CS 160: Lecture 13

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Administrivia

- Hifi projects due this Weds, but presentations are due after Spring break on 3/31/03
Design is...

About function:
* Good designs support user tasks

About form:
* Good designs should be a pleasure to use
Design is...

- About communication, not just about the medium
- Not abstract expressionism:
Principles

- Simplicity
- Scale, Contrast, Proportion
- Organization and Visual Structure
- Grid-based Design
Simplicity

- Simple designs are usually the most effective

- “Form ever follows function”
  - Sullivan
Simplicity
Simplicity - History

Constructivism between the wars
Simplicity - Unity

One path to simplicity is through unifying themes:
* Forms, colors, components with like qualities
Simplicity - Fitness

- Match the design to the capabilities of the technology and the user

Why not use Roman fonts?

Sans-serif fonts fit the medium

Be careful of slant
Simplicity - Common mistakes

- Clutter and noise
Simplicity - Common mistakes

- Interference between competing elements
Simplicity - Common mistakes

- Using explicit structure as a crutch
Simplicity - Common mistakes

Belaboring the obvious
Simplicity - Common mistakes

- Overly literal translation
Simplicity - Common mistakes

Excessive Detail
Simplicity - Common mistakes

- Gratuitous dimensionality
Administrivia

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Module and Program

A systematic approach to the design of many artifacts:
* web pages on a site
* documentation pages
* devices in a family

Programs describe how to build designs from modules.
Grid-based Design

142: These typographic grids for book design subdivide the page uniformly into one to six columns. Grids for GUI design have important differences, but the goal of providing systematic structure is the same. From Basic Typography: Design with Letters, by Ruedi Rüegg, ABC-Verlag, Zurch, 1987.
143: Each of the grids in Figure 142 leaves a distinct imprint on the resulting layout. When the same grid is used throughout a book – or even an application – this imprint becomes a unifying element for the entire work. From Basic Typography: Design with Letters, by Ruedi Rüegg, ADC-Verlag, Zurich, 1987.
Grid-based Design
Focus: the design should highlight one or a small number of modular elements
Principles - Flexibility

Flexibility: The program should allow variation from a theme.
Principles - Consistency

Consistent application: The program should maximize consistency in size, position, texture...
Common mistakes

- Arbitrary component positions
- Arbitrary component dimensions
- Random window sizes and layouts
- Unrelated icon sizes and imagery
- Inconsistent control presentations
- Inconsistent visual language
Techniques

- Reinforcing structure through repetition: Repeat design elements across the program

- Stylesheets can help
Techniques

- Establish modular units
Techniques - Canonical grid

- The canonical grid (see notes)
- An six-column basic grid with column separators and label templates
- Can be implemented with HTML tables
Canonical Grid

- Determine any size restrictions
- Define horizontal and vertical modules
- Develop a rough sketch of sizes, positions, orientations
- Use the canonical grid to adjust sizes and positions of control elements
- For dynamic layouts, figure out the minimum workable size.
Canonical Grid

This two-column layout is based on the canonical grid (in our first three examples, the grid is not used for the labels in the left-hand column). To visualize this grid, ignore all but the middle three lines of Figure 178. The Name, Type, Vendor, and Note fields span both of the columns that remain, while the items in the Mode setting, Progress indicator, and Scope options span one column each.
Canonical Grid

180: In this example, the full six-column grid is used to lay out the left-most label column as well as five columns of controls. Note the presence of controls spanning one, two, three, and five columns. Note too that elements of different widths can be placed in the same row without problems.
Places to go

- MetaDesign: www.metadesign.com
- IDEO: www.ideo.com
- Frog Design: www.frogdesign.com
- Swim studio www.swimstudio.com
- Cooper Interaction Design www.cooper.com
- Aaron Marcus and Associates www.amanda.com
- Icarian www.icarian.com