Lecture Overview

- Successful interface design
- Building an interface
  - Standards
  - Methods
  - Tools

It is standard practice in interactive systems development to separate the user interface from the remainder of the application.

Three pillars of successful UI development

- Each pillar of success CAN help user interface designers to turn good ideas into successful systems.
- Working guidelines are critical to the success of an interface.
Pillar 2: Interface building tools

Need
- standards
- a method
- a tool (or two)
- to consider multi-platform applications, e.g., desktop versus mobile
- a realistic ‘model’ of the interface prior to full development.
- to recognize constraints

Standards

Important to specify (and follow) standards and guidelines

Example
- Microsoft and Apple have standards and guidelines
- The KDE User Interface Guidelines, have instructions (and examples) for developing UI for their applications
  http://developer.kde.org/documentation/standards/kde/style/basics/quitclose.html

Methodologies

- Prototyping
- JAD: Joint Application Development,
- RAD: Rapid application development

User-centered design !!
Prototyping is

- A model of the overall design – features, function, ‘look and feel’
- Often a working mini-version of the final product
- 'proof of concept'
- Demonstrates the underlying technology of the final product
- A potential marketing tool

Prototyping

- Features:
  - Partially completed user needs
  - Participation of end users
  - Cognitive walkthroughs
  - Iterative requirements analysis, development and evaluation
  - Is either used, modified, or thrown away

Prototype development process

<table>
<thead>
<tr>
<th>Create</th>
<th>Test Usability</th>
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<tbody>
<tr>
<td>– Development environment, Standards, content</td>
<td>– Formative evaluation</td>
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<tr>
<td>• Modify</td>
<td>• Redesign, start again, or abort</td>
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Lynch & Fisher. Monash University
Prototyping tools (examples)

- Paper
- PICTIVE. (Plastic Interface for Collaborative Technology Initiatives through Video Exploration; Muller, 1991) ; using “low fidelity office items, such as sticky notes and pens, and a collection of design objects to investigate specific screen and window layouts for a system.” (Preece et al 2002 p. 307).

Examples

Prototyping tools

- Grey-screen prototyping is a rapid development process where sequential or interrelated screens without the use of colour and ‘gimmicks’. The intention of using grey screens is to reduce interference of colour and multimedia elements that often distract the user from the purpose of the evaluation.
- Screen mockups
- Interactive
- Other (whatever works for the user and the developer)

Examples

Tools

- Purpose built tools, eg Authorware
- Customized tools, eg Powerpoint, Flowcharting programs (eg Visio), mindmapping tools

Examples
Designing specific components
- Menu-selection and dialogue-box trees;
  - do not show where the user has come from or going to
- Transition diagrams;
  - show the full picture or storyboard of the application

Examples
• Interface building tools [w6]

Platform

- Development platform
- End user platform
- Testing

Pillar 3: Expert reviews and usability testing

- Pilot testing of components
- Experts and intended users (see another lecture)

Summary

- For the practitioner:
  - Interface development tools have been designed to assist in the development of the interface, they can be complex and take control of the project
  - Need to evaluate the tool before it is used
  - User involvement (through participation, and evaluation)
- For the organisation:
  - Addressing the possible dilemma - Too many ideas: Not enough time
  - Be aware of the standards and guidelines and ensure attention to these are written into the plans.
  - Examine the project against the requirements
References and readings

- Shneiderman and Plasiant (2005) ch 5