Four basic design principles

- Contrast
  - Avoid having items on a page be similar
  - If they are not the same then make them very different
- Repetition
  - Repeat visual elements of the design throughout the piece
  - i.e. shape, texture, spatial relationships, line thickness, sizes, etc.
- Alignment
  - Nothing should be arbitrarily placed
  - Every element should have some visual connection with another element on the page
- Proximity
  - Items relating to each other should be grouped close together
  - Helps organize information and reduces clutter
Proximity

*Group related items together*

- The basic purpose:
  - Proximity helps to organize the information and reduce the clutter.

- How to get it:
  - If there are too many visual elements on the page, try to regroup some of the elements.

Proximity (Continued)

- What to avoid:
  - Too many separate elements on a page
  - Avoid leaving equal amounts of white space between elements unless each group is part of a subset
Alignment

*Nothing should be placed on the page arbitrarily*

- The basic purpose:
  - Alignment unifies and organizes the page.

- How to get it:
  - Be conscious of where you place elements

- What to avoid:
  - Avoid using more than one text alignment

Repetition

*Repeat some aspect of the design throughout the entire piece*

- The basic purpose:
  - Repetition unifies and adds visual interest

- How to get it:
  - Think of it as being consistent

- What to avoid:
  - Avoid repeating an element so much that it becomes annoying or overwhelming
Contrast

*If two items are not the same then make them REALLY different*

- The basic purpose:
  - Contrast is one of the most effective ways to add visual interest to your page.

- How to get it:
  - Add contrast though typeface choices, line thickness, colors, shapes, sizes, spaces, etc.

- What to avoid:
  - Don’t be a wimp!

Don’t be a Wimp!

- Don’t be afraid to design a piece with LOTS of blank space
- Don’t be afraid to be asymmetrical

- Don’t be afraid to make words very large or very small

- Don’t be afraid to make graphics very bold or very minimal as long as the result complements or reinforces your design or your attitude
Principles of Effective Visual Communication for Graphical User Interface Design

by Aaron Marcus

Principles of User Interface Design

- Organize

- Economize

- Communicate
Visual language

- Layout
- Typography
- Colour and texture
- Imagery
- Animation
- Sequencing
- Sound

- Visual identity

Organize

- Consistency
  - internal consistency
  
  - external consistency
  
  - real world consistency
  
  - when not to be consistent
Organize

• Screen layout
  – use a grid structure
  – standardize the screen layout
  – group related elements
• Relationships
  – Establish clear relationships by linking related elements and disassociating unrelated elements
• Navigability
  – provide an initial focus for the viewer’s attention, direct attention to important, secondary or peripheral items, and assist in navigation

Economize

doing the most with the least
• Simplicity

• Clarity

• Distinctiveness

• Emphasis
Communicate

- Legibility
  - design individual characters, symbols, and graphic elements to be easily noticeable and distinguishable

- Readability
  - the display is comprehensible

- Typography
  - Typography includes the characteristics of individual elements (typefaces and typestyles) and their groupings (typesetting techniques)

Basic Typesetting Recommendations

- Maximum of three typefaces and three sizes
- lines of text should be max. 40-60 characters
- text should be set in appropriate formats

- use variable width font
- use upper and lower case characters
Communicate (continued)

- Symbolism

- Multiple views
  - provide multiple perspectives on the display of complex structures and processes

- Color

8 Golden Rules of Interface Design

#1 Strive for consistency
  - consistent sequences of actions required in similar situations

#2 Enable frequent users to use shortcuts

#3 Offer informative feedback
  - for every user action there should be system feedback

#4 Design dialogs to yield closure
  - sequences of actions should be organized with a beginning, middle, and end
8 Golden Rules continued ….

#5 Offer error prevention and simple error handling
   – as much as possible design the system such that users cannot make a serious error

#6 Permit easy reversal of actions

#7 Offer informative feedback
   – this helps relieve anxiety and encourage exploration of unfamiliar options

#8 Reduce short-term memory load
   – displays should be kept simple, multiple pages consolidated, and sufficient training time should be allotted for codes and sequences of actions.

Wednesday, June 9th

• Midterm Exam in AQ 3181

• Readings for Wednesday, June 9th
  – Evaluating the Design Without Users (chapter 4), Lewis and Rieman
  – Article 12: A GOMS Analysis of a Graphic, Machine-Paced, Highly Interactive Task by Bonnie E. John and Alonso H. Vera