

CS 315 – Intro to Human Computer Interaction (HCI)

A decorative graphic consisting of a solid blue horizontal bar that spans the width of the slide. Below this bar, on the right side, there are several horizontal lines of varying lengths and colors (light blue and white) that create a stepped, layered effect.

User Acceptance Testing

Acceptance Tests

- Set goals for performance
 - Objective
 - Measurable
- Examples
 - Mean time between failures (e.g. MOSI)
 - Test cases
 - Response time requirements
 - Readability (including documentation and help)
 - Satisfaction
 - Comprehensibility

Acceptance Tests

- We want the software to be user friendly.
- How could we rephrase it?
 - Use a metric such as Shneiderman's goals for interface design
 - Time for users to learn specific function
 - Speed of Task performance
 - Rate of Errors
 - User retention
 - Subjective satisfaction

Examples

- Test A
 - The participants will be
 - 35 adults (25-45 years old)
 - Native speakers with no disabilities
 - Hired from an employment agency
 - Moderate web-use experience (1-5 hours/week) for at least one year
 - >30 of the 35 should complete the benchmark tests within 30 minutes
- Test B
 - The participants will be
 - 10 older adults 55-65
 - 10 adult users with varying motor, visual, and auditory disabilities
 - 10 adult users who are recent immigrants and use English as a second language
- Test C
 - Ten participants will be recalled after one week
 - Carry out new set of benchmark tests
 - In 20 minutes, at least 8 should be able to complete tasks

Acceptance Tests

- By completing the acceptance tests
 - Can be part of contractual fulfillment
 - Demonstrate objectivity
- Different than usability tests
 - More adversarial
 - Neutral party should conduct that
- Ex. Video game and smartphone companies
 - App Store, Microsoft, Nintendo, Sony

Evaluation During Use

Evaluation during use

- Evaluation methods after a product has been released
 - Interviews with individual users
 - Get very detailed on specific concerns
 - Costly and time-consuming
 - Focus group discussions
 - Patterns of usage
 - Certain people can dominate or sway opinion
 - Targeted focus groups
- Case Study
 - 45 min interviews with 66 of the 4300 users of an internal message system
 - Happy with: legibility, convenience, online access
 - Concerns with: reliability, confusing, and accessibility
 - 42 enhancements that differed from what designers thought they should implement

Continuous Logging

- The system itself logs user usage
 - Track frequency of errors (gives an ordered list of what to address via tutorials, training, text changes, etc.)
 - Speed of performance
 - Track which features are used and which are not
 - Web Analytics
- Privacy? What gets logged? Opt-in/out?
- What about companies?

Online and Telephone Help

- Users enjoy having people ready to help (real-time chat online or via telephone)
- E.g. Netflix has 8.4 million customers, how many telephone customer service reps?
 - 375
 - Expensive, but higher customer satisfaction
- Cheaper version are Bug Report systems
 - Windows, Chrome, Bugzilla

Exam Review Topics

Study Materials

- Shneiderman: First 4 chapters
- Lecture notes
- Research papers:
 - Teenagers & their virtual possessions
 - Aesthetics in online casual games
 - Health & the mobile phone
- Techniques used in assignments

Usability

- Usability Measures
 - Time to learn, speed of performance, rate of errors by users, retention over time, subjective satisfaction
 - Define, give an example of
 - How important are they in:
 - Life-critical systems
 - Industrial & commercial use
 - Etc.

Universal Usability

- Physical abilities
- Cognitive & perceptual abilities
- Cultural & international diversity
- Users with diversity
- Older adult users
- Children

Guidelines, Principles, & Theories

- Difference between guidelines, theories, and principles
- Principles:
 - Five primary interaction styles
 - Eight golden rules of interface design
 - Fitt's law
 - Metaphors

Users

- Types of users:
 - Novice, first-time, intermittent, expert
 - Multiple users

Software Lifecycle

- Waterfall
- Spiral
- Iterative design
- User centered design

Users & Tasks

- Identifying users
- Task analysis
- Contextual inquiry

Data Gathering

- Setting goals, triangulation, pilot studies
- Interviews
- Field notes
- Questionnaires

Expert Reviews

- Heuristic evaluation
- Guidelines review
- Cognitive walkthrough
- Formal usability inspection

Usability Testing

- Usability lab
- Eye tracking
- Think aloud

Usability Testing

- Discount usability testing
 - **Formative vs. summative evaluation**
- Competitive usability testing
- Universal usability testing
- Remote usability testing
- Can you break this test

Acceptance Testing

- See earlier notes