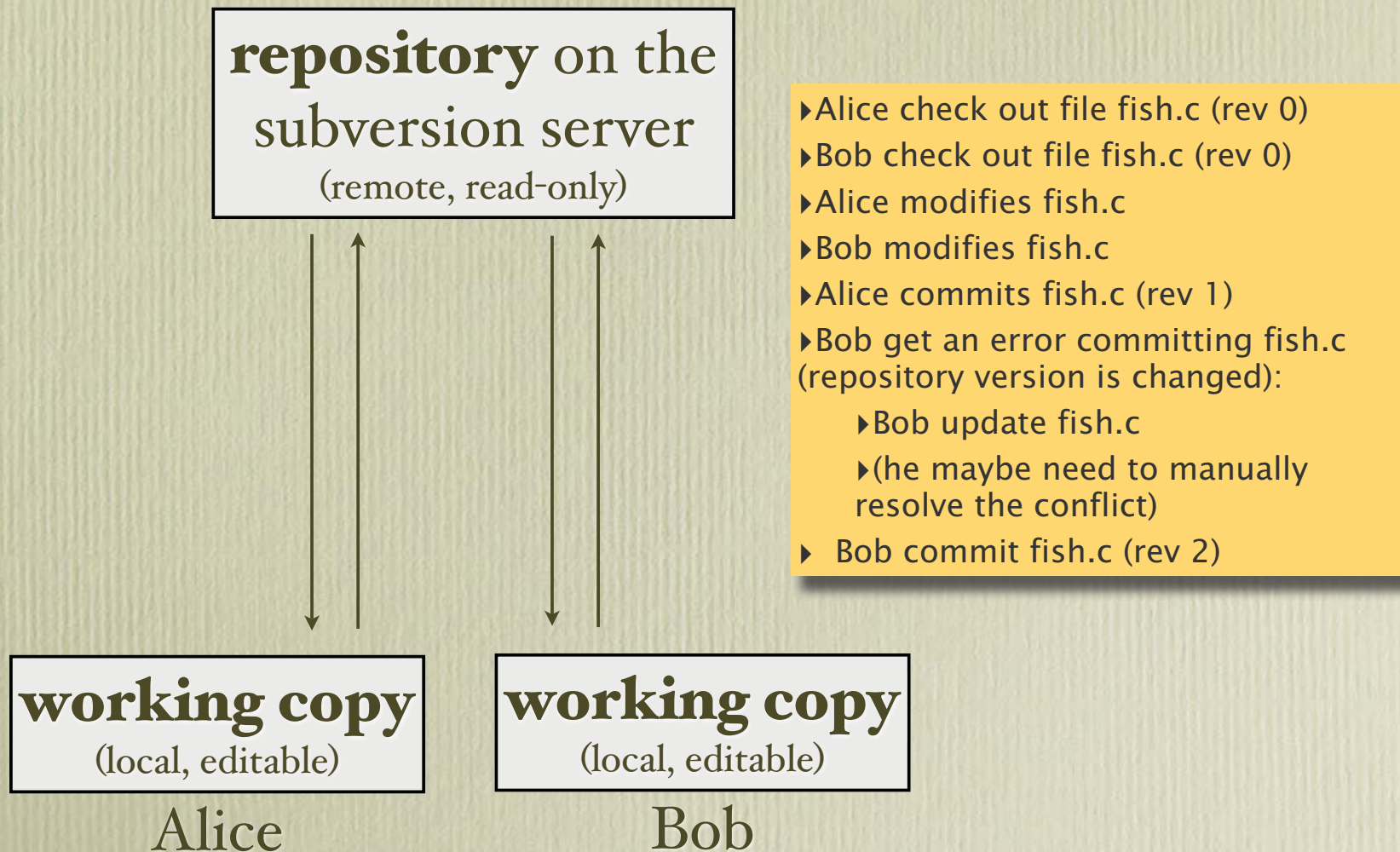
svn status

```
? scratch.c          # file is not under version control
A stuff/bear.h       # file is scheduled for addition
D stuff/fish.c       # file is scheduled for deletion
M bar.c              # the content in bar.c has local
                     # modifications

C stuff/bear.c       # file has textual conflicts from an
                     # update
```

svn update

```
A stuff/bear.h       # file was added
C stuff/bear.c       # file has textual conflicts
D stuff/fish.c       # file was deleted
U bar.c              # the content in bar.c was updated
G scratch.c          # remote changes merged
```

"concurrent"

repository on the
subversion server
(remote, read-only)

▸ Alice check out file fish.c (rev 0)
▸ Bob check out file fish.c (rev 0)
▸ Alice modifies fish.c
▸ Bob modifies fish.c
▸ Alice commits fish.c (rev 1)
▸ Bob get an error committing fish.c
(repository version is changed):
  ▸ Bob update fish.c
  ▸ (he maybe need to manually
  resolve the conflict)
▸ Bob commit fish.c (rev 2)

working copy
(local, editable)

working copy
(local, editable)

Alice

Bob

other commands

- svn log

    show commit logs for file(s)

- svn diff

- svn revert

    revert back changes on the working copy

- svn list

- svn cat

the most important command
svn help

```
$ svn help
usage: svn <subcommand> [options] [args]
Subversion command-line client, version 1.4.4.
Type 'svn help <subcommand>' for help on a specific subcommand.
Type 'svn --version' to see the program version and RA modules
  or 'svn --version --quiet' to see just the version number.

Most subcommands take file and/or directory arguments, recursing
on the directories.  If no arguments are supplied to such a
command, it recurses on the current directory (inclusive) by default.

Available subcommands:
   add
   blame (praise, annotate, ann)
   cat
   checkout (co)
   cleanup
   commit (ci)
   copy (cp)
   delete (del, remove, rm)
   diff (di)
   export
```

links

- **http://subversion.tigris.org** subversion home

- **http://svnbook.red-bean.com** subversion book

- **svn://www.qe-forge.it/svn/hpc-2008** subversion repository of the school

- **https://pcfs1.ictp.it/svn/smr1967/test** test subversion repository for members of this school

- **http://www.democritos.it/hpc-wiki/index.php/Main/Antonio**