

HUMAN-COMPUTER INTERACTION THIRD EDITION DIX FINLAY ABOWD BEALE

chapter 3

the interaction

**extras ...**

more about widgets

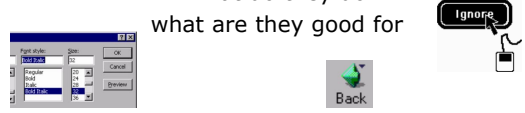
HUMAN-COMPUTER INTERACTION

understanding and choosing widgets

widgets - bits that make the GUI

what do they do

what are they good for



HUMAN-COMPUTER INTERACTION

one-by-one - WIMP elements

- widgets - bits that make the GUI
- what do they do
- what are they good for

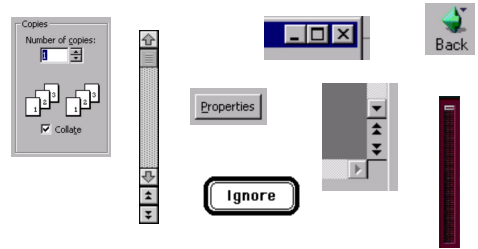
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widgets?

- individual items on a GUI screen ...
  - checkboxes, menus, toolbars, buttons etc.
- three aspects:
  - appearance - what they look like
  - interaction - how they behave
  - semantics - what they mean

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appearance



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appearance includes words

- verbs - action words
  - quit, exit, embolden, italicise
- adjectives - description/state words
  - bold, italic
- nouns - usually as a form of description
  - Times New Roman, US Letter
- beware of mixes ...
  - embolden + italic !!!

behaviour

Move mouse over button  
- highlights

Move mouse off target with  
button still down  
- highlight removed

Release mouse  
- nothing happens

behaviour ... ctd.

- some bits the toolkit does for you
  - but is it right?
- some you control
  - e.g. drawing, interactions between widgets
- beware timing issues
  - e.g. large selections under Windows apps.

semantics

- menus, buttons, ..., etc.
- do things ...

... lets make it **bold italic**

YOU say what it means


- semantics usually up to you
  - although widgets may link direct to database
  - even then, you say what links
- think separately:
  - meaning first - what you want it to do
  - then appearance - how you do it
- choose the widget for the job

what do you want?

- actions
  - usually menu, buttons, or toolbar
- setting state/options
  - usually checkbox, radio button, combi-box
- but ...
  - menus can be used to set state etc. ...

how many?

- one of several options
  - radio buttons, selection menu
- zero, one or more options
  - checkbox, multi-choice menu
- free choice
  - offer recent/typical shortcuts
  - one line text boxes often terrible!



SCIENCE, ART & DESIGN  
SCHOOL OF DESIGN & VISUAL COMMUNICATION  
HUMAN-COMPUTER  
INTERACTION

## and more ...

- **number**
  - fixed e.g. bold, italic, underline
  - variable e.g. font list
  - scrolling through telephone list ...
- **liveness**
  - grey out inactive options
- **dynamic interactions**
  - some choices dependent on others

☒ Move object with text  
☐ Lock anchor  
  
☐ Float over text