

Week 3

- 11 Software User Interfaces - Intro. to Interface Design
- design in everybody objects
 - activities in interface design - identifying needs & req., develop alternative designs that meet those req., build interactive sessions, evaluate.

12 Usability Goals

- good + prin. req. to design 'usable' interfaces.
- usability (ISO 9241-11 Std.) - the extent to which a prod: can be used by specified users to achieve specified goals with effectiveness, efficiency & satisfaction in a specified context of use.
- 1. effectiveness - how good a sys. is at doing what it is supposed to do.
- 2. efficiency - how does a sys. support users in carrying out their tasks, common tasks thru a minimal no. of steps.
- 3. safety - protect the user from dangerous situaⁿs, avoid unwanted acⁿs accidentally, recovery option
- 4. learnability - how easy a sys. is to learn to use.
- 5. memorability - how easy a sys. is to remember how to use, once learned
- users should experience true emotions while using software. Eg. fun, satisfied, joyous, etc.

13 Prototyping Techniques

- initial design ideas may not be best, due. an interface takes more time & money, prototype helps you to quickly test on users.
- prototypes ans. ques. & support designers in choosing b/w. alternatives. Purpose - test feasibility,

clarify vague req., user testing & evalua".

- Storyboard - hand drawn comic features setting +
 ↳ req. + satisfac", use speakup \Rightarrow user Tasks
 ↳ benefits - emphasize how interface acc. the task,
 avoids commitments to particular UI, shared
 understanding among stakeholders.
- Paper - prototypes - hand-drawn interface, multiple
 pieces of paper. \Rightarrow user interactions
 ↳ benefits - easier than writing code, start conversa"
 abt. UT, elements can be red. easily.
- Visual Design \Rightarrow digital mockups
- picky usability details \Rightarrow interactive prototypes

L4 Evaluation using Design Heuristics - Understanding H(n)

- evalua" of UT - assess with real users, critique from expert designers.
- Heuristics are the strategies derived from peron. exp. with similar problems.
- Understanding - consistent names, layout
- Use familiar lang. & metaphors - cart, wallet
- Clean & functional design

L5 Heuristics for Ac"

- Freedom - freedom to undo, explore
- Flexibility - experts as well as new users should be able to carry out tasks efficiently
 ↳ personalizan
 ↳ customizan

- "Recognit" over recall - users find it easier to recognize sth. they have seen earlier.
- ↳ interface - buttons, nav., etc. should help the user to reach the goal.

L6

Heuristics for Feedback

- Show status - keep users informed abt. what is happening thru: app. feedback. within a reasonable amt. of time., provide next steps, warning in adv.
- Prevent errors - include helpful constraints, offer suggestions
- Support error recovery - make the problem clear, provide a soln., alternative.
- Provide help - ensure help is easy to search, provide help in context
- Heuristic "value" - experts evaluate the prototype \Rightarrow do multiple passes, list of issues that violate design heuristics.