Topics

- Review
- Selling these new techniques
- Cost justification
- Getting started
- Parting words
Wrap Up

- We have addressed how to design the content of quality interaction, and a process by which usability can be ensured in user interaction.
- Apply interaction design guidelines.
- Use an iterative, evaluation-centered usability engineering life cycle for user interaction development.
- Participate in systems analysis, including user, needs, task, and functional analyses.
Wrap Up

What you can now do:
- Perform conceptual and detailed design
- Establish usability specifications
- Build rapid prototypes
- Perform formative usability evaluation
- Iteratively refine an interaction design
- Know how to get started with these new ideas
Wrap Up

- Your biggest challenge may be:
  - Not technical!
  - Selling this to management

- By necessity, the interaction development process has changed from linear to iterative, which in turn changes at least:
  - Control
  - Scheduling
  - Organizational roles
  - Territoriality
Wrap Up

- Project Management
- Communication, skills
- Test facilities, tools

What we’ve presented is the basis for controllability, accountability, and quantitative methods that are so important (rightfully) to management.
Wrap Up

- Selling these techniques to management
  - They may not be aware that there is a problem
  - They may view these techniques as a solution to a non-existent problem
    - “The product is selling well”
    - “We’re getting lots of interested inquiries”
    - “Users don’t complain”
  - “We’ve never done it this way before”
  - Seek out corporate mission statement and show usability engineering supports
  - Remember the “personware” factor
Wrap Up

- Successful interaction designs are being developed using these techniques, because they’ve been shown to work!
- Resources needed: Minimum of 15% of entire development effort!
- “You have to keep running just to stay in the same place!”
Cost Justification of Usability

- Can we afford to include usability engineering in our system development process?
  - Answer: Usability engineering does not add overall cost, for two reasons
    - Costs are added only to a limited part of total development process
    - Usability saves on many other costs
Cost Justification of Usability

- Added costs are confined
  - Reality: Interaction development process must be iterative—*cannot* get it right the first time
  - But interaction development is *small* part of overall system development
  - Rest of development – user interface software and other application software – is not necessarily iterative
Cost Justification of Usability

- Poor usability is costly; good usability is all about saving costs
  - Costs of hardware and software vs. costs of “personware”
  - Usability is about good business, not just about “being nice”
  - Costs of development vs. cost of operation
    - Development costs are mostly one time; operational costs accrue for years
    - Cost/benefit scope must be broad enough to include usage, as well as training, help desk support, etc.

Scope problem: one group pays for development cost and another group gets benefits.
Cost Justification of Usability

- Development savings from usability in process
  - High software maintenance costs – trying to get it right after release
  - Implementation Costs
- Usage savings; even more significant if users are your employees!
  - Save operational productivity costs
  - Save user training costs
Cost Justification of Usability

- Save costs of user errors
- Save costs of database errors
- Save costs of help desk and user support operations
- Save intangible costs of employee dissatisfaction

Point: Not more resources to ensure usability, but different resources with different distribution during life cycle
Cost Justification of Usability

- Beyond cost savings: In the e-commerce world of the Web, good usability can mean increased revenue!
  - Can market your company as having a focus on usability; competitive edge
  - Huge need to avoid releasing something that will embarrass you and the company (despite the pressure of “Internet time”)
Cost Justification: A Simple Example

For a large distributed system:
- Users: 75,000
- Average transactions/users a day: 20
- Transactions/day: 1,500,000
- User time per transaction: 5-20 minutes
- Average time saved per transaction, due to improved usability: 30 seconds
- Average fully-loaded hourly rate: $25.00
Cost Justification: A Simple Example

- Saved per year
  - = 75,000 users * 20 trans/user-day * .5 min/trans * 230 days/yr * $25/hr * 1hr/60min
  - =$71,875,000.00

- Other savings: user training, help desk
- Regardless of what usability engineering cost for this product, payback is enormous
Cost Justification of Usability

- But won’t it be nice when we no longer have to justify “costs” of usability?

- When have you heard anyone ask: Can we afford costs of designing data structures, implementing algorithms, doing quality assurance, etc..........?!
Getting Started

- Some ideas for selling these techniques to management:
  - **Start small**
    - Try the process on a small part of a project
    - Try a few usability specifications
    - Set up a small usability lab somewhere, anywhere – and use it
    - Develop at least a minimal customized style guide
Getting Started

- Tell management exactly what you intend to try and hope to accomplish, and within what time frame
- Expect some rough spots in initial stages
- Get appropriate resources lined up
  - Get buy-in from management
Getting Started

- Get at least one person with appropriate skills on the user interface development team, and give them a title, responsibility, and authority
- Give appropriate training to team members
- Get commitment from team members to try these new techniques
- Find someone you can apprentice with
- Get consulting help when needed, especially during start-up
Getting Started

- Professional preparation
  - Go to appropriate conferences – e.g., Computer-Human Interaction (CHI); Human Factors and Ergonomics Society (HFES); User Interface Software and Technology (UIST); National Institutes of Standards & Technology (NIST)
  - Subscribe to HCI publications
  - Join Usability Professionals’ Association (UPA)
Getting Started

- Join Special Interest Group on CHI (SIGCHI) – local and/or national
- Start a “brown bag” user interface lunch bunch

● Try the process all the way through once
● Generate a failure story
● Better: Generate a success story

- E.g., Video-clips for “before and after”
Parting Words

- Encourage focus on the process, rather than just the product
  - Make customized process guide
  - Operationalize the process organization-wide

- Ensure usability “by practice” rather than “by decree” or “by politics”

- Characteristics needed by user interaction/interface developers:
  - Dedication – to the cause of quality interfaces
  - Daring – to do things differently
Parting Words

- Congratulations, you made it!!!!