Midterm I

Menus

Gestalt Principles

Georg Apitz
Midterm in Numbers

- results: 37 to 99
- median: 79

![Histogram of midterm scores](image)
Question 1

- Lunch ordering system

  - novice
    - step by step, easy, lots of visual clues
    - suggest meals, show what others order

  - intermittent
    - once in a while, know about the system
    - knows what he wants and has general idea of how to get it
    - guide, suggest, personalize

  - expert
    - daily user, wants fast results
    - shortcuts, customized
    - store preferences, history
Question 2

- Life-critical systems
  - lives are on the line
    - expensive
    - high training cost
    - no error tolerance
  - where
    - air traffic control
    - nuclear power plants
    - emergency equipment
Question 3

- 3 Pillars of design

  - *guidelines documents & process*
    - the framework
  
  - *user interface and software tools*
    - the means
  
  - *expert reviews, usability testing*
    - did it work?
    - what needs to be changed
Question 4

- Direct Manipulation

  • what:
    • simulation of real world
    • immediate feedback

  • pro:
    • easy to learn
    • easy to remember

  • cons:
    • history can be difficult to implement
    • resource intense
Question 5

- Notification Messages
  - *use examples/drawings to explain*
  - *font size and color*
  - *audio*
  - *blink*
  - *blocking of user interaction*
Question 6

- Design a singing bottle
  - describe the steps necessary for design
    - analysis
    - definition
    - ideas
    - idea selection
    - implementation
    - evaluation
  - run through several times
  - talk about the product
Question 7

- Usability test
  - durability, ease of use, satisfaction
    - drop it, select song, upload music to it, search for song
    - survey, questionnaire to describe how liked
  - consent forms
  - age, gender, background of subjects
  - briefing, debriefing

  - greeting, briefing, consent, tasks, questionnaire, debriefing
Gestalt Principles

- Form Perception
  - Closure, area, symmetry
Gestalt Principles

- Grouping
  - Proximity, similarity, continuity
Grouping

- Break content into sub-units
Hierarchy

- Set information in context
Relationship

- parallel representation and content
Balance

- Global arrangement needs to work
  - symmetry or asymmetry
Symmetry

- Center information around axis of symmetry
  - balance
  - vertical more prevalent
Alignment

- Boundaries and grouping should be enhanced
- Avoid false alignment
  - almost aligned
  - optical adjustments

Typography Typography

Typography Typography

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Consistency

- Within the application
- For a whole environment, platform
- Grids to divide space
Grid vs. No Grid

![Frame Settings](image1)

![Advanced FAX Settings](image2)
Negative Space

- Canvas for the Design
- Use the structure of the document
  - minimize the use of borders
Single Menus II

Single Menus III

- slider
- alphaslider
More Menus

- Two-Dimensional

- Tree-Structured
More Menus II

- Menu Maps
  - *Menu maps can help users stay oriented in a large menu tree*
  - *Effective for providing overviews to minimize user disorientation.*

- Acyclic and Cyclic Networks
  - *social relationships*
  - *transportation routing*
  - *scientific-journal citations*
  - *Can cause confusion and disorientation.*
Access to Menus

- broad-shallow over narrow-deep
- Keyboard shortcuts
  - Supports expert use
  - Can make translation to a foreign language more difficult
  - Bookmarks in browsers
  - User configured toolbars
Content Organization

- task related grouping
  - Create groups of logically similar items
  - cover all possibilities
  - non-overlapping

- ordering
  - time, numeric, physical properties
  - Alphabetic sequence of terms
  - Grouping of related items
  - Most frequently used items first
  - Most important items first.
Other Menus

- Pie Menu, Marking Menu
- FlowMenu
- ToolGlass