

WVU LDCSEE CS 430

User Interface Design

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1

Interface Design

Easy to learn?

Easy to use?

Easy to understand?



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2

Interface Design

Typical Design Errors

- lack of consistency
- too much memorization
- no guidance / help
- no context sensitivity
- poor response
- Arcane/unfriendly



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3

Golden Rules

- Place the user in control
- Reduce the user's memory load
- Make the interface consistent

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4

Place the User in Control

Define interaction modes in a way that does not force a user into unnecessary or undesired actions.

Provide for flexible interaction.

Allow user interaction to be interruptible and undoable.

Streamline interaction as skill levels advance and allow the interaction to be customized.

Hide technical internals from the casual user.

Design for direct interaction with objects that appear on the screen.

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5

Reduce the User's Memory Load

Reduce demand on short-term memory.

Establish meaningful defaults.

Define shortcuts that are intuitive.

The visual layout of the interface should be based on a real world metaphor.

Disclose information in a progressive fashion.

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6

Make the Interface Consistent

Allow the user to put the current task into a meaningful context.

Maintain consistency across a family of applications.

If past interactive models have created user expectations, do not make changes unless there is a compelling reason to do so.

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7

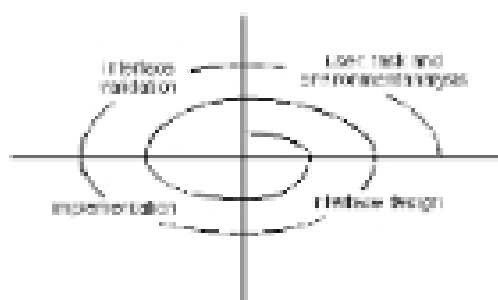
User Interface Design Models

- User model — a profile of all end users of the system
- Design model — a design realization of the user model
- Mental model (system perception) — the user's mental image of what the interface is
- Implementation model — the interface "look and feel" coupled with supporting information that describe interface syntax and semantics

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8

User Interface Design Process



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9
