Interaction Design

Chapter 12 (July 11, 2012, 9am-12pm):
Graphical User Interface Design
Graphical User Interface Design

• Principles
  • Layout, Typography, Color & Contrast
  • Controls and Widgets
  • Simplicity
Graphical User Interface Design
INTERACTION DESIGN

KNOW?

FEEL?

...DO?
Like all forms of design, visual design is about problem solving, not about personal preference or unsupported opinion.

Bob Baxley
Interface design is only the experienced **representation** of the interaction, not the interaction design itself.

source: [4]
UI Elements

source: [4]
Graphical User Interface Design

- Principles

- Layout, Typography, Color & Contrast

- Controls and Widgets

- Simplicity
Grids
Today's featured article

The Cross of Gold speech was delivered by William Jennings Bryan, a former congressman from Nebraska, at the Democratic National Convention in Chicago on July 9, 1896. In the address, Bryan supported bimetallism or "free silver", which he believed would bring the nation prosperity. He decried the gold standard, concluding the speech, "you shall not crucify mankind upon a cross of gold". Bryan's address helped catapult him to the Democratic Party's presidential nomination; it is considered one of the greatest political speeches in American history. For twenty years, Americans had been bitterly divided over the nation's monetary standard. Many Americans believed bimetallism (making both gold and silver legal tender) was necessary to the nation's economic health. Bryan's speech, delivered at the close of the debate on the party platform, electrified the convention and is generally credited with getting him the nomination for president. However, he lost the general election to William McKinley and the United States formally adopted the gold standard in 1900.

Recently featured: Dendrocollybia – Killer? – Calgary Stampede

Did you know...

From Wikipedia's newest content:

- ... that during the Antinomian Controversy, Anne Hutchinson (pictured) withstood two separate trials without counsel before being banished from Massachusetts?
- ... that Argentine nationalism sees José de San Martín, Juan Manuel de Rosas and Juan Perón as a line of historical continuity?
- ... that one of the most popular Polish cabarets, Pod Egidą, performing since 1967, has faced persecution from the communist authorities in the People's Republic of Poland?
- ... that 2012 College World Series Most Outstanding Player Robert Refsnyder was born in South Korea and adopted by a California couple when he was three months old?
- ... that the print identity of UK music newspaper The Stool Pigeon is modelled on Victorian tabloids?
- ... that 2012 Australian Olympic canoeist Hannah Davis won a bronze medal in the sport at the 2008 Summer Olympics?
- ... that the starfish Anastomus rupicola feeds on the limpet Nacella macquariensis, sometimes hunting it in groups?
Clutter creates visual noise and makes an application hard to use.
Proximity & Grouping
By grouping similar elements together, the designer helps the user deal with a complex information display by reducing it to a manageable number of units.

source: [2]
Primary Action / Secondary Action
All form actions are not equal, and therefore the visual presentation of actions should match their importance to make it easier to complete a form. Visual distinction helps users make “good” choices.

source: [2]
Example: “Web Design, Filling the Blanks”

Yammer
Constraint

source: [2]
Constraints are closely related to real affordances: For example, it is not possible to move the cursor outside the screen: this is a physical constraint.

Locking the mouse button when clicking is not desired would be a physical constraint. Restricting the cursor to exist only in screen locations where its position is meaningful is a physical constraint.
Visual Constraint

source: [2]
Scalability of Interfaces / Flexibility
80/20 rule
A principle for setting priorities: users will use 20% of the features of your product 80% of the time. Focus the majority of your design and development effort (80%) on the most important 20% of the product.

source: [1]
Overcrowded Widget
Users are overwhelmed by options, limitless flexibility

Only show me what I need to see

Implement one easy to discover and easy to learn core pattern for common actions across the platform.
Adjust to users’ preferences.
Make less common actions harder to reach.

source: [5]
Aesthetic-Usability Effect

http://www.swissknifeshop.com/media/catalog/product/cache/1/image/5e0e6319eda06020e43594a9c230972d/v/m/vm_53831--91_sol_front_ax1000.jpg

source: [1]
Aesthetic-Usability Effect
Aesthetic designs are perceived as easier to use than less-aesthetic designs.
Aesthetic designs look easier to use and have a higher probability of being used, whether or not they actually are easier to use.

source: [1]
The flexibility-usability tradeoff is exemplified in the well known maxim “jack of all trades, master of none”.

Flexible designs can perform more functions than specialized designs, but they perform the functions less efficiently.
Fonts
-two general groups: serif & sans serif
-sans serif can be scanned quickly
-avoid very heavy or light typefaces for UIs
-avoid combining too similar typefaces
-stick with standards first
Roboto

SUNGLASSES
Self-driving robot ice cream truck
Fudgesicles only 25¢

ICE CREAM
Marshmallows & almonds
#9876543210

Music around the block
Summer heat rising up from the sidewalk

source: [5]
Colors
HSV Color Space
-three main properties: hue, saturation (or intensity) and value (or brightness)
-hue refers to the color itself (the particular color within the optical (visible) spectrum of light), saturation refers to the brightness, value refers to the amount of black in a color

-color can provide cues for use
-color can establish a relationship
-color can indicate importance
-consider human factors such as color blindness and cultural differences
Colors
source: [2]
Effective design creates no more contrast than necessary.

This allows the viewer to easily identify the elements in question as a strongly defined subset of the available information.
Effective design creates no more contrast than necessary. This allows the viewer to easily identify the elements in question as a strongly defined subset of the available information.
Symmetry
Symmetry ensures balance and clear organization, if sometimes at the expense of visual interest. While this may be a drawback for a poster or retail packaging, it is perfectly appropriate for a user interface.

source: [2]
UI Kits
Explore Over a Million Color Palettes
You'll find over 1,666,068 user-created color palettes to inspire your ideas. Get the latest palettes RSS feed or use our color palette maker to create and share your favorite color combinations.

NEW  MOST LOVED  MOST VIEWS  MOST COMMENTS  MOST FAVORITES

Browse Palettes

Giant Goldfish  by manekineko
508 COMMENTS  3005 FAVORITES  232796 VIEWS  3510 LIKES

Thought Provoking  by Miss_Anthropy
285 COMMMENTS  1938 FAVORITES  139170 VIEWS  2738 LIKES

Terra?  by GlueStudio
442 COMMENTS  1567 FAVORITES  89562 VIEWS  1463 LIKES

Recent Palette Comments

huege  POSTED 2 MINUTES AGO  
Lovely pattern Dawn! After a few minutes of looking at it, I realized she had a cigarette 😊
American Women wrote:

Smoking Lady  by American Women
3 LIKES  0 COMMENTS  137256 RANK
American Women wrote:

I love it! I don't know why, but to me this looks like the palette should on a package of cigarettes. I don't even smoke, but I love the palette so much that I think it's making me want to start smoking!!
Graphical User Interface Design

• Principles

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• Controls and Widgets

• Simplicity
Switch


Button


Dial


Slider

Checkbox

Radio Button

Twist

Scroll Bar


http://www.satimage.fr/software/images/gui/radio_button.png
Drop-down menu  Multiple Selection List  Text Box  Spin Box

http://www.satimage.fr/software/images/guil/radio_button.png
Controls

http://www.flickr.com/photos/merlijnhoek/2055608176/
Controls


source: [4]
Mapping of Representation and Control
Graphical User Interface Design

• Principles
• Layout, Typography, Color & Contrast
• Controls and Widgets
• Simplicity
Simplicity
Approachability
Simple designs can be rapidly apprehended and understood well enough to support immediate use or invite further exploration.


source: [2]
Recognizability
Simple designs can be recognized more easily than their more elaborate counterparts. Because they present less visual information to the viewer, they are more easily assimilated, understood and remembered.
Immediacy
Simple designs have a greater impact than complex designs, precisely because they can be immediately recognized and understood with a minimum of conscious effort.

source: [2]

Usability
Improving the approachability and memorability of a product necessarily enhances usability as well. Simple designs that eliminate unnecessary variation or detail make the variation that remains more prominent and informative.

source: [2]
Reduction through successive refinement is the only path to simplicity
References (Books):

Breakout session No. 9

Recap Part I
Klausur

• **Termin:** Mittwoch, 01.08.2012, 10-12 Uhr

• **Frist zur Anmeldung:** Mittwoch, 25.07.2012

• **Ort:** Theresienstraße 41, Raum C 123

• **closed book, also keine Hilfsmittel zugelassen**

• **Abmeldefrist:** 29.07.2012
Problem
Studenten melden sich zu Klausuren an und
• erscheinen nicht (Verwaltungsaufwand)
• erscheinen zunehmend unvorbereitet (Korrekturaufwand)

Mögliche Lösung
• Bitte mindestens eine Woche vor Klausurtermin abmelden!
• Bitte Korrektur nur bei Aussicht auf Erfolg in Anspruch nehmen!

Notlösung
(wenn genannte Lösung im SoSe 2012 nicht funktioniert)
• Alle angemeldeten Klausuren werden im Transcript of Records vermerkt
Sketch Books

• 5% Bonus possible for the Sketchbooks
• Please hand in the books next week after breakout session
• we will look through them quickly
• you can pick them up Thursday 4 p.m. at Amalienstraße 17 5th floor (when the Tutorial takes place)
Task for Today

• Every group gets a card with an important topic of IxD

• Prepare the topic for a 3-5 min presentation

• Presentation should contain:
  – Explanation of the topic/concept
  – Why is it important for IxD? What are the conclusions for the Interaction Designer?
  – Demonstrative example
  – Send material to sebastian.loehmann@ifi.lmu.de or bring it to us in other form
  – Presentations start at 11 a.m.