CSE 40416

System Interface Design

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Lecture 33 – November 18, 2009
Today’s Lecture

☐ Lecture Feedback

☐ C# Tips / Tricks
  ■ Drag / drop

☐ Continue
  ■ Human Information Processing

Reminders
- Blog Post (Week)
- Homework 5
- Project 3
Customizable UI - Android

http://vimeo.com/7670834
Discuss

- Consistent UI
  - Good or bad?
  - Compare / contrast
    - Apple iPhone / iPod Touch
    - Android
    - Symbian
    - Windows Mobile
Surface Units

☐ Simulator
   ■ Installed on each of the multi-touch
   ■ Also on the Macs via the VM

☐ Community website
   ■ Homepage of Internet Explorer
   ■ Login is striegel@nd.edu
      ☐ Don’t post!
      ☐ Automatically saved
Microsoft Surface Lamp Timer Now Available
Tuesday, Sep 22, 2009
A Microsoft Surface unit uses infrared cameras to sense objects, hand gestures...

Protective Film Available for Microsoft Surface Tabletops
Monday, Sep 21, 2009
Microsoft Surface units receive a lot of use as users touch the tabletop and...

New Microsoft Surface Availability and Services
Tuesday, Sep 01, 2009
Announcing Microsoft Surface Availability in Three New Markets Microsoft Surface...

Start Developing and Win a Microsoft Surface Unit!
Monday, Aug 24, 2009
Create the most innovative, next-generation application experience for Microsoft...

Patch Release: Microsoft Update patch release bulletin for November 10, 2009
Friday, Nov 06, 2009
This bulletin describes the results of the Microsoft Surface tests of software...

KB: ApplicationActivated Event Is Never Raised in Single-Application Mode
Wednesday, Oct 28, 2009
Applies To Microsoft Surface 1.0 Service Pack 1 (SP1) Problem Typically, a Microsoft...

Patch Release: Microsoft Update patch release bulletin for October 13, 2009
Wednesday, Oct 28, 2009
This bulletin describes the results of the Microsoft Surface tests of software...

Windows Vista SP2 and Microsoft Surface
Wednesday, Oct 28, 2009
Windows Vista Service Pack 2 (SP2) is available through Windows Update for...
Drag / Drop Surface

- Shopping Cart in the SDK
  - All Multi-Touch, Macs, Dev unit
- Solution: DragDropScatterView
  - Borrow this class
  - Extension of scatter view class
- Remember
  - Background
  - AllowDrop
  - or just use the above class 😊
Project 3 / Final Project

- OK to use other code
- Borrow code from other projects
  - Other teams - that’s cool
- Proper attribution
  - Appropriately link / document via Wiki
Receiver - Easier

☐ LibraryBar
  ■ Will create the object to drag out
    ☐ Whew!

☐ Task
  ■ How do we react to the newly dropped object?
    ☐ AllowDrop property
    ☐ Drop event handler
Design Qualities

- Visually pleasing
  - Balance
  - Symmetry
  - Regularity
  - Predictability
  - Sequentiality
  - Economy
  - Unity
  - Proportion
  - Simplicity
  - Groupings

Aesthetics matter
Aesthetic design are perceived as easier.
Balance

12/13/2009
Balance

- Equal weight of elements
  - Left to right
  - Top to bottom
Balance

- Heavy vs. light
  - Dark colors, unusual shapes, larger objects -> heavier
  - Light colors, regular shapes, small objects -> lighter
Balance

12/13/2009
Balance

12/13/2009
Symmetry

- Symmetry creates formal balance
- Can be balanced without symmetry
- Symmetry
  - More compressed / compact
- Asymmetric
  - Perceived as larger
Symmetry
Asymmetry
Regularity

- Standard / consistent spacing
- Horizontal / vertical alignment points
- Similar
  - Element size
  - Shapes
  - Colors
  - Spacing
Regularity
Irregularity
Predictability

- Consistent / follow conventional order
- View one screen
  - Predict the next one
- Spontaneous
  - No plan
  - Unpredictable
Predictability
Sequentiality

- Logic, rhythm
- Eye attraction
  - Brighter vs. less bright
  - Isolated before elements in a group
  - Graphics before text
  - Color before black / white
  - Highly saturated colors vs. less
  - Dark areas before light areas
  - Big element before small
  - Unusual shape vs. usual one
  - Big objects vs. little objects
Sequentiality
Economy

- Limit
  - Styles
  - Display techniques
  - Colors
- Frugal, judicious
- Opposite is intricacy
Economy

XXXXX
XXXXX
XXXXX

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XXX
Unity

- Use similar sizes, shapes, colors
- Leave less space between elements vs. space left at margins
Use aesthetic proportions (Markus 92)

- Square (1:1)
  - Stability / permanence
- Square root of two (1:1.414)
  - Book design
- Golden rectangle (1:1.618)
  - Early Greek architecture
- Square root of three (1:1.732)
  - Narrowness gives distinct shape
- Double square (1:2)
  - Higher ratio is difficult to sense
Proportions

- **Letter paper**
  - 1:1.29

- **TV**
  - 1:1.33

- **CRT / LCD**
  - 1:1.33 to 1:1.50
Questions?

- Weekly Blog
- Homework 5
- Project 3