FIT 100 Some Housekeeping

- Missing exams
- Readings/Mini Quizzes
- Late Turn In
  - For projects only
- Service/Participation
  - Can be done in lecture or in lab
  - Short "reports"
  - Significant Bulletin Board postings
  - Demonstrations of cool lab work
  - Organizing study groups for the class
  - …?

FIT 100 Changes that IT brings

- Nowhere is Remote
  - Or is everywhere remote?
- World Connectivity
- Changes in the Human Idea of Relationships
- English as a Universal Language
- Freedom of Speech and Assembly

What The Digirati Know
Or,
Becoming An Intuitive Tools User in the Computer Culture

FIT 100

FIT 100 People, Culture And Technology

- Human beings adapt their behavior to the culture presented
  - Use of certain colors in clothing to show emotion or status
  - Driving on the right, or left, side of the road
- Behaviors often involve the interaction between people and certain tools for customs, work
  - A particular knife to cut the holiday turkey
  - A corn husker for harvest

FIT 100 People, Culture And Technology

- Human beings are natural tool users
  - From the first use of animal bones as weapons thousands of years ago to present day - we have been innate tool users
  - We invent tools all the time (e.g., using a book to balance a cup of coffee on your lap)
  - Some tools seem perfectly designed for their purpose
- Complicated tools may require training
  - We must be taught how to ride a bicycle, drive a car, ski, ... (of course, some people don't seem to even need that!)
  - Appliances and tools come with an owner's manual

FIT 100 How Do We Learn in a New Culture?

- By watching others: learning and reasoning why they do as they do
- By analogy with other environments: developing intuitions
- By trying things (and learning from what happens, even mistakes!): accumulating experience

FIT 100 How Do We Learn to Use Complicated Tools?

- By accumulating experience
- By developing intuitions
- By learning, and reasoning,
  - Thus, we can "figure out" how to use some tools without reading the owner's manual (e.g. portable CD player)
- Designers (product or software) -- try to make technology so simple that members of a technological society can guess its operation using only their experience, intuition, prior knowledge, and reasoning
- Well-designed tools can be said to be "intuitive-use" tools. They play off of the intuition and experience of their audience.

FIT 100 Learning by Analogy

- Most interactive software today uses a Graphic User Interface (GUI), pronounced GOO·ey
- Consider this GUI interface:

- Can you guess what this software does? And how to use it?

FIT 100 Analyzing the CD Player Interface

- The visual analogy is obvious if you're already familiar with a physical CD player
  - "Metallic" buttons
  - CD "slot"
  - Slider for volume
- The icons (images) on the control buttons are familiar (standard)
- The names on the "mode" buttons are suggestive of the capabilities of an audio CD, and can be guessed
- As the slider moves up and down, the volume of sound provides immediate feedback
- The "single-pass"  icon changes to a continuous loop icon  when clicked, suggesting it's meaning

FIT 100 Criteria for Well-designed Interfaces …

- Familiarity: reflects relevant non-computer experience
- Well-chosen metaphors and analogies: the metaphors and analogies make sense and suggest important relationships
- Expected functionality: the software does the things one would expect given the task at hand
- Consistency: the operations work together as whole

FIT 100 More Criteria…

- Simplicity: keep it simple; avoid too many features
- Feedback: let the user know what the machine is doing
- Transparency: using the tool should not take too much conscious attention, so the user can concentrate on the task at hand
- Rational defaults: the defaults should reflect what a typical user would want to do

FIT 100 Learning by analogy

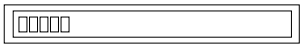
Real Jukebox has added more features, but notice the basic design (from a previous slide) remains

FIT 100 Some More Insight on Technology Cultures

- Some environments you enter are better at informing you of appropriate behavior than others
  - Think of how different email clients alert you that a message has been sent
- Discovering how each environment will deliver feedback is important.
- Some environments will give obvious feedback. Others require more initial alertness on your part.

FIT 100 Computer Culture Feedback

- How can you distinguish between a case when the computer or program is busy working on your task and the case when it is patiently idling, waiting for you to give it another command?



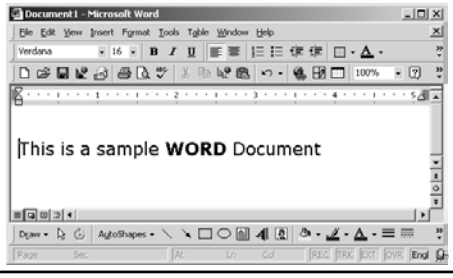
Well-designed computer tools will always give you feedback indicating their state of activity, the task they are performing, alternatives, etc.

- Watch for color or shadow change, icon change, title change, motion, etc.
  - Think of the rotating world image in Internet Explorer

FIT 100 Some Behaviors are Cross-Cultural

- Current GUIs are built using some standard behaviors
- MS Word illustrates many of these behaviors

Buttons
Sliders
Arrows
Icons
Close



FIT 100 Computer Cultures Share Many Common Behaviors

- Menus present the functionality of an application
- There are pull-down menus and pop-up menus
- There are standard behaviors that should always be applicable in certain activities

File

New	Ctrl+N
Open …	Ctrl+O
Close	
Save	Ctrl+S
Save As …	
Page Setup …	
Print …	Ctrl+P
Print Preview	
Exit	

Edit

Undo	Ctrl+Z
Repeat	Ctrl+Y
Copy	Ctrl+C
Cut	Ctrl+X
Paste	Ctrl+V
Clear	
Select All	Ctrl+A

Notice the ellipsis (…) and the shortcut (Ctrl+X)

FIT 100

Let's Look at Two Cultures

FIT 100 Explore the Environment

- When starting to use a new piece of software, like any new culture, take a moment to explore
- With the expectation that much of the culture can be observed and tested, check out the environment

Ironically, though most beginners think they should read the manual, it's most useful to an expert

FIT 100 Explore, Experiment, Interact!

- Fundamental Rule of IT:
  You can't break the computer unless you drop-kick it out the window!!!!
- The way to learn the operation of an application is to try it out, so **EXPLORE!**
- Though nothing will break, things can get into a horrendous mess -- beginners and experts alike can really screw up software!
- There is no value in the mess, so it doesn't have to be undone … Throw the mess away
- Be prepared to throw work out
  - Work on copies
  - Don't expect to do it all right the first time, work in stages
  - Go out, and come back in

FIT 100 However….. Some cautions and tips

- While exploration and use is the best way to learn a tool, here are a few good tips:
  - Your motto when working on any application should be:

    Save early, Save often, and create a backup!
- A "Hard Reboot" solves most problems when the program acts up
  - Start, Shutdown, Power Off, Power On
- Practice safe computing: There is a lot of "buggy" software out there, available free on the Internet and a great many viruses that are sent in email.

FIT 100 The dilemma of design…

- Are intuitive tools always better?
- Are standardized tools always better?

FIT 100 Are Intuitive Tools Always Better?

- Consider GUIs vs. Command Line interfaces (e.g., WebPine vs. Pine)
- On the surface, the GUI looks more intuitive than command line interface
  - Visual
  - Spatial
  - Less to remember
- But, it depends on what you mean by better…
  - Explore what it takes to delete a message using each interface
  - How many clicks?
- Looking ahead to lab 2 - decide for yourself which interface is easier to use: SSH or TeraTerm

FIT 100 For Friday

- Treasure Hunt Due
- Reading: Check the website
- Keep checking the website for additional information