GUI's
(Graphical User Interfaces)

or: What the Digerati Know

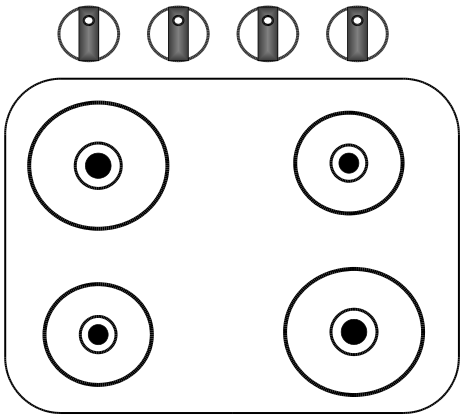
outline

- what makes a GUI good? bad?
- common features of GUIs
- human-computer interaction (HCI) at UBC
- 'getting started' lab

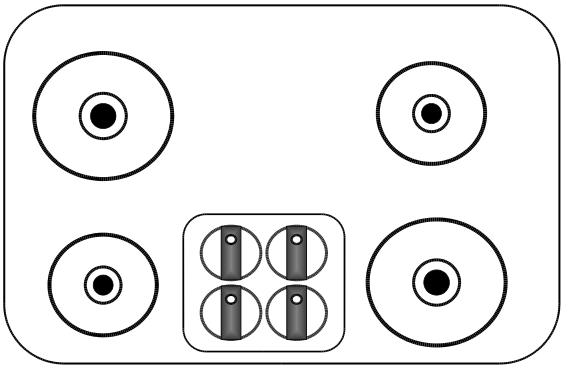
people and technology

- people innately are tool users, tool designers
- even the simplest things can be hard to use!
- human error often results from poor design

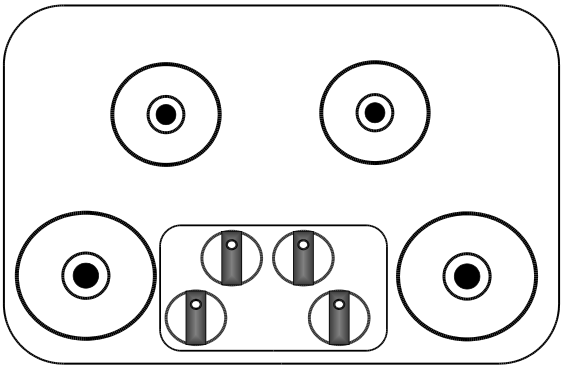
stove top designs



stove top designs



stove top designs



user centered design

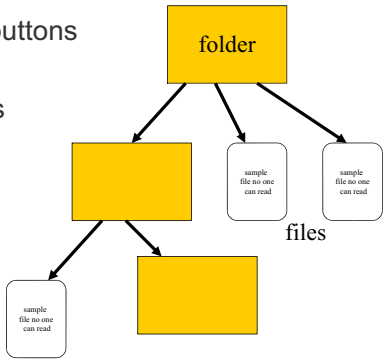
- take qualities of users into account in design of technology
- particularly important for computers, because of their complexity
- two common modes for interfacing with computers: *command line interfaces* and *graphical user interfaces (GUIs)*

what makes a good GUI?

- *familiarity, consistency*: reflects relevant non-computer experience, experience with other programs
- *well chosen metaphors*: metaphors and analogies make sense and suggest important relationships
- *useful feedback*

common GUI metaphors

- command buttons
- menus
- files, folders
- icons



other common GUI features

- ellipses, triangles
- short-cuts
- special role of
  - right mouse button (PCs), ctrl-mouse (Mac)
  - shift key

[UI experiment]

blaze away!

- exploit consistent interfaces
- look for feedback from computer
- don't worry about breaking the computer
  - careful with powering off, attaching devices
- don't worry about making mistakes
  - but save often
- ask questions!

command line interfaces

- you will use a *command line interface* when using your Unix account
- you can also create directories (i.e. folders), files, and edit your files in Unix
- command line interfaces require lots more knowledge "stored in the brain" rather than "in the world", but are often preferred by experienced users

human computer interaction @ UBC/CS

- involves researchers from Computer Science, Psychology, Commerce, Forest Resource Management, and Engineering
- projects include
  - study of merits of adaptable user interfaces
    - Findlater & McGrenere paper (see course web page)
  - D'Groove (digital haptic turntable):
    - www.cs.ubc.ca/labs/spin/projects/dgroove.html
  - the Aphasia Project:
    - www.cs.ubc.ca/projects/Aphasia

take home message

- if you are a frustrated computer user, blame the designers, not yourself!
- and remember… if you can't beat them, join them!

food for thought…

"enjoy yourself. Walk around the world examining the details of design. Take pride in the little details that help…Give mental prizes to those who practice good design: send flowers. Boos to those who don't: send weeds."

– Donald A. Norman

project idea

- Record your experiences with computers over the semester - both the difficult and rewarding moments. Derive a list of good design principles, based on your experience, and suggest how the interfaces you used could be better designed.
- Present your record as a web page, web log ("blog") or essay.

what else?

for information on computing remotely, check http://www.cs.ubc.ca/ugrad/facilities/remote/

getting started lab