Evaluation (cont.):

Heuristic Evaluation
Cognitive Walkthrough

CS352
Announcements

• Notice upcoming events (web page).
  – Midterm: where to stop studying.

• Team matters. Recall that:
  – Everyone does everything.
    • Specialties: make sure it’s done right.
  – Your grade depends on what your team thinks of your pulling your share.
Announcements (cont.)

• Where we are in PRICPE:
  – Predispositions: Did this in Project Proposal.
  – RI: Research was studying users. Hopefully led to Insights.
  – CP: Concept and initial (very low-fi) Prototypes.
  – Evaluate throughout, repeat iteratively.

• Design Gallery:
  – where did that fit in?
  – what to do with what happened there?
Evaluation

• Analytical – based on your head
• Empirical – based on data
  – Formative
    • inFORMs design
    • what is (still) needed?
  – Summative
    • did it work?
Analytical methods

• You follow established guidelines/procedures/models to decide (in your head) how good your design is.

• Examples:
  – GOMS/KLM – for skilled users.
    • evaluating efficiency of regular use.
  – Heuristic Evaluation
  – Cognitive Walkthrough – for first-time users.
    • evaluating ease of learning.
Heuristic Evaluation

• One of the “Discount usability” methods
• Apply heuristic guidelines (eg: Nielsen’s) to a UI to find problems.

• Who does it:
  – Multiple usability experts.

• Example heuristics:
  – web design: Box 15.1 (3rd ed).

• Default: use Nielsen’s:
Heuristic Evaluation: How

• How:
  – Pick some usability guidelines, experts, task.
  – Brief the experts.
  – Experts indep’ly evaluate UI’s conformance with those guidelines for that task (1-2 hrs.)
    • Pass 1: flow.
    • Pass 2: focus on specific UI details.
    • Outcome: UI problems.
  – Experts meet to discuss problems, assign priorities, suggest solutions.
Heuristic Evaluation: Activity

• Applying this version of the guidelines to your projects:
Cognitive Walkthrough

• “Walk through” the UI, asking yourself questions along the way.
• Who does it:
  – 1 or more usability experts. (3 is ideal)
• How:
  – Identify characteristics of user and task.
  – Make up multiple copies of the Questions (next slide...)
Cognitive Walkthrough: How (cont.)

• Walk through the task while answering these Questions:
  – Will the user know what to do? (Gulf of exec)
  – Will the user see how to do it? (Gulf of exec)
  – Will the user understand from feedback whether their action was correct? (Gulf of eval)
Cognitive Walkthrough: How (cont.)

• Record the answers but also:
  – Assumptions about what would cause the problems and why.
  – Notes about side issues.
  – Notes about possible solutions.

• Example for Amazon.com
Cognitive Walkthrough: Activity

• OSU has a “shared car” program:
  – Suppose an OSU student wants to consider whether to use it when she needs to shop.

• Walk through the steps of this task:
  – Will s/he know what to do? (Gulf of exec)
  – Will s/he see how to do it? (Gulf of exec)
  – Will s/he understand from feedback whether the action was correct? (Gulf of eval)

• Notes: why, side-issues, ideas, ...
Comparison

• GOMS/KLM vs. HE vs. CogWalk
  – how long it takes you to do
  – how much detail it gives you
  – about what kind of user
  – how much of the UI you focus on at once