

## Computer/Human Interaction

### Lecture 13

#### Overview:

- Activity design and SBD
  - Explore activity design space
  - Activity design scenario
  - Activity design claims
  - Refining activity design
  - Coherence and completeness

## Activity Design & SBD

- Transform problem scenario (stories about current activities) into **activity design scenarios** (stories about new functionality, new needs and how to meet them)
- Address system functionality only, not concerned with details of presentation or physical interaction
- Make **claims** regarding new features and analyze consequences

## Explore Metaphors

- Brainstorm about metaphors for activities and discuss implications of each
  - Think "out of the box"
- Example: Electrical circuit simulation
  - Building a circuit is like ...
  - Hooking up a voltmeter is like ...

## Explore Technology

- Brainstorm about technology and discuss implications of each
  - Existing technology
  - Future technology
  - Remember root concept
- Example: Electrical circuit simulation
  - Building a circuit is like using ...
  - Hooking up a voltmeter is like using ...

## Activity Design Scenarios

- Identify claims features that might be changed by introducing technology
- Use metaphors and technology to propose changes
- Rewrite scenario using changes
  - How to actors react, what happens next
- Consider consequences, side effects

## Claims Analysis

- Same idea as for problem scenarios
- Identify a feature of the activity design
- Analysis considers consequences of feature
  - Interleave with scenario writing
  - Document pros and cons of activity, especially as related to problem claims analysis

## Example

- Problem scenario: Dr. Hwang builds a circuit... She finds her breadboard, gets parts from the stockroom... She reads the circuit diagram... She inserts parts connected to same node into same row of breadboard...
- Activity scenario: Dr. Hwang builds a circuit...
- Activity claim: Building a circuit by drawing a circuit diagram
  - + ...
  - ...

## Refining Activity Design

- System object's point of view
  - Consider computational aspects implied by scenario, responsibility-driven design similar to object-oriented design
  - **Anthropomorphism**: object as a sentient entity. "If I were Dr. Hwang's circuit in the building scenario, what could I do to be useful?"
  - May prompt ideas of when software should take initiative or be responsive to user actions
- Participatory design – ask stakeholders

## Coherence & Completeness

- **Coherence**: no contradictions or inconsistencies over the whole set of scenarios
  - One team of designers
  - Reuse actors and task information
  - Insert same design features in multiple scenarios
- **Completeness**: considered all needs
  - Generally, cannot enumerate all possible activities
  - Main issue is missed opportunities
  - Consider new activities not previously done

## Homework 2

- Exercises 2 & 3 on page 107 of textbook.
- **Due at beginning of class on Friday**, will discuss and compare.