

209 Tutorial 1 - CVS

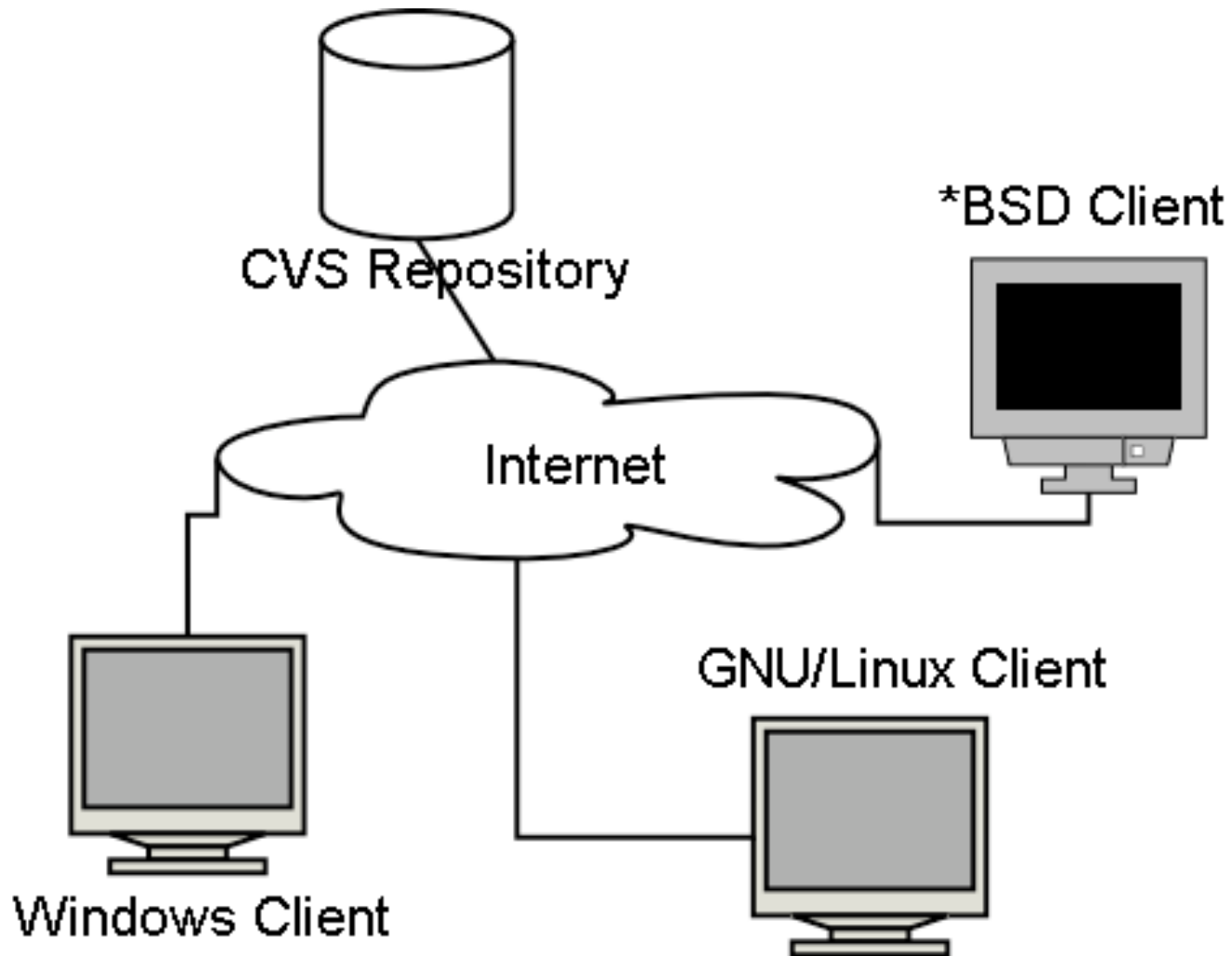
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Credits: These slides are adapted from slides by
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CVS

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

CVS Architecture



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

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.

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:
 - `cvcs commit -m "Changed printed message" hello.c`
- Change now in repository, with message specifying what was changed.
 - `cvcs log hello.c`
lets you see a history of the changes to the file, along with message about 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
 - `cv`s update -d
 - U hello.c
- The "U" shows the file was updated. The local hello.c now has the new changes.

Adding files

```
cv$ add readme.txt
```

- File only in local repository. Still need to commit it:
 - `cv$ 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).
 - `cv$ add -kb logo.gif`

For More Information

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

info cvs

- *CVS website:*

<http://www.cvshome.org>

Path variable

- *PATH* is an environment variable.
- “env”: Display all environment variables
- ***echo \$PATH***
/h/u3/c3/07/c3littyl/bin/Linux:/h/u3/c3/07/c3littyl/bin
- *TCSH: setenv PATH /u/csc369h/summer/pub/bin:\$PATH*
- ***echo \$PATH***
/u/csc369h/summer/pub/bin:/h/u3/c3/07/c3littyl/bin/Linux:/h/u3/c3/07/c3littyl/bin
- ***BASH: export***
PATH=/u/csc369h/summer/pub/bin:\$PATH