Chapter 7

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Interface Metaphors and Conceptual Models

Preview of Chapter 7

- Verbal metaphors
- Virtual interface metaphors
- Ubiquitous computing
- Conceptual models

Metaphors

- Metaphors convey an abstract concept in a more familiar and accessible form
- Metaphors are everywhere in life

Goal

- The goal of this chapter is to describe how the cognitive principle of metaphorical reasoning has been applied to user interface design.
- To what extent do metaphors help the users interact with computer systems

Verbal Metaphors

- Verbal metaphors can help users understand a new system
  - by explicitly providing a verbal metaphor in training
  - by describing the aspects of the system as a computer system

Verbal Metaphors
Word Processor vs Typewriter

- Foss et al. (1982) used an "advance organizer" to describe how files were created, stored and retrieved in terms of a filing cabinet.
- Results were positive for those who had been presented the verbal metaphor.

Virtual Interface Metaphors

- Xerox Star - Apple Lisa - Macintosh - based on the physical office
  - paper
  - folders
  - filing cabinets
  - in/out trays

Virtual Interface Metaphors

- Composite metaphors
  - Windows
  - Scroll bars
  - Menus
- Do they exist in real life?

Ubiquitous computing

- Inivisibly enhancing the world that already exists
  - Dishwashers
  - Microwave Ovens
  - VCRs (possibly)
  - Bill Gates house

Conceptual Models

- Design model
  - The way in which the designer wanted the product to be perceived
- User model
  - The way the user preceives the product

Summary

- Verbal metaphors are analogies based on familiar knowledge
- Interface metaphors combine a familiar domain with the system structure
- Composite interface metaphors are combinations of multiple and partial models of familiar domains

Summary

- There are several kinds of interface metaphors, although the most common is desktop
- Users and designers may have different conceptual models of the same system
- A main goal in interface design is to relate the design model to the user model

Summary

- Ubiquitous computing systems have invisible interfaces that can be effortlessly used