Design for Interaction

Visual Design Issues

Contents

- screen layout
- colour issues
- text: fonts, formatting, etc.

Screen Design

- visual design for interactive systems usually refers to screen design

- any screen design has to balance a number of considerations:
  - conveying all relevant information
  - (potentially) enabling navigation and control
  - attractive aesthetic appearance

- good screen design will enhance usability

Layout and Information

- main issue is how all relevant information can be made available to a user
- what is "relevant" will vary according to current circumstances
  - user's current location within system
  - user's current goal
  - system's current state
- design space may be extremely limited

Screen Space

- major design issue, especially if multiple platforms are being targeted
- for computer or TV-based applications:
  - available space is relatively large
  - screen design may have to incorporate control options as well as actual content
- for phone/PDA/other handheld devices:
  - <u>much</u> smaller screen size
  - offscreen / touchscreen controls

General Layout Principles

- <u>simplicity</u>: in general, simpler interfaces are easier to learn and memorise
  - classic example: Google
- <u>consistency</u>: certain aspects of any design should stay the same within an application
- <u>grouping</u>: related items should usually be grouped together
  - <u>logical</u> groupings enhance learnability and reduce cognitive load

Layout Guidelines

- there are a number of design conventions which can be considered as guidelines
- should <u>usually</u> be followed, but may be broken with care and for a good reason
  - menus go on the left or at the top (rather than on the right or at the bottom)
  - body text should be <u>left-aligned</u>
  - icons or buttons should be either <u>left-aligned</u> or <u>centre-aligned</u>

Screen Design Solutions

- the screen is generally the primary means of getting information to a user
  - therefore, it is worthwhile to devote care and effort to finding the best solution
- often, we will want to divide the screen up into areas with specific roles
- examples:
  - control area and content area
  - status area and information area

Eye Tracking

- much research has gone into the path our eyes take when viewing content
  - important design aid
- path varies depending what is being viewed
- three examples (the third is for a 3-column news site)
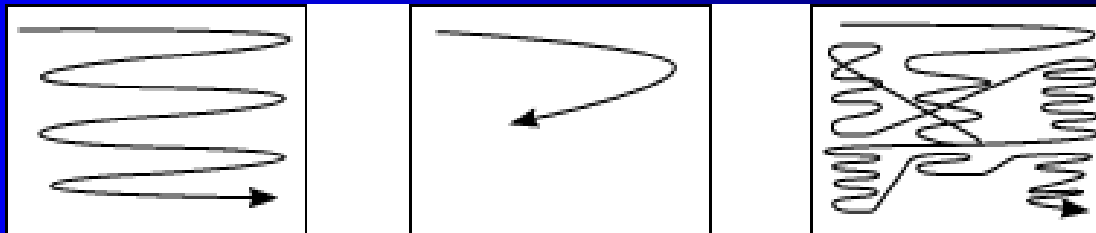
Design and Colour

- colour has a number of uses in visual design
  - <u>visual appeal</u>: a wider palette of colours usually improves the look of an application
  - <u>association</u>: use of colour can visually link together elements of an application
  - <u>highlighting</u>: bright, bold colours emphasise important messages
  - <u>affective reasons</u>: certain colours associate with moods or themes (eg. warm/cold, bright/dark)

Colour Use Guidelines

- colour selection:
  - large blocks of intense, strong colour are hard to view and can cause eyestrain
  - paler colours are often more effective
- colour combinations:
  - for readability, contrasts in <u>hue</u> are less relevant than contrasts of <u>brightness</u>
  - beware of colour blindness (eg. red-green)
  - try and use meaningful colour combinations

Example "Colour Wheel"

Text and Visual Design

- in many cases, text is the primary vehicle for conveying meaning to a user
- while textual <u>content</u> is important, its style of presentation can also enhance a message
- important factors:
    - font / typeface used
    - breaks and spacing
    - justification

Font Styles

- any choice of font will have an effect on the way a message is delivered
  - **Find Out More**
  - Find Out More
  - Find Out More
  - Find Out More
  - **Find Out More**
  - *Find Out More*

Font Characteristics

- <u>size</u>: measured in points

- <u>weight</u>: eg. normal or **bold** (in printing, many other possibilities exist)

- <u>style</u>: eg. Roman or *italic*

- <u>fixed/variable width</u>: fixed-width fonts (eg. Courier) can be useful for columns of data

- <u>serif/sans serif</u>: affects readability in specific contexts

Breaks and Spacing

- generally, shorter paragraphs (or "chunks" of text) are easier to read than longer ones
  - especially true on a screen
- line length is also important – reading body text across a full screen is near impossible
  - using columns can help
- word spacing also has an impact
  - wider spacing increases eye movement, slowing down reading speed

Justification

- (up to) four options:
  - <u>left justification</u>: uniform left edge
  - <u>right justification</u>: uniform right edge
  - <u>centred text</u>
  - <u>full justification</u>: both edges uniform (not always available in multimedia/web design)
- readability is usually highest with left justification (for wide columns) or full justification (narrow columns)