

Multimedia Design (1)

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Multimedia

- What is this course about?
 - The **media** (text, graphics, audio, video, haptics,...)
 - **Choosing** the right media
 - **Combining** them effectively
 - **Tools / technologies** to apply or implement the media
 - **Implementing** a multimedia application (**prototype**)
 - **Communicating** your multimedia design/product
 - **Evaluation** (expert critical evaluation and user evaluation)

Multimedia Design

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Today.....

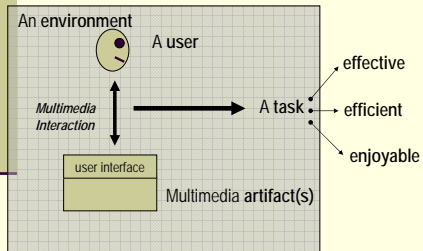
- Overview of the Multimedia Design Cycle
- Multimedia Design principles

Next week

- Design methodologies
 - The City Design Method
 - The Reeves Model (1994)
- Design documents
 - Used to document design and process
 - Used to communicate product

Multimedia Design

Remember Basic HCI Concepts



Users

- Multimedia must support or enhance the user(s) experience
- There are different types of user
 - Novice / casual / expert
 - Language / cultural barriers
 - Disabilities
 - Preferences

Multimedia Design should be User Centered

- **User-centered design**
 - usability of an application depends upon the designer's understanding of:
 - the limitations and capabilities of the target user group(s)
 - the limitations and capabilities of the available media
 - always design the system to be adaptable
 - novice users, experienced users, users with special-needs.....

What's Special About Multimedia Design?

- Multimedia applications involve more than just traditional media
 - They involve combinations of text, audio, images, video, animation.....
 - Interactive television
 - Audio/video conferencing
 - Virtual worlds
 - Games
 - Digital audio and/or video editing and production systems
 - World Wide Web
 -

Multimedia applications introduce:-

- Rich forms of
 - information delivery
 - interaction
- BUT.....
- Challenges of
 - perception
 - comprehension
 - integration & attention

What's Special About Multimedia Design?

- It is important therefore to learn:
 - about the different media and their associated tools and technologies
- AND
- **how to use the different media in combination effectively**

What's Special About Multimedia Design?

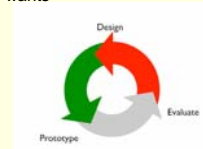
- A multimedia product has to (at least):
 - communicate information effectively
 - deliver functionality and usability (work!!!)
- How can we guarantee that our application will achieve both of these?

Multimedia Design

- There are **guidelines** for designing multimedia applications
 - based on research from cognitive psychology, computer science, social psychology, technology, design,
 - guidelines are often based on minimal evidence and there is no accepted standardised set of guidelines for all multimedia applications
- Use a tailored **design process** suitable to the multimedia application being developed
 - Existing design methods can be adapted to our needs

Multimedia Design Cycle

- Requirements capture
 - Finding out what the user wants
- Initial design & prototype
 - Produce a mock up
 - Present to user
- Implementation
 - Build the end product
- Evaluation
 - How well are their requirements met by your design?



Multimedia Design Principles

Guidelines - ISO 14915 Part 3

- Support user tasks
- Support communication goals
- Ensure compatibility with users' understanding
- Select media appropriate for the users' characteristics
- Support user preferences
- Consider the context of use
- Use redundancy for critical information
- Avoid semantic conflicts
- Avoid conflicting perceptual channels
- Combine media for different viewpoints
- Avoid information overload
- Choose media combinations to elaborate information
- Design for simplicity
- Guard against degradation
- Preview media selections
- Use static media for important messages

Format and Structure in Multimedia Design

- Consistency -
- Completeness -
- Functionality -
- User Control -
- Feedback -
- Forgiveness -
- Simplicity -
- Media Use -

Design and Style in Multimedia Design

- Navigation scheme
- Page Layout
- Buttons
- Colour
- Graphics
- Bullet
- Analogy/Metaphor

Feedback and Help in Multimedia Design

- Types of assistance users require varies
- *Feedback* - conveys state of system to user to reassure they are on the right track
- *Help* - should be easily available when and if user requires help in performing a specific task
 - Quick reference
 - task-specific help
 - full explanation or tutorial

Feedback and Help in Multimedia Design

- **Feedback and Help should be:**
 - Available
 - Accurate
 - Consistent
 - Flexible
 - Functional
 - Usable

Multimedia Design Methods

Multimedia Design Methods

- Any Multimedia Design Model should include attention to:
 - analysis
 - design
 - production/implementation
 - evaluation
- Design artefacts/documents often produced along the way to assist each stage of design
 - We will look at some examples of these next week

Multimedia Design Methods

- Next lecture
 - look at the *City Design Method*
 - Look at the Reeves Model (1994)
- Look at different stages/activities in the design cycle
- Look at various design artefacts/documents that can result from the design cycle