Study List

History
   Sketchpad
   Star

Human information processor
   Overview
      Human interaction loop
   Key components
      Perceptual processor
         Translation speed
         Percept fusion
         Causality
         Decay
      Working memory
         Capacity
         Decay
      Long term memory
         Capacity
         Read/write speed
         Decay
   Cognitive processor
      Cycle time
      Locus of attention
         Driving and speaking
      Motor processor
         Motor program

Fitt's law

Hick's law

GOMS
   Description
   Applications
   Limitations
   KLM
      Rules
      Examples
      Pro and cons

Skill acquisition
   Different stages
   Power law of learning
   Implication for design
      Confirmation dialog box
      Dynamic menus
Input/Output devices

DOF
Isotonic/isometric
Relative/absolute
Direct/indirect
Card's analysis

Design process

7 stages
Relation to product design timeline

User centered
Contrast with system centered
Different way to collect users experience
  Interview
  Diary
  Direct observation
  Difficulties
Different way to explain your design to users
  Storyboarding
  Low fidelity
  Wizard of Oz
  Medium fidelity prototype

Conceptual models
Gulfs of evaluation and execution
  Examples
Affordances
  Examples
Interface metaphor
  Pro and cons
Direct manipulation
  Key aspects
  Grammar structure
  Pro and cons

Brainstorming
Key aspects

Graphical design
Components of a visual language
Parsing visual input
  Gestalt principles
  Structure
    Grouping
    Hierarchy
    Relationship
    Balance
Tools
  Symmetry
  Alignment
  Negative space
  Occam's razor
Consistency
Information visualization

Explanation vs. Exploration
Tufte’s classification
- Micro/Macro reading
- Layering and separation
- Small multiples
- Color
- Narration of space and time

Importance of interactive exploration

User Evaluation

Managing subjects
Conducting an experiment
Statistical versus design significance
Questioning measurements

Qualitative evaluation

Methods
- Introspection
- Direct observation
- Interviews and questionnaires

Outcomes
Pros and cons

Quantitative evaluation

Methods
- Users events collection
- Controlled experiment
  - Design steps

Outcomes
Pros and cons

Design heuristics

Pros and Cons

Neilsen’s methods (examples for each heuristic)
- Simple and natural dialog
- Speak the users’ language
- Minimize user memory load
- Consistency
- Feedback
- Clearly marked exits
- Shortcuts
- Prevent errors
  - Forcing functions
- Good error messages
- Provide help and documentation

Technology Customers and Product development

Need-satisfaction curve

Examples

Adopter categories

Examples

3 legs of product development

Examples