Picking Project Teams & Problem Finding

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Autumn 2012

* Problem Finding slides from Prof. Tad Hirsch, UW Design

Hall of Fame or Shame?

• Good
  - flexible sort
  - icons change if save a house
  - understands “neighborhoods”

• Bad
  - no map legend?
  - unclear how to sort
  - cluttered map
  - similar icons

Hall of Shame!

Aesthetically pleasing but...

Does not perform it’s only function well: To make Juice.

Amazon review:
You’ll get almost as much juice on the wall and counter as you do in the glass after the juice sprays in every direction.

An example of where beauty can overpower purpose

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Outline

- Review
- Project teams
- Administrivia
- Brainstorming & Problem Finding

Readings

- Fitts’ Law?
  - time it takes a person to move a mouse to a target is proportional to distance to target divided by target size
  - e.g., buttons that are small or far away are harder to click on than buttons that are large or nearby

- What was NLS?
  - oNLine System

- Features of NLS?
  - mouse, groupware, client-server, windows, version control, hypertext, 2d editing, context-sensitive help, …

Project Team Ideas

- Let’s hear 1 minute from each proposer
- At the end rank the top 4 projects you’d like to work on
- Don’t pick groups with your friends
- Groups will be on web site by end of day
  - get together soon & start talking
  - problem finding assignment due this Thur (online today)

Administrivia

- Roll

Teams vs. Groups

- Teams & good performance are inseparable
  - a team is more than the sum of its parts

- Groups
  - strong leader
  - individual accountability
  - organizational purpose
  - individual work products
  - efficient meetings
  - measures performance by influence on others
  - delegates work

- Teams
  - shared leadership
  - individual & mutual accountability
  - specific team purpose
  - collective work products
  - open-ended meetings
  - measures performance from work products
  - does real work together
Keys to Team Success

- **Common commitment**
  - requires a purpose in which team members believe
  - "prove that all children can learn", "revolutionizing how we use energy in the home", …
- **Specific performance goals**
  - comes directly from the common purpose
  - "increasing the scores of graduates form 40% to 95%"
  - helps maintain focus – start with something achievable
- **A right mix of skills**
  - technical/functional expertise (programming/design/writing)
  - problem-solving & decision-making skills
  - interpersonal skills
- **Agreement**
  - who will do particular jobs, when to meet & work, schedules

Team Action Items

- **Keep meeting & get used to each other**
- **Figure out strengths of team members**
- **Assign each person a role**
  - responsible for seeing work is organized & done
  - not responsible for doing it themselves
- **Names/roles listed on next assign. turned in**
- **Roles**
  - design (visual/interaction)
  - user testing
  - development
  - team manager (coordinate - big picture)
  - documentation (writing)

Design Process: Exploration

1. **Discovery**
2. **Design Exploration**
3. **Design Refinement**
4. **Production**
5. **Expand Design Space**
   - Brainstorming
   - Sketching
   - Storyboarding
   - Prototyping

Wicked Problems

- **Ill-defined**
  - Complex, interrelated
  - Multiple stakeholders, differing perspectives
  - Example: Air pollution

- **No stopping rule**
  - Problems are managed, not solved
  - Examples: Aging

Implications for Design

- Solutions depend on how the problem is Framed… and vice-versa
- Solutions are not optimal
  - There’s no right or wrong… but there is better and worse
- Every problem is unique
- Creative approaches are required

Approach

1. Explore the problem
2. Find a leverage point
3. Design an intervention
4. See what happens
5. Repeat
Methods

Concept mapping
create a model
find out what you already know

Ideation
explore a solution space

Concept mapping
A technique for visualizing relationships between ideas

Process
1. List 10-20 words associated with the topic
2. Group them into named categories
3. Start diagramming
4. Add categories + examples
5. Label the relationships
6. Keep going until you lose momentum (and/or run out of time)
7. Highlight areas for further investigation

Outcomes
1. A model (not definitive!)
2. A few design directions

Step 1: List associated words

Step 2: Group into Categories

Step 3: Start Diagramming
Step 4: Add Categories + Examples

Step 2: Keep Going

Step 2: And going…

Step 2: Highlight Areas for further Investigation

Next step: Research + Analysis

How big a problem is it? (market)

Whose problem is it? (stakeholders)

What's already out there? (competition)

How are things done currently? (status quo)

How can they be improved? (innovation)

Step 8: Edit and Prioritize
Next Time

• Lecture
  – Design Discovery: Contextual Inquiry & Task Analysis

• Readings
  – Chapter 3 of *Contextual Design*
  – optional: Lewis & Reiman Chapter 2