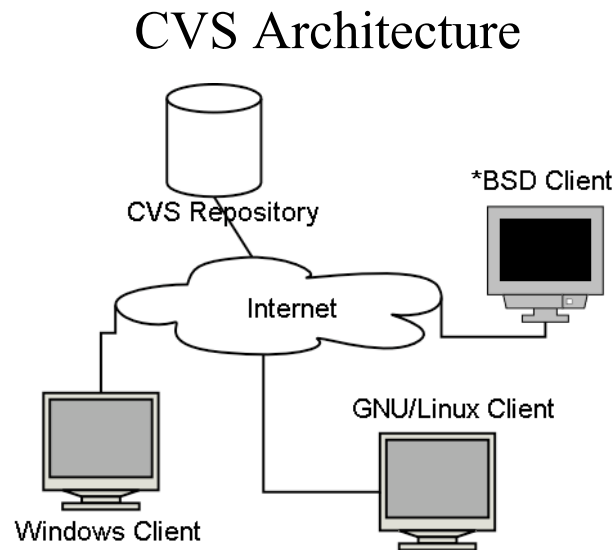


209 Tutorial 1 - CVS

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Credits: These slides are adapted from slides by Tom Hart



CVS

- Keeps track of changes to source code
- Can compare current code with old code
- Multiple users edit code separately, and synchronize their work together

Sample repository

```
/myrepo          <-- Repository
/helloworld      <-- Module helloworld
/hello.c
/tetris          <-- Module tetris
/readme.txt
/tetris.c
/doc
/howtoplay.html
/logo.gif
```

Repositories

- Repository records all revisions of files
- Contains set of modules, representing a program or parts of a program
- Don't work with repository directly:
 - Download local copy of a module, and synchronize it to the repository to keep changes up to date

Editing a file

- Let's edit hello.c:
 - Change: `printf("Hello world\n");` -> `printf("Goodbye cruel world\n");`
- Change still **ONLY** on local version. Must now commit the change:
 - `cvs commit -m "Changed printed message" hello.c`
- Change now in repository, with message specifying what was changed.
 - `cvs log hello.c`
lets you see a history of the changes to the file, along with message about it

Checking out a module

- Point CVS to our repository, by setting CVSROOT:
 - `setenv CVSROOT /u/csc209h/summer/pub/repo/userid`
 - `userid` is your CDF account
- Checkout module hello world:
 - `cvs checkout helloworld`
- Now have a local directory 'helloworld' with 'hello.c' in it.

Getting the change

- Another user may have checked out the old version of helloworld, but doesn't have the latest changes to do hello.c.
- To get these changes, go into the helloworld directory, and type
 - `cvs update -d`
`U hello.c`
- The "U" shows the file was updated. The local hello.c now has the new changes.

Adding files

cvcs add readme.txt

- File only in local repository. Still need to commit it:
 - `cvcs commit -m "Created documentation" readme.txt`
- CVS is made for **text** files. In general, keep to:
 - Source code
 - Text files
 - HTML files
- Binary files can be added, but changes from multiple users can't be merged together. Generally, stay away from adding compiled versions of code, but add files that may be necessary for the program (such as art).
 - `cvcs add -kb logo.gif`

For More Information

- On CDF, you can get the complete manual by typing:

`info cvcs`

- *CVS website:*

<http://www.cvshome.org>

Path variable

- *PATH* is an environment variable.
- “*env*”: Display all environment variables
- ***echo \$PATH***
/h/u3/c3/07/c3litty1/bin/Linux:/h/u3/c3/07/c3litty1/bin
- ***TCSH: setenv PATH /u/csc369h/summer/pub/bin:\$PATH***
- ***echo \$PATH***
/u/csc369h/summer/pub/bin:/h/u3/c3/07/c3litty1/bin/Linux:/h/u3/c3/07/c3litty1/bin
- ***BASH: export***
PATH=/u/csc369h/summer/pub/bin:\$PATH