

Computer/Human Interaction

Lecture 21

Overview:

- Project schedule corrections
- Gulf of Evaluation: Making Sense
 - Consistency
 - Visual Metaphors
 - Information Models
 - Dynamic Displays

Project Schedule Corrections

- Java prototype due **Monday, October 23** (not October 18 in assignment sheet)
- Exam 1 is Friday, October 27 (as stated in reading schedule)
- Rest of project schedule the same.

Gulf of Evaluation

- How users understand tasks
 - Perception: Mind organizes and **encodes** the data it is given into groups
 - Interpretation: Result of perceptual encoding is **recognition** of the task being performed
 - Making sense: Evaluate whether task addresses the active goal or interest.

Making Sense

- User **integrate** information to make sense of their perceived and interpreted information
- Connect new information to
 - Personal knowledge
 - Domain expertise
 - Recent events
- Users detect patterns and relationships in presented information and relate them to patterns of knowledge and of the task

Making Sense 2

- Various techniques facilitate users' making sense of user interface
 - Consistency
 - Visual metaphors
 - Information models
 - Dynamic displays

Consistency

- Visual design program allows users to create and benefit from expectations
 - Example: fonts, labeling
- Placement of elements
 - Example: window buttons
- Terminology, command language
 - Example: "Move backward", "Backward", "Reverse"
- Internal (within screen) and external (across screens)

Visual Metaphors

- Consistency with real world objects and actions
- Designers explore and are inspired by real world
- Allows users to recognize task easily
- Tradeoff: Metaphor can be too literal
 - Example: Desktop calculator in Figure 4.7; irrelevant information/actions

Information Models

- **Information model** is a set of concepts, relationships and representations to facilitate understanding of large amounts of data and complex functionality
- Most common is **hierarchy** (i.e., tree model)
 - Example: library classification, Web site maps
- Tradeoffs: Breadth vs. depth, organization vs. inflexibility, exposing intermediate categories
- Network models common on web

Dynamic Displays

- Redisplay or animate information based on context
- Humans are good at making sense of motion and depth variations
- **Fish-eye view**: clearer, more detail at the point of interest
- Generalized to **focus+context** visualization
- www.inxight.com

Dynamic Displays 2

- Semantic filtering: use semantic attributes to determine whether to display, color and shape, etc.
- Multiple coordinated views: panel of windows that show different, related views of information
 - Example: Visual Studio IDE, Java API documentation website

Exercise

Exercise 1 on page 156 of textbook:

- Use the Gulf of Execution to analyze the information that you process when you check your email for the first time each day. What happens during perception? Interpretation? Making sense?