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## How to Initialize and Use X on the Mac

The X windowing system can now be used on the Macintosh (merlin), using an X server program called “MacX”. But before you can use MacX, you must perform the following initialization steps. (You need only do this once.)

1. Before you can use X you must copy some start-up files to your home directory. In a shell window give the following commands:

```
% cp ~myers/.MacXrc    ~/.MacXrc
% cp ~myers/.MacXdefaults ~/.MacXdefaults
```

(Or you can copy the sample files from my Fortran class directory on scarlett.) The `.MacXrc` file is executed by the X server when it is first started, and contains commands for starting shell windows and other tools, as well as starting the window manager, `twm`. If this file does not exist, then the file `.xinitrc` will be used instead. If this does not exist then the file `.xsession` will be used.

The `.MacXdefaults` file contains defaults for fonts, window colors and sizes and such. If this file is not present, the file `.Xdefaults` will be used. If that file does not exist then the file `.Xresources` will be used.

2. The `.twmrc` file is read by the `twm` window manager when it is first started and contains the definitions for the buttons and menus and other features of the window manager. There is one thing you may wish to change. The `.twmrc` some of you may have will not allow windows to be moved off the screen. This is fine on a big screen, but crowds things on the Mac. You should therefore edit your `.twmrc` file and comment out (put a “#” in front of) or remove the following line:

```
DontMoveOff # don't let windows move off the screen
```

You can still keep `twm` from moving windows off of the screen on a big screen display by adding the following line to your `.Xdefaults` file:

```
twm*DontMoveOff:      true
```

3. We do not have `tcsh` on scarlett, so if you want to use X on scarlett via MacX you should edit your `.MacXrc` file on that machine and change the `SHELL` variable to `cs` instead of `tcsh`.

Once you have performed these initialization steps, you may start an X session on a particular host by double clicking on the MacX icon with the appropriate name (e.g. “Xterra” to log into terra). The DISPLAY variable should be set to the appropriate value at the beginning of your X session, so you should not have to set it yourself. Once your session has begun, please also note the following:

1. X uses a 3-button mouse, but the Mac has only one button. Therefore the arrow keys are used as mouse buttons. The left-arrow key is the middle mouse button, and the right-arrow key is the right mouse button.
2. The MacX server will not terminate when you exit the window manager (using the right mouse button pull-down to exit twm). To terminate MacX use Option-Q or pull down the “File” menu and select ‘quit’ or ‘close’.
3. Sometimes when you try to start a MacX session nothing will happen. The probable cause of this is the following: At present the Mac is assigned an IP address by a server, and this IP address must be in the host table on the computer you are trying to start. Sometimes the server assigns an IP address which is not in our host tables. Until we fix this limitation, you should find out the IP address being used (use the MacTCP control panel) and see if it is in `/etc/hosts` on the workstation. If not, report it to Eric and he’ll try to add it.