Visual Information Design

Palm Beach, Florida

Eye drawn to the wrong holes.
If only 1% error rate, can still change a close election

One Possible Redesign


Hall of Shame!

iFitness

iOS App

Non-conventional design is a waste of resources—iOS has better defaults
Know your users! 99% of users will want to enter today’s weight
‘Record’ button almost invisible due to lack of contrast
Possible Re-design

- ¼ of the controls
- Saved space can be used for statistics
- Date and time can be recorded automatically

Source: smashingmagazine.com/2009/07/21/iphone-apps-design-mistakes-overblown-visuals/

One Possible Redesign

Outline

- Good Form
  - layout, proximity, small multiples, space, grids, typography & icons
- Team Break
- Color
- “Interesting Design”

The Art of Balance

Promotion & demotion of important objects

First Question for any design
  - What are the most important things?

Information should be prioritized based on its importance to the user

Visual Design that has Good Form (Purpose)

Based on David McCandless
http://www.informationisbeautiful.net
Using Context to Determine Layouts

Know Thy Users! (Design Discovery)

Context is extremely important to how much “Stuff” should be visible.

Screen Space
Time for tasks
UI Elements

Mobility
Importance of Information
Hierarchy

Using Context to Determine Layouts

Responsive Layout Design for Web

Using Proximity to Indicate Relationships

Gestalt Psychology in information design
Information blocks should be grouped together if related, but unrelated elements should be located at some distance from each other.
Using **Proximity** to Indicate Relationships

**Small Multiples**

- Economy of line
- Similarities enable us to notice differences

**International Women’s Day**
Proximity & Small Multiples in Use

Today Weather

iOS App

Proximity & Small Multiples in Use

Today Weather

iOS App

Proximity & Small Multiples in Use

Today Weather

iOS App

Administrivia

- Medium fi prototype & presentations
  - must be on web site by this Thursday/Friday or grade will be docked
  - problem getting a web site up, talk to your CA
- Fill out studio teaching survey today
- CS 194H
  - Mon/Wed 1:30-3:20 PM
  - continuation of projects from CS147 & advanced techniques
  - need 2-3 of a project team to continue, individuals can join another team
  - more iterations – get to release quality
  - no exams – less writing (mainly project presentations) – fewer lectures – individual studio assignments on advanced techniques
  - counts for senior project requirement (CS)
  - cap at 28-32 students

TEAM BREAK
(FINISH MED-FI PROTOTYPE OR SLIDES)

Using Blank / White Space as an Object

- White space can be used to suggest importance or prestige.
- The more space around a group, the more valuable it should be for the user.
- Think of whitespace as an “element” – consider its position.

What Are The Important Things Here?

Jan Tschichold’s Revolution

Champion of Modernist Typography

Type Classifications

**Typeface** (Arial) vs **Font** (Arial Bold)

- **Serifs**: Structural details in letters that (may) help the reader connect them.

<table>
<thead>
<tr>
<th>Sans Serif</th>
<th>Serif</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman</td>
<td>answ</td>
</tr>
<tr>
<td>Oblique</td>
<td>answ</td>
</tr>
<tr>
<td>Bold</td>
<td>answ</td>
</tr>
</tbody>
</table>

Asymmetric Typography

- The same blocks, correctly arranged in the same type area. Constructive, meaningful and economical (= beautiful).
Grid Systems
• A key pattern for implementing rationality, modernism, asymmetry
• Note that no elements are “centered”

Iconography: Differences that Make a Difference

Color Definitions (digital)
• **Hue** is gradation of color (i.e., name: “yellow”)
• **Saturation** is purity of the hue (vividness)
  - how much gray
• **Luminance** is the brightness in an image
The Basics of the Color Wheel

**Warm Colors:**
- Triggering / Sensual

**Cool Colors:**
- Conserved / Relaxing
"A pleasing arrangement of parts, whether it be music, poetry, color, or an ice cream sundae."

Color Harmonies

Complimentary

- Chromatic, maybe
- Very bright
- Not so much

This color scheme must be managed well so it is not jarring. Bad with Text!!

Analogous

Always easy on the eyes, this type of color scheme always looks "natural"
Often a good choice for beginners, because it is difficult to mess up.

Start with Greyscale

... then accent or enhance with color
**Action + Passive Colors**

Redesigned to Use 3 Actionable Colors

Tools that help with color selection

- [http://colorschemedesigner.com/](http://colorschemedesigner.com/)
- [http://www.colourlovers.com](http://www.colourlovers.com)

**Poor Use of Color**

**Visual Design that is Interesting**

[the wow factor]
Why Make Information Interesting?

- Differentiation from similar work
- Creates “willful” interaction as opposed to “forced”
- With an interesting interface that is simple to learn, the user will teach themselves

Non Conventional Layouts

- Hard to get right & easy to overdo!
- Try new shapes
  - circular charts
  - hexagonal objects
- Like all techniques (color, etc) – restrict unconventional layouts to the most important information

Dynamic Movement

- Hard to get right & easy to overdo!
- Animation is best used to connect information & create “flow”
- Like size, color & unusual shapes, animation draws attention to the eye & suggests importance
Metaphors (using the real world to describe info)

- Hard to get right & easy to overdo!
- Very useful to provide meaning and connect information to logic
- As you have seen before, the more direct or specific a metaphor, the more contextually relevant it is to a generation or time

The best designs balance the techniques you have seen

and

The less techniques used, the easier it is to balance them

In other words, Keep it Focused
Summary

- Start with context – what is the nature of the information? What is the most important?
- Design first in grayscale to focus on hierarchy
- Small changes help us see key differences – e.g., small multiples
- Avoid clutter, focus on the essence of your tasks
- Use color properly – not for ordering!
- Only use 1-2 colors at a time, unless absolutely necessary

Further Reading

- Kevin Mullet and Darrell Sano, Designing Visual Interfaces
- Edward Tufte’s books and course
- Robin Williams, The Non-Designer’s Design Book
- Typography – Jan Tschichold, The New Typography
- Robert Bringhurst, The Elements of Typographic Style
- http://www.adobe.com/type/
- http://www.microsoft.com/typography/

Next Time

- Heuristic Evaluation – including an in-class exercise that will be graded
- Reading – How to Conduct a Heuristic Evaluation by Jakob Nielsen
- Next assignment – Heuristic Evaluation (individual assignment)