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