

## 98-172 : Great Practical Ideas for Computer Scientists

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### Screen & IRC

#### What is screen?

screen is a UNIX program that serves two purposes:

- (1) It allows you to painlessly have many terminals open at once. This is particularly useful if you're on windows and don't want to open putty a billion times.
- (2) It allows you to keep a persistent connection with a remote server. Importantly, this allows you to keep a program running even if you're not currently ssh'ed into the server.

#### Get the screen config

Start out by grabbing the screen config file by using the `gpi_install` command and installing the screen package.

#### CMU UNIX Servers

Here is a list of CMU servers you can connect to and what you can expect of them:

`unix.andrew.cmu.edu` These are servers that many people use, and they restart every night. So, if you have a screen session running, you shouldn't expect it to persist for very long.

`ghcXX.ghc.andrew.cmu.edu` You can replace the XX with any number from 01 to 81, and it will be a real machine. These are the machines in the gates clusters. They restart very infrequently and are usually good candidates for long running jobs.

If you find yourself frequently using one of the ghc machines, you might consider going back to `labitation01` and following the instructions to create a shortcut to `ssh` to it rather than typing in

```
ssh username@ghcXX.ghc.andrew.cmu.edu
```

every time.

#### Starting a new screen session

To create a new screen session, you can just run the `screen` command. However, I suggest that you give your session a name for easy recall later. So, you would start screen via:

```
screen -S <name>
```

## Setting up and using the screen session

To make a new window... Ctrl-A Ctrl-C

To rename a window... Ctrl-A Shift-A

To delete a window... Ctrl-D until it goes away

To switch between your last two windows... Ctrl-A Ctrl-A

To switch to window number *x*... Ctrl-A *x*

## Detaching and Reattaching

When a screen session is currently running in your terminal, you are **attached** to it. When you close the terminal, the session doesn't die, you **detach** from it and it runs in the background. Later, if you want to use it again, you can **reattach** to it.

To reattach from a screen session (and detach from anywhere else you have it open), you should use the command:

```
screen -dr <name>
```

## An Application: IRC

IRC is a way of chatting (over the internet!) with a bunch of people at once. There are many different servers and channels with people interested in just about every topic you could think of.

Since you probably want to receive chats even when you're away, it's a great candidate to be used in conjunction with screen. One of the IRC clients that many people use is called `irssi`. So, what follows is a short guide on setting up `irssi`.

- First, create a new screen session (we suggest using the name `irc`) by running `screen -S irc`
- Then, create a new tab in your screen session with Ctrl-A Ctrl-C and name it with Ctrl-A Shift-A.
- Run the program `irssi` in this new tab.
- Now to set up `irssi`. In `irssi`, you can run commands (rather than type chats) by prefacing the text with a `/`

```
- /set nick <the nickname you want to be known as>
- /set real_name <your name>
- /connect irc.freenode.net (freenode is the network where many interesting channels
  are)
- /join #cmu2015 (This is a channel for you guys that students in your year created to chat
  with!)
```

- If you plan to continue using IRC, there are a few things you should do:

**Register your nick.** Your nick is supposed to be an identifier for you; so, you don't want other people using the one you have chosen. As a result, you can *register* it by using the command:

```
/msg nickserv register <password> <email>
```

It would be a bad decision to use a really important password here.

**Save your irssi settings.** If you continue using irssi, then you probably don't want to connect and join every single time. So you should save your settings by doing:

- /network add -nick <your nick> Freenode
- /server add -auto -network Freenode irc.freenode.net
- /channel add -auto #cmu2015 Freenode
- /network add -autosendcmd "/msg nickserv identify <password>; wait 2000" Freenode  
(This auto-logs you in as your nick.)
- /save

This IRC tutorial is mostly ripped off from <http://crunchbanglinux.org/wiki/irssi> and repeated here for your convenience.