

## CS 160: Graphic Design

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Spring 2006

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## Administrivia

- Hi-Fi prototype assignment is being handed out today, due in two weeks.
- MS Smartphones will be handed out today.

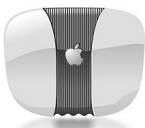
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## Design is...

### About function:

- \* Good designs support user tasks



### About form:

- \* Good designs should be a pleasure to use



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## Design is...

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

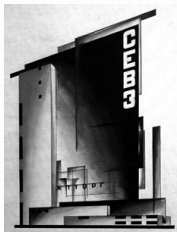


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## History

- Russian Constructivism between the wars



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## Bauhaus (1919-33)

- 3 Principles that shaped modern design:
  - \* Form follows function

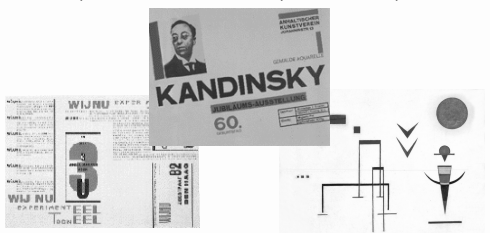


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## Bauhaus

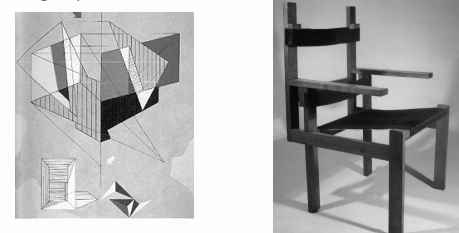
- 3 Principles that shaped modern design:
  - \* Economy of form (limited shape vocabulary)



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## Bauhaus

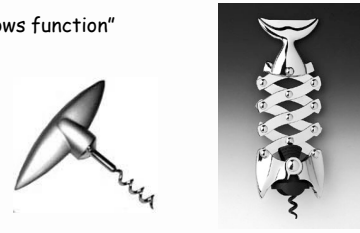
- 3 Principles that shaped modern design:
  - \* Integrity of materials



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## Simplicity

- Simple designs are usually the most effective
- "Form ever follows function"  
- Louis Sullivan



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## Simplicity



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## Simplicity - Unity

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



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## Simplicity - Refinement



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## 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



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## Simplicity - Common Mistakes

- Clutter and noise
- Interference between competing elements
- Using explicit structures as a crutch
- Belaboring the obvious
- Overly literal translation
- Excessive detail
- Gratuitous Dimensionality
- Match the design to the capabilities of the technology and the user

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## Welcome to Microsoft Bob!



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## Simplicity - Common mistakes

- Clutter and noise



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## Simplicity - Common mistakes

- Interference between competing elements



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## Simplicity - Common mistakes

- Using explicit structure as a crutch



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## Simplicity - Common mistakes

### Belaboring the obvious



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## Simplicity - Common mistakes

### Overly literal translation



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## Simplicity - Common mistakes

### Excessive Detail



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## Simplicity - Common mistakes

### Gratuitous dimensionality



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## Break

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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.

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## Grid-based Design

142: These typographic grids for book design subdivide the page uniformly into one to six columns. Grids for fine design have important differences, but the goal of providing systematic structure is the same. From *Basic Typography: Design with Letters*, by Rudolf Roegg, ABC-Verlag, Zurich, 1987.

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## Grid-based Design

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 an application – this imprint becomes a unifying element for the entire work. From *Basic Typography: Design with Letters*, by Rudolf Roegg, ABC-Verlag, Zurich, 1987.

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## Grid-based Design

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## Principles - Focus

Focus: the design should highlight one or a small number of modular elements

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## Principles - Flexibility

Flexibility: The program should allow variation from a theme

Univers Font

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## Principles - Consistency

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

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## Common mistakes

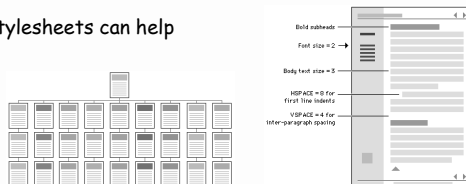
- Arbitrary component positions
- Arbitrary component dimensions
- Random window sizes and layouts
- Unrelated icon sizes and imagery
- Inconsistent control presentations
- Inconsistent visual language

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## Techniques

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



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## Techniques

- Establish modular units



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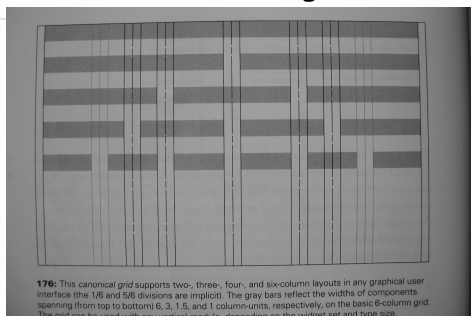
## Techniques - Canonical grid

- The canonical grid
- An six-column basic grid with column separators and label templates
- Can be implemented with HTML tables
- Frontpage is pretty good for this:
  - \* Build a regular grid as a table
  - \* Merge cells to eliminate some of the boundaries

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## The canonical grid



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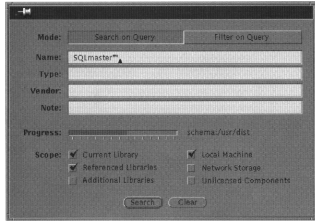
## Canonical Grid

- 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.

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## Canonical Grid

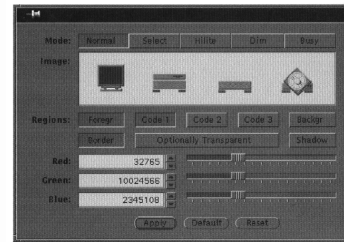


177: This two-column layout is based on the canonical grid in our first three examples, the grid is not used for the labels in the left-hand column. To visualize this grid, ignore all but the middle three lines of Figure 118. The Name, Type, Vendor, and Note fields span both of the columns that remain, while the items in the Mode setting, Progress indicator, and Scope options span one column each.

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## 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.

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## Plagiarism

Remember Picasso's quote:  
"Good artists borrow (from other artists),  
but great artists steal!"

Compelling visual design takes  
practice and experience -  
A natural part of which is study  
and critique of other's work.



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## Places to go

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

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## Summary

- One design strategy follows Bauhaus principles
  - \* Form Follows Function
  - \* Economy of Form
  - \* Integrity of Materials
- General design principles
  - \* Simplicity
  - \* Grid-based Design
- Inspection and critique of other sites

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