

CS3724 Human-computer Interaction

Usability Inspection

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Topics

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

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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)

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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

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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

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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

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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

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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

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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

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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

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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"

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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?

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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)

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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

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