

## Computer/Human Interaction

### Lecture 27

#### Overview:

- Interaction Design and SBD
  - Explore interaction design space
  - Interaction scenarios
  - Interaction claims
  - Refining interaction scenarios
- Summary and Review

Reminder: Exam 1 on Friday, October 27

## Interaction Design & SBD

- Elaborate activity and information scenarios into **interaction design scenarios** (same stories with interaction details); also called dialog design
- Concentrates on exchange between humans and the system; specify how users will select or manipulate system information
- Make **claims** regarding interaction features and analyze consequences

## Explore Metaphors

- Use the same ones as in activity and information design or new ones to brainstorm
- Concentrate on what they suggest with regard to interaction
- Example:
  - Wiring an electrical circuit is like...
  - Using a voltmeter is like...

## Explore Technology

- Elaborate what technology being considered acts like
- Example:
  - Wiring an electrical circuit is like...
  - Using a voltmeter looks like...

## Interaction Design Scenarios

- Identify claims features of activity and information scenarios that can be supported by specific choices of interaction
- Rewrite scenario with interaction details
- Consider consequences, side effects

## Claims analysis

- Same as before: identify feature of interaction scenario, consider consequences of feature
- Pros and cons from the point of view of the interaction being presented as related to activity and information claims
- Goal is to maximize overall pros and minimize overall cons

## Example

- Activity scenario: Dr. Hwang builds a circuit using a simulation program to draw a circuit...
- Information scenario: Dr. Hwang launches a simulation program... It has toolbar buttons with different shapes...
- Interaction scenario: Dr. Hwang launches a simulation program... She clicks on the toolbar button with the resistor symbol. This causes the cursor to turn into the resistor symbol. She moves the mouse...

## Example 2

- Interaction claim: Having the cursor change shapes to the element selected
  - + ...
  - ...

## Refining Interaction Design

- Design eventually must map each action to a specific device with specific visual/auditory feedback. etc.
- Storyboard sketches can be used to elaborate interaction (over text-only)

## Summary of SBD Design

- Develop root concept (overall vision/rationale), identify stakeholders
- Problem scenarios describe current activity
- Activity scenarios transform problem scenarios into activities using new concepts, new technology
- Information scenarios specify representations of task's objects and actions that help users perceive, interpret, and make sense

## Summary 2

- Interaction scenarios specify how users will select or manipulate system information
- Brainstorm and consider HCI principles at each design phase.
- Develop claims regarding features; present both positive and negative effects; feedback into previous phases
- Overriding goal is to maximize positive and minimize negative effects.

## Review

- Consider case studies at <http://ucs.ist.psu.edu>
- What is root concept? Who are the stakeholders?
- What are the current activities?
- What are the new activities? What is being claimed?
- What information is being presented? What is being claimed?
- What kinds of interaction are there? What is being claimed?
- How are these phases supported with specific techniques?