Lecture 10

Chapter 7.5-7.8 Menu Content Organization

Task-Related Organization

"The primary goal for menu, form-fillin, and dialog-box designers is to create a sensible, comprehensible, memorable, and convenient organization relevant to the user's task."

Content Organization

• Problem: How do we create menu groupings (categories) that enhance usability
Content Organization

- Task-related grouping in tree organization
  - Create groups of logically similar items
  - Example: File menu and Edit menu
  - Form groups that cover all possibilities
  - Make sure that items are non-overlapping
  - Use familiar terminology, but ensure that items are distinct from one another

Example: Major Menu Categories in WORD

Content Organization (cont.)

- Item Presentation Sequence within a menu
  - Order of items is important, and should take natural sequence into account when possible:
    - Time
    - Numeric ordering
    - Physical properties
  - When cases have no task-related orderings, the designer must choose from such possibilities as:
    - Alphabetic sequence of terms
    - Grouping of related items
    - Most frequently used items first
    - Most important items first.
Content Organization (cont.)

• Menu layout guidelines
  • Use task semantics to organize menus (single, linear sequence, tree structure, acyclic and cyclic networks)
  • Prefer broad-shallow to narrow-deep
  • Show position by graphics, numbers, or titles
  • Use items as titles for submenus
  • Group items meaningfully
  • Use brief items, begin with the keyword
  • Use consistent grammar, layout, terminology
  • Allow taps ahead, jumps ahead, or other shortcuts
  • Enable jumps to previous and main menus
  • Consider online help, novel selection mechanisms, and optimal response time, display rate, screen size

Content Organization (cont.)

• Menu layout (cont.)
  – Titles
    • For single menus, use a simple descriptive “familiar” title.
    • For tree-structured menus, use the exact same words in the higher-level menu items as in the titles for the next lower-level menu.
      – E.g. if a menu item is called Business and Financial Services, the next screen should have that phrase as its title.
Content Organization (cont.)

- **Menu layout (cont.)**
  - **Phrasing of menu items**
    - Use familiar and consistent terminology
    - Ensure that items are distinct from one another
    - Use consistent and concise phrasing
    - Bring the keyword to the left

Content Organization (cont.)

- **Menu layout (cont.)**
  - **Graphic layout and design**
    - Constraints
      - screen width and length
      - display rate
      - character set
      - highlighting techniques
      - UI widget look & feel

Content Organization (cont.)

- **Menu layout (cont.)**
  - Establish guidelines for consistency of at least these menu components:
    - Titles
    - Item placement
    - Instructions
    - Error messages
    - Status reports
  - Be consistent with the UI (Windows, Mac, X Window)
Content Organization (cont.)

- Menu layout (cont.)
  - Techniques to help users know where they are in a menu
    - Indentation
    - Upper/lower case characters
    - Symbols such as * or - to create separators or outlines
    - Position markers
    - Cascading or walking menus
    - Magic lens (transparent menus)

Fast Movement Through Menus

- Keyboard shortcuts
  - Supports expert use
  - Can make translation to a foreign language more difficult
  - Bookmarks in browsers
  - User configured toolbars

Data Entry with Form Fillin

- Form Fillin
  - Appropriate when many fields of data must be entered:
    - Full complement of information is visible to user.
    - Display resembles familiar paper forms.
    - Few instructions are required for many types of entries.
  - Users must be familiar with:
    - Keyboards
    - Use of TAB key or mouse to move the cursor
    - Error correction methods
    - Field-label meanings
    - Permissible field contents
    - Use of the ENTER and/or RETURN key.
Data Entry with Form Fillin

• Form-Fillin Design Guidelines
  – Meaningful title
  – Comprehensible instructions
  – Logical grouping and sequencing of fields
  – Visually appealing layout of the form
  – Familiar field labels
  – Consistent terminology and abbreviations
  – Visible space and boundaries for data-entry fields
  – Convenient cursor movement
  – Error correction for individual characters and entire fields
  – Error prevention
  – Error messages for unacceptable values
  – Optional fields clearly marked
  – Explanatory messages for fields
  – Completion signal

• Format-specific field
  – Coded fields
  – Show users the format
    – Telephone numbers
    – Social-security numbers
    – Times
    – Dates
    – Dollar amounts (or other currency)
Data Entry with Form Fillin

Data Entry with Dialog Boxes

- **Dialog Boxes**
  - Combination of menu and form-fillin techniques.
  - Internal layout guidelines:
    - Meaningful title, consistent style
    - Top-left to bottom-right sequencing
    - Clustering and emphasis
    - Consistent layouts (margins, grid, white space, lines, boxes)
    - Consistent terminology, fonts, capitalization, justification
    - Standard buttons (OK, Cancel)
    - Error prevention by direct manipulation

Dialog Box Example
Data Entry with Dialog Boxes

- **Dialog Boxes (cont.)**
  - External Relationship guidelines
    - Smooth appearance and disappearance
    - Distinguishable but small boundary
    - Size small enough to reduce overlap problems
    - Display close to appropriate items
    - No overlap of required items
    - Easy to make disappear
    - Clear how to complete/cancel

Dialog Box Example

Audio Menus and Menus for Small Displays

- Menu systems in small displays and situations where hands and eyes are busy are a challenge.

- **Audio menus**
  - Verbal prompts and option descriptions
  - Input is normally verbal or keypad
  - Not persistent, like a visual display, so memorization is required.
  - Help users avoid listening to all options
    - Accept or reject each option as read
    - Allow users to select an item while list is being read
Audio Menus and Menus for Small Displays (cont.)

- Menu for small displays
  - E.g., entertainment, communication services
  - Learnability is a key issue
  - Hardware buttons
    - Navigation, select
  - Expect interactions
  - Tap interface
  - GPS and radio frequency identification provides same automatic input