What The Digitarati Know

FIT 100

One goal of this class is to think about our use of IT abstractly. That is, looking at ourselves as computer users, what do we know, what more should we learn to be more effective and what should we change?

FIT 100 People And Technology

❖ People have no innate understanding of any technology more complicated than a stick
  ❑ We must be trained to ride a bicycle, drive a car, ski, ...
  ❑ Appliances and tools come with an owner's manual
❖ But people accumulate experience, learn and reason, so we can "figure out" how to use some gear without reading the owner's manual, e.g. portable CD player

❖ Product designers try to make technology so simple that members of a technological society can guess its operation using only experience, knowledge and reasoning

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FIT 100 How To Learn Consumer Software

❖ Like physical product designers, software product designers know their design will be more successful if people can figure it out without resorting to a manual
❖ For someone to figure out software, the operation must be consistent with their experience and follow the same rules & principles
  + Consistent interface
  + Standard metaphors
  + Features conveyed by analogies
  + Full complement of basic features
  + Intuitively consistent
  + Rational defaults
❖ Expect to figure out consumer software on your own

FIT 100 The Perfect GUI

❖ Most interactive software uses a Graphic User Interface or GUI, pronounced GOO·ey
❖ An example of a "perfect" GUI is the Macintosh Audio CD Player interface

❖ Do you know how it operates?


FIT 100 Recap of Audio CD Player

❖ The visual analogy is perfectly obvious if one has seen a physical CD player
  ❑ "Metallic" buttons
  ❑ CD "slot"
  ❑ LCD font, complete with "shadows"
❖ The icons on the controls are standard
❖ The volume control shows more/less speaker "sound" as slider is moved up and down
❖ The names on the "mode" buttons are suggestive of the capabilities of an audio CD, and can be guessed
❖ The "single-pass" [→] icon changes to a continuous loop [⇐] icon when clicked, suggesting it's meaning

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FIT 100 Standard Metaphors

❖ GUIs are built using standard metaphors
❖ MS Word illustrates many of these features

Buttons
Sliders
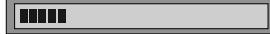Arrows
Icons
Close

This is a sample **Word** document
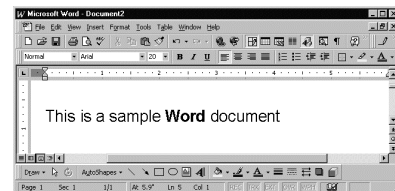
FIT 100 Feedback

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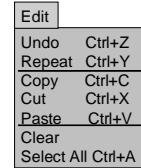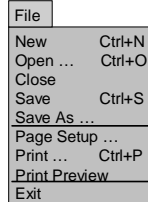
  [▮▮▮▮▮]

  > Computers will always give you feedback indicating their state of activity, the task they are performing, alternatives, spatial precision, etc.

- ❖ Watch for color or shadow change, icon change, title change, motion, etc.

FIT 100 Menus

- ❖ Menus present the functionality of an application
- ❖ There are pull-down menus and pop-up menus
- ❖ There are standard operations that should always be applicable in an information processing activity

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 Summary Of GUI Features

- ❖ Expect to see standard metaphors
- ❖ Expect to find the "standard" operations in the file and edit menus
- ❖ Expect to use analogies
- ❖ Expect feedback

  > These features and their behavior form our idea of desk top computing, our "mental model" of how personal computer software should work

FIT 100 "Clicking Around"

- ❖ When starting to use a new piece of software, take a moment to look at each menu and icon
- ↻ With the expectation that much of the application can be brained out, "Click Around" to discover what's there

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

FIT 100 "Blazing Away"

- ❖ Fundamental Rule of IT: Nothing Will Break
- ❖ The way to learn the operation of an application is to try it out, so blaze away
- ❖ Though nothing will break, things can get into a horrendous mess -- beginners and experts alike can really mess 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
  - ✛ Set up limited, controlled situations
  - ✛ Go out, and come back in

FIT 100 "Blazing Away" … Alan's cautions

- ❖ Disk Files
  - ❏ Only use the "save" command if it's a new file name, or if you know you want to replace the old file. Otherwise use "save as".
  - ❏ Try to only put items in the recycle bin if you think you want to get rid of them. Only empty the recycle bin if you are *sure* you want to get rid of them.
  - ❏ If it's your own computer, make backup copies of files in case the disk crashes (i.e. fails horribly). Dante files are backed up for you automatically.
- ❖ Viruses
  - ❏ Practice safe computing. For now, just use the software already installed on the Collab computers, use pine for e-mail, and you'll be fine. Later we'll talk about viruses, how to protect yourself against them, and how to write your own and annoy your friends.
- ❖ Electrical Stuff
  - ❏ If it's your own machine, shut it down by picking the shutdown item on the menu – don't just turn it off or pull the plug.

FIT 100 Summary

- ❖ First point … by creating a mental model of personal computing, it is possible to learn many applications independently
  - ✛ Expect a consistent interface with standard metaphors, standard operations, obvious and intuitive behavior, etc.
  - ✛ "Clicking Around" familiarizes you with the available features of the software
  - ✛ "Blazing Away" is trying out the software -- nothing will break, but its easy to create a hopeless mess, so be prepared to throw the mess out
- ❖ Second (most important) point … view your use of IT abstractly -- Ask what you know, don't know, need to learn, when to read the manual & when to ask for help