USER INTERFACE DESIGN + PROTOTYPING + EVALUATION

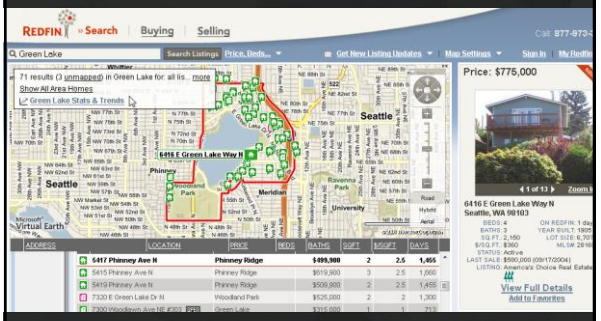
Picking Project Teams & Problem Finding

Prof. James A. Landay
University of Washington

CSE 440
Jan 15, 2013

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

Hall of Fame or Shame?



Hall of Fame!

- Good
  - flexible sort
  - icons change if save a house
  - understands "neighborhoods"
- Bad
  - no map legend?
  - cluttered map
  - similar icons

Hall of Fame or Shame?

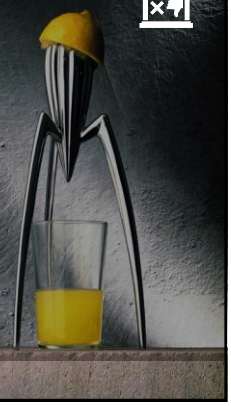
Hall of Shame!

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 since the juice will spray in every direction.

An example of where beauty can overpower purpose



USER INTERFACE DESIGN + PROTOTYPING + EVALUATION

Picking Project Teams & Problem Finding

Prof. James A. Landay
University of Washington

CSE 440
Jan 15, 2013

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

Outline

- Review
- Project teams
- 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 online
  - problem finding assignment due this Thur (online today)

Project Team Ideas

1	Anti-distraction tool for students (Angela Liu)
2	To-do list/project planning (Fanny Luor)
3	Recipe sharing (Shahaf Nuriel)
4	Help people recycle (Chris Rovillos)
5	Time management/health app (Catriona Scott)
6	Exploration + discovery + creativity app (Janette Siu)
7	Collaborative grocery list (David Swanson)
8	Promote balance in users' lives (Dian Hartono)
9	Grocery shopping based on meals (Peter Huss)
10	Help people find shared free time (Grace Jang)
11	Crowdsourced image search (Adam Kalman)
12	Music recommendations via crowdsourcing (Sheena Kapur)
13	Promote family interaction (Yousef Khwaja)

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

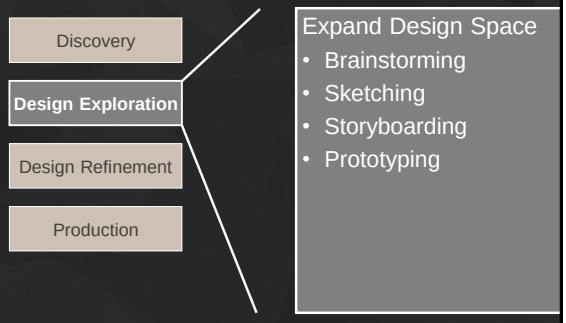
- Common commitment
  - requires a purpose in which team members believe
    - "prove that all children can learn", "revolutionizing how we use energy in the home", …
- Specific performance goals
  - comes directly from the common purpose
    - "increasing the scores of graduates form 40% to 95%"
  - helps maintain focus – start w/ 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
  - team manager (coordinate - big picture)
  - documentation (writing)
  - design (visual/interaction)
  - user testing
  - development

Design Process: Exploration



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

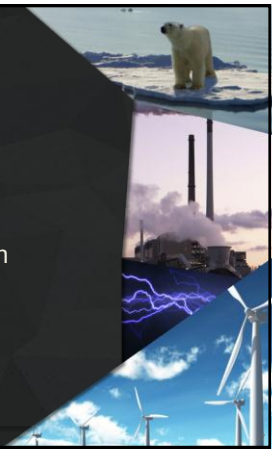
Solutions depend on how the problem is Framed… and vice-versa

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

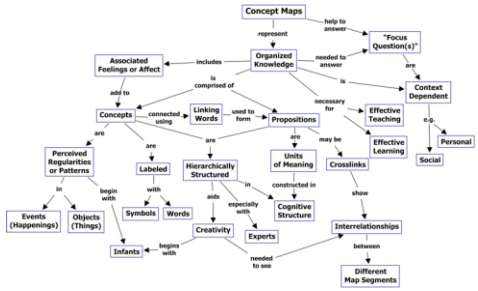
create a model
find out what you already know

Ideation

explore a solution space

Concept mapping

A technique for visualizing relationships between ideas



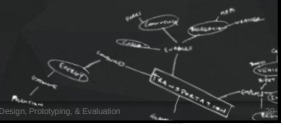
Concept mapping

Process

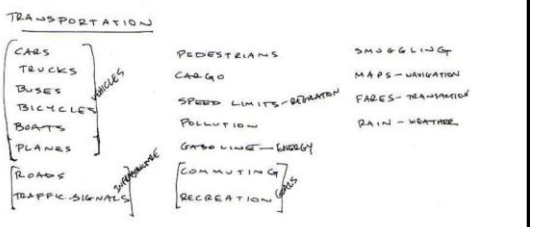
1. List 10-20 words associated with the topic
2. Group them into named categories
3. Start diagramming
4. Add categories + examples
5. Label the relationships
6. Keep going until you lose momentum (and/or run out of time)
7. Highlight areas for further investigation

Outcomes

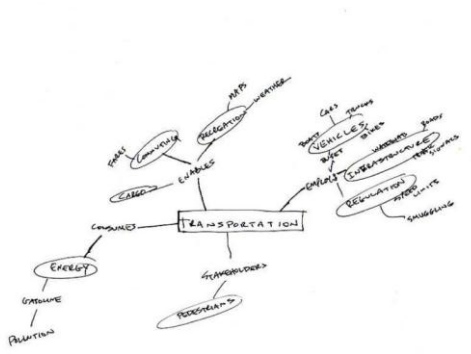
1. A model (not definitive!)
2. A few design directions



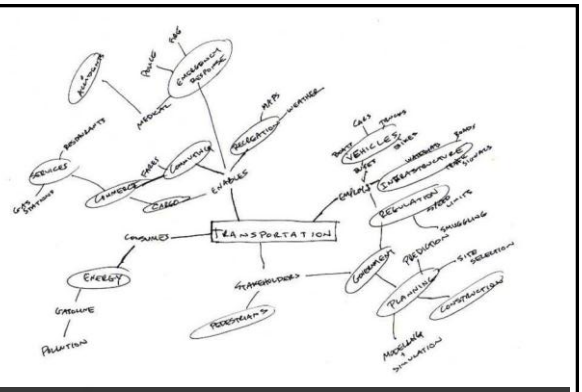
Step 1: List associated words



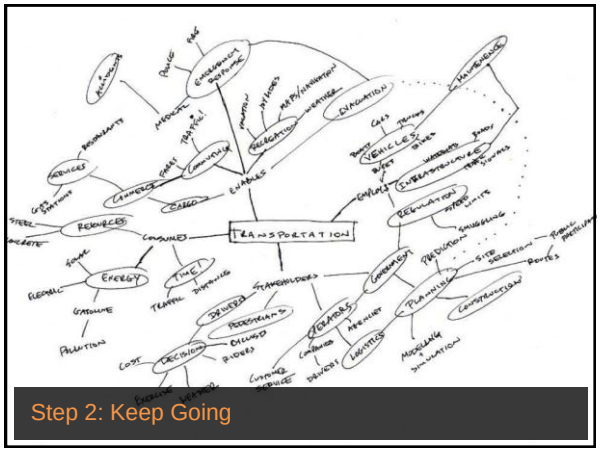
Step 2: Group into Categories



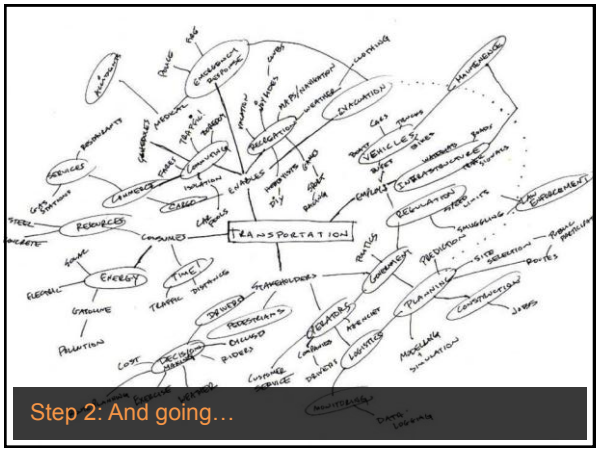
Step 3: Start Diagramming



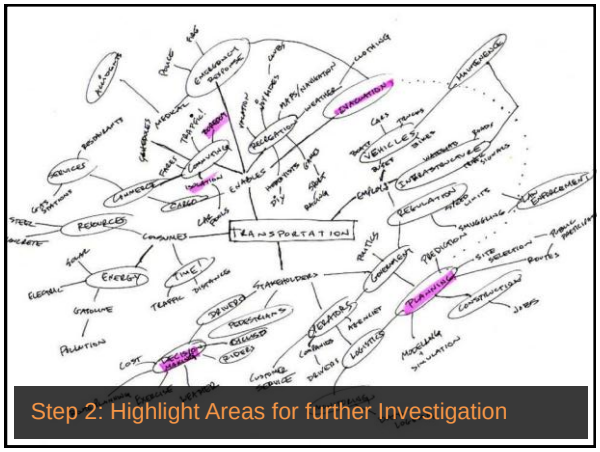
Step 4: Add Categories + Examples



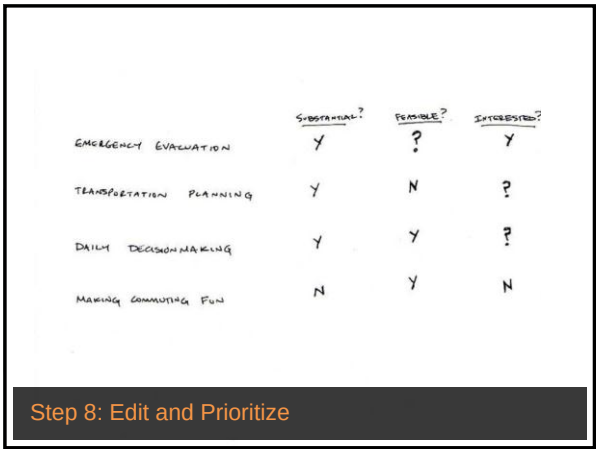
Step 2: Keep Going



Step 2: And going…



Step 2: Highlight Areas for further Investigation



Step 8: Edit and Prioritize

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)

Next Time

- Gestalt Principles
- Remember to fill out and submit your project choices!!!!!!!!