

Individual Homework #6 - Heuristic evaluation and guidelines

- HCI Law
 - Suitable for the task
 - Easy to use
 - Provides Feedback
 - Information must be at pace with user
- Design
 - User centered design
 - Evolutionary and Incremental prototyping
 - Implement Storyboards, Functionality simulations and HyperTalk
 - Scenarios
- Navigational design
 - Goal seeking behavior
 - After each step, answer the following
 - Where you are?
 - What you can do?
 - Where you are going? - What will happen?
 - Where you have been? - What have you done?
- Screen design
 - Grouping elements
 - Order of elements
 - decoration and alignment
 - Understanding white space
- Interaction paradigms
 - Establish goals
 - Forming intentions
 - Specifying actions
 - Perceiving, interpreting and evaluating the states
- Organizational Issues
 - Free-rider problem Contribution vs. benefit
 - Critical mass Cost vs. Benefit

- Requirement Analysis
 - Identifying stakeholders
 - Identifying work-groups
 - Identifying task-object pairs
- Evaluating techniques
 - Through expert analysis Cognitive walkthrough, Heuristics
 - Through user participation Laboratory and Field studies
- Heuristics
 - Visibility of system status
 - Real world metaphors
 - Consistency with user freedom
 - Recognition rather than recall
 - Flexible and efficient
 - Aesthetic and minimal design
 - Low physical effort
 - Equitable use
 - Reversal of actions
 - Provide feedbacks (> 0.1s to 1s)
 - Principle of least surprise
 - Similar things look similar
 - Different things look different
 - Help users recognize, diagnose and recover from errors
 - Descriptive errors
 - Protect users
 - Help and documentation
- Participatory Design - Prototyping
 - Brainstorming Informal and unstructured
 - Storyboarding Users day-to-day activities
 - Workshops Stepping in users shoes
 - Walkthroughs Pencil and paper exercises
 - Parallel prototyping Presenting multiple designs to users
 - Practice ThinkAloud with users

- Task Analysis
 - Task decomposition Into sub-tasks
 - Goals of each tasks and sub-tasks(if any)
 - Preconditions What users need to know about objects and actions involved
 - Exceptions What can go wrong?
 - Description of each task
- Ethnography
 - Going through the existing research
 - Cross-sectional studies
 - Longitudinal studies
 - Psychological findings on aging and ability
 - Understanding issues with vision, speech, hearing, Psychomotor abilities
 - Memory and learning issues