

# CS3724 Human-computer Interaction

## Usability Inspection

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# Topics

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- Heuristic inspection
- Expert inspection
- Web usability inspection
- Usability inspection process

# Usability Inspection

- Sometimes called heuristic evaluation or expert evaluation (Nielsen 1990)
  - A guidelines-based formative usability evaluation technique
  - Performed by usability expert as inspector
    - Does not use actual users
    - Role of expert is “usability problem detective”
    - Inspectors ask themselves questions about what would cause users problems
    - Inspector gives expert opinion predicting usability problems (not just own critical incidents)

# Usability Inspection

- Advantages

- Some think inspection is single most cost-effective method to improve usability
- Provides design team with perspectives and experience independent of design team
- Complements usability testing with users
- Especially appropriate for early development stages

# Usability Inspection

- Disadvantages
  - Does not use real users
  - Not a substitute for lab-based usability testing
  - Experts may not know system in depth
  - May find “false positives”
  - May find higher proportion of lower severity problems

# Usability Inspection

- Typical usability inspection process
  - Expert usability specialists (not on interaction design team) assess specific user interaction design by determining guidelines violated and supported
  - “Double expert” even better
  - Typical 2 or 3 inspectors
    - Gives diversity of opinion
    - Typically, one inspector finds only about 30% of problems
    - Can have up to 5 inspectors for important part of design

# Usability Inspection

- Typical usability inspection process
  - First, each inspector separately assesses design of site
    - Open, no pre-defined tasks
    - Take notes
    - Watch especially for first impressions

# Usability Inspection

- Then, all inspectors work together
  - Merge problem lists
  - Select most important to fix
  - Brainstorm suggested solutions
- Based on findings, experts recommend modifications to improve usability of site

# Assessing a Web Design Via Inspection

- Some suggested categories for inspection of web site (very broad)
  - Availability and accessibility of needed information
    - Information is there AND user can easily find it
  - User-centered wording
    - Speak user's language
  - User-centered control
    - Keep user feeling in control

# Assessing a Web Design Via Inspection

- Consistency
  - Use similar design for similar concepts, terminology, graphics
- Error prevention
  - Make it goof-proof; recognition vs. recall
- Feedback
  - Let user know what has happened, to determine where in site they are

# Assessing a Web Design Via Inspection

- Specific guidelines for category: *Availability and accessibility of needed information*
  - Is important information available?
  - Is important information easy to find?
  - Are pages/frames organized into good “sight bites”

# Assessing a Web Design Via Inspection

- Are frames used effectively and efficiently?
- Is text laid out attractively and effectively?
- Are layout, graphic, and text components easily “scan-able” by user?
- Are color/graphics/animation used appropriately?

# Usability Inspection

- Reporting results
  - List guidelines used in inspection
    - Example: Does the design give good user **feedback** throughout?
  - For each guideline
    - Give specific examples of design violations (and excellent examples of support!)
    - Give URL, explanation, and screen image (if available)
    - Give suggestion for redesign (if appropriate)

# Usability Inspection

- List “Top 3” (or 4 or 5) suggestions for modifications
  - To give biggest improvement in usability
  - Based on most frequently visited screens, screens with most usability problems, guidelines most often violated, minimum resources to make changes