DIX
FINLAY
ABOWD
BEALE

chapter 9

evaluation techniques

Evaluation Techniques

- Evaluation
  - tests usability and functionality of system
  - occurs in laboratory, field and/or in collaboration with users
  - evaluates both design and implementation
  - should be considered at all stages in the design life cycle

Goals of Evaluation

- assess extent of system functionality
- assess effect of interface on user
- identify specific problems

Evaluating Designs

Cognitive Walkthrough

Heuristic Evaluation

Review-based evaluation

Heuristic Evaluation

- Proposed by Nielsen and Molich.

- usability criteria (heuristics) are identified
- design examined by experts to see if these are violated

- Example heuristics
  - system behaviour is predictable
  - system behaviour is consistent
  - feedback is provided

- Heuristic evaluation `debugs' design.

Heuristic Evaluation

- Heuristic is a guideline or general principle or rule of thumb that can guide a design decision or be used to critique a decision that has already been made.
- It is a method for structuring the critique of a system using a set of relatively simple and general heuristics.

Heuristic Evaluation

- Heuristic evaluation can be performed on a design specification so it is useful for evaluating early design.
  - it can also be used on prototypes, storyboards and fully functioning systems.
- it is often considered a *discount usability* technique because it is a cheap approach.

Heuristic Evaluation

- The general idea behind heuristic evaluation is that several evaluators independently critique a system to come up with potential usability problems.
- It is important that there be several of these evaluators and that the evaluations be done independently.

Nielsen's Experience

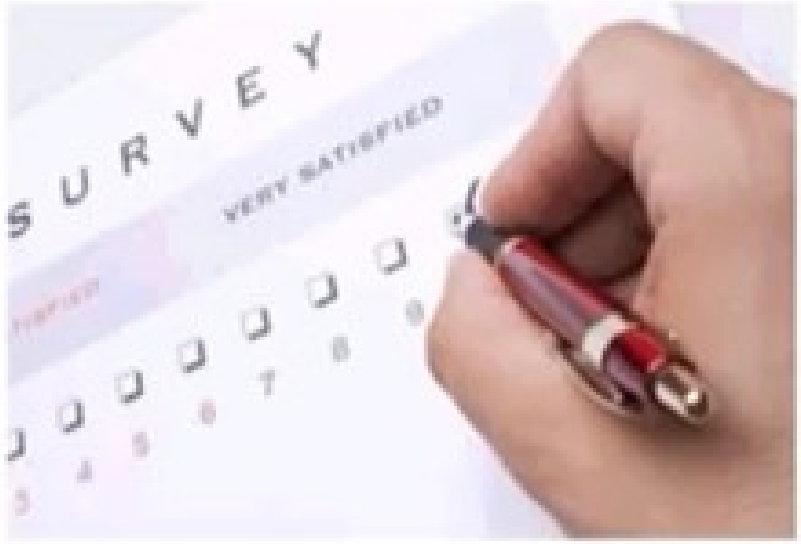
- Nielsen's experience indicates that between three and five evaluators is sufficient, with five usually resulting in about 75% of the overall usability problems being discovered.

Evaluators scale

- Each evaluator prepares the result based upon a rating scale. For example
  - 0 = I don't agree that this is a usability problem at all
  - 1 = Cosmetic problem only: need not be fixed unless extra time is available on project
  - 2 = Minor usability problem: fixing this should be given low priority

Evaluator Scale

- 3 = Major usability problem: important to fix, so should be given high priority
- 4 = Usability catastrophe: imperative to fix this before product can be released (Nielsen)



Heuristic Evaluation

- Once each evaluator has completed their separate assessment, all of the problems are collected and the mean severity ratings calculated.
- The design team will then determine the ones that are the most important and will receive attention first.