Information on the CS computing environment

You will all need to use a UNIX machine in the CS department's computing environment at some point for this class. You could do all the work for this class on CS department Sun computers, but at the very least, you will need to use `maximal.cs.rpi.edu` in order to program the robot.

CS accounts

If you do not currently have a CS account, you will be getting one with the same login name as your RCS account. The password will be emailed to your RCS account. If you already have a CS account, your password will not be reset. If it's been a while and you've forgotten your password, you will have to request a password reset.

If you need to have your password reset, contact `labstaff@cs.rpi.edu`. You can also stop by Lally 301 during business hours. Be sure to bring ID with you. (You might want to call x2842 to make sure they are there first.)

Kerberos

The CS department uses the Kerberos authentication system. The password you will be given is your "Kerberos password". If you've had a CS account for a long time, then you might also have a "NIS password." When you log into a CS machine, you should use your Kerberos password. You should get "Kerberos tickets" at login time. To verify that you have kerberos tickets, use the `klist` command. You should get something like this:

```
$ klist
Ticket cache: FILE:/tmp/krb5cc_2380
Default principal: whuang@LAB.CS.RPI.EDU

Valid starting     Expires            Service principal
01/16/03 06:19:22  01/16/03 16:19:22  krbtgt/LAB.CS.RPI.EDU@LAB.CS.RPI.EDU
01/16/03 06:19:27  01/16/03 16:19:22  pop/mumble.cs.rpi.edu@LAB.CS.RPI.EDU
```

On `maximal`, you may need to specify the full pathname: `/usr/rpics/bin/klist`. (Hopefully this will soon be fixed so that you don't have to do this.)

If for some reason you don't have Kerberos tickets, you can get them with the `kinit` command:

```
$ kinit
Password for whuang@LAB.CS.RPI.EDU:
```

On `maximal`, you may need to specify the complete pathname as for `klist` above.

Information on using CS machines

You can find basic information on using CS machines at:

`http://www.cs.rpi.edu/guide/machines/`

However, `maximal` is set up slightly differently than most CS machines.

You will have a home directory on one of the department fileservers. You will get this home directory on (almost) any CS machine that you use. On `maximal`, however, you will have a local directory that exists only on that machine. (This is because of incompatibilities with dotfiles…)

If you need to transfer files to and from `maximal` or other CS machines, you should use the `scp` program which uses a secure `ssh` transport so that passwords are not sent unencrypted over the network.

Physical access to machines

There are two labs with Suns that you can use:

- Amos Eaton 117 (the OOT lab) — contains 16 Sun Ultra 10 workstations. This lab is open Monday to Friday from 9am to 5pm; however, if there is someone already in the lab at other times, you can probably get them to let you in.
- Amos Eaton 215 — contains 36 SunRay workstations/terminals. This lab is open (in theory) 24 hours a day, but you cannot use this room while scheduled classes are there. The schedule should be posted on the door.

Please note that the Amos Eaton building is locked over the weekend and at night on weekdays (generally at sometime between 7pm and 10pm). If you try all the doors on all sides of the building or wait patiently by the front door for someone to leave, you can probably get in.

The CS department also has a lab in Amos Eaton 217, but this is reserved for CS graduate students only.

Remote access to machines

You can access the CS Suns remotely by connecting to:

```
solaris.remote.cs.rpi.edu
```

This will actually connect you to one of 16 computers. Please do not connect to specific machines by name. Note that you will need to use a solaris machine in order to do this assignment.

These computers do not accept unencrypted connections; you must use some version `ssh` to login to these machines. If you wish to connect under Windows, RPI laptops should already have SecureCRT, or you can get a free version of TeraTerm with SSH extensions. See `http://www.cs.rpi.edu/lab/software` for links to this software. The connections from Windows machines probably won't be able to display graphics, but you can at least compile and edit code.

File editors

For editing files, I recommend the GNU emacs editor. You can run the editor by typing `emacs` at a command prompt. (Actually, I would suggest running version 21 by typing `emacs-21.2` on the Suns.) GNU emacs has a built-in tutorial which you can get through the pulldown "help" menu.