IS4300: HCI

Heuristic evaluation.

Spring 2013

Today's Agenda

- Lecture on heuristic evaluation and discount usability testing
- In-class prototyping preparation

Heuristic Evaluation

- Developed by Jakob Nielsen
- Several expert usability evaluators assess system based on simple and general heuristics (principles or rules of thumb)
- A.k.a. Homework 5

Heuristic Evaluation procedure

1. Gather inputs

2. Evaluate system

3. Debriefing and collection

4. Severity rating

Step 1: Gather Inputs

Who are evaluators?

- Need to learn about domain, its practices

Get the prototype to be studied

- May vary from mock-ups and storyboards to a working system

Step 2: principles of usability
(Remember these?)

- visibility of system status
- aesthetic and minimalist design
- user control and freedom
- consistency and standards
- error prevention
- recognition rather than recall
- flexibility and efficiency of use
- recognition, diagnosis and recovery from errors
- help and documentation
- match between system and real world

Step 2: Evaluate system

Reviewers evaluate system based on high-level heuristics (i.e., usability principles)

- use simple and natural dialog
- provide clearly marked exits
- speak user's language
- provide shortcuts
- minimize memory load
- provide good error messages
- be consistent
- prevent errors
- provide feedback

Step 2: procedure

- Perform two+ passes through system
- Inspect:
  - Flow from screen to screen
  - Each screen
- Evaluate against heuristics
- Find problems
  - If you think it is, it is
  - Don't dwell on whether it is or isn't

Step 3: debriefing

- Organize all problems found by different reviewers
  - At this point, decide what are and are not problems
  - Group, structure findings
 - Document and record them

Step 4: rate severity

- 0-4 rating scale where 4 is most severe
- Based on
  - frequency
  - impact
  - persistence
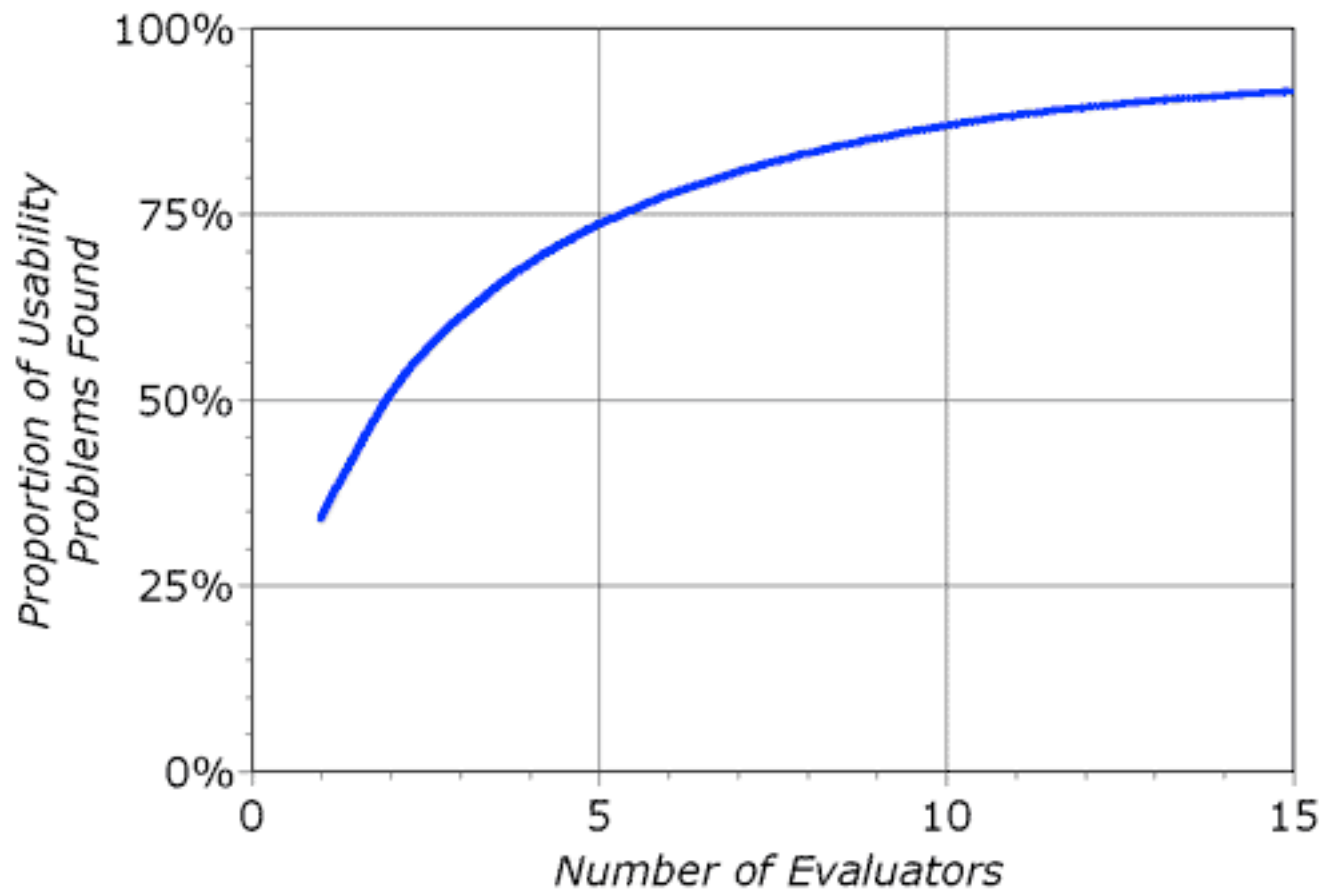 - market impact

Benefits of Heuristic Evaluation

- Cheap and effective
- Getting someone practiced in method is valuable

Still, some concerns

- Why are these the right heuristics?
- Some identified "problems" really aren't
- How to determine what is a true usability problem
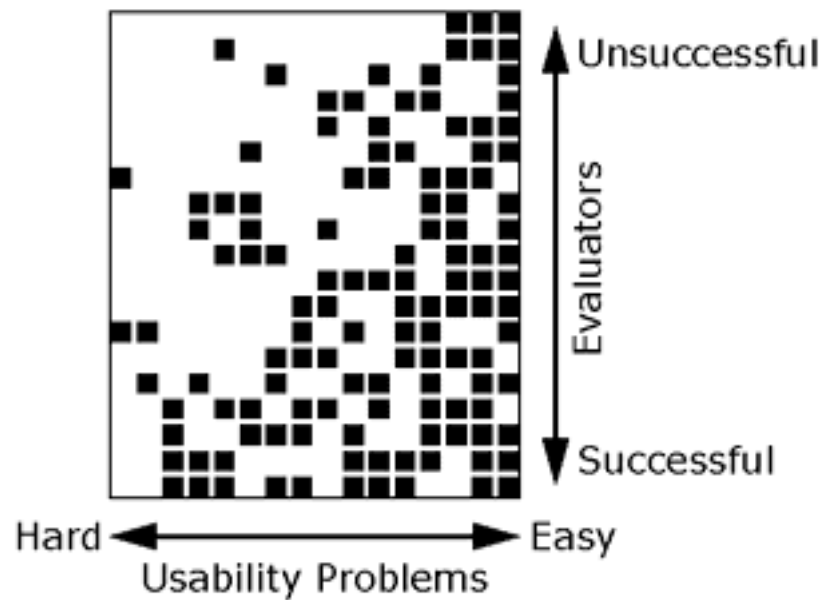
Discount usability testing

- Hybrid of empirical usability testing and heuristic evaluation

- Have 2 or 3 think-aloud user sessions with paper or prototype mock-ups

- The videos we watched are examples of this approach.

How discount usability testing is done

- Mockups don't have to be perfect
- Must be quick to create; economical in use of resources
- Sketches most common
- Paper has its limitations; tends to focus on the visual elements
- Sometimes awkward to use in usability testing