chapter 3
the interaction
extras ...
more about widgets

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

one-by-one - WIMP elements

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

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

appearance

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!
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