

COMPSCI 708S1C Multimedia and Hypermedia Systems

A Model for the Design and Development of Multimedia Projects

Department of Computer Science, UoA
Emilia Mendes (supervisor) (emilia@cs), city room 583
Georgy Gimel'farb (g.gimelfarb@auckland.ac.nz), Tamaki room 320
Chris Anderson, (chris-a@cs), city 3rd floor technical team

<http://www.cs.auckland.ac.nz/compsci708s1c/>

Outline

- The three remaining stages:
 - Design
 - Develop
 - Evaluate
- Assignment 1 out

Phase 2: Design

- Main activities include:
 - Outlining the content
 - Project requirements
 - The target audience
 - Creating flowcharts
 - Specifying screen design
 - Writing storyboards

Phase 2: Design: Outlining the content

- Project requirements
- The target audience


Phase 2: Design: Creating Flowcharts

- A flowchart is used to visually describe the sequence and structure of a program.

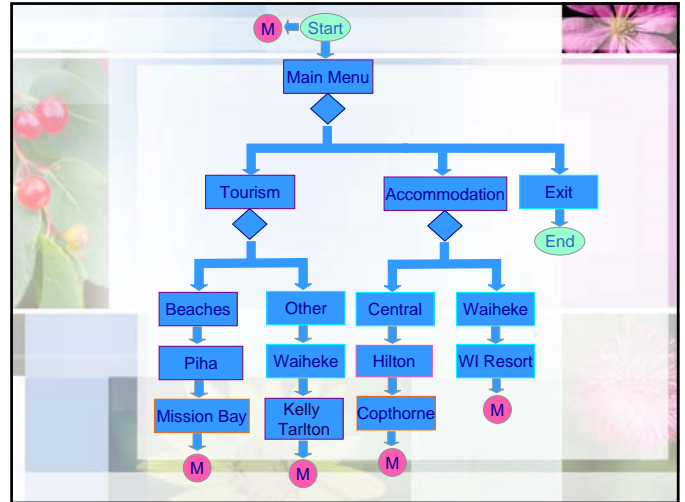
- Flowchart symbols

- Start/end 

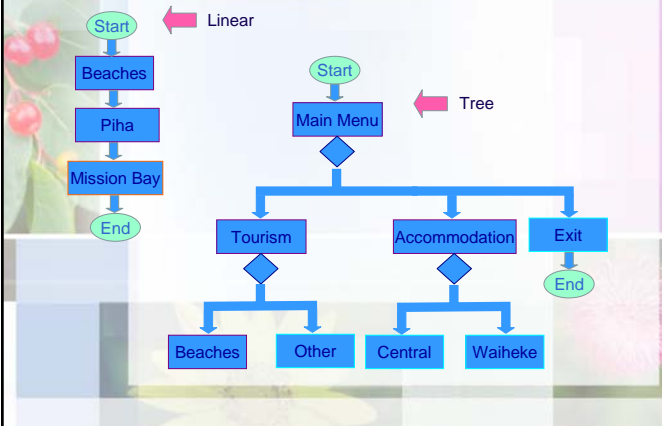
- Connector 

- Frame 

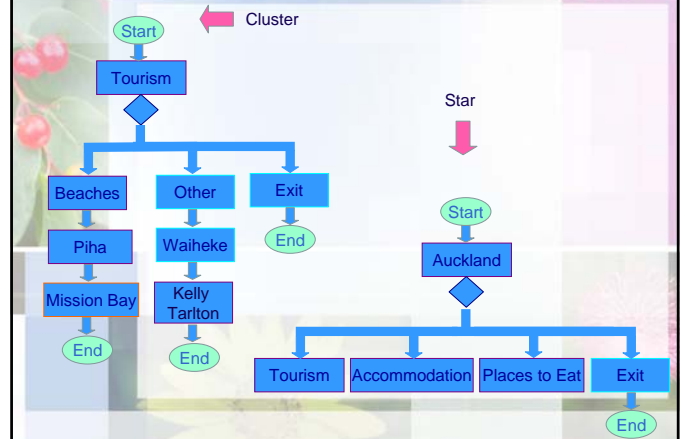
- Menu or decision point 



Phase 2: Design: Flowchart Structures



Phase 2: Design: Flowchart Structures

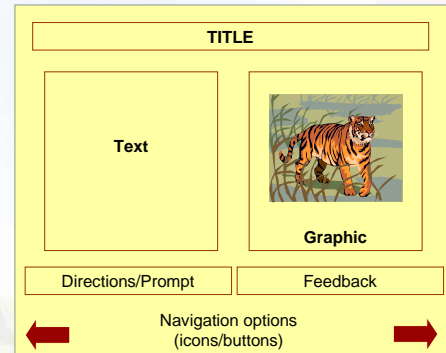


Phase 2: Design: Screen Design

- Determine general “look and feel” of the screen templates to be used in the project
 - Define the colour scheme
 - Define the navigation options that will be used
- Different templates can be used (e.g. informational, menu, questions)

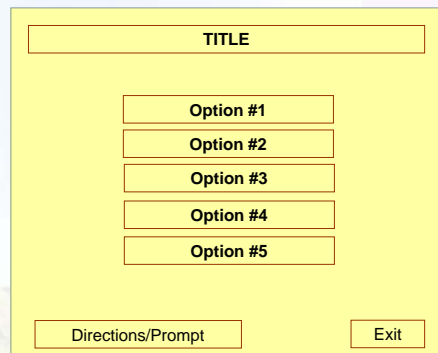
Phase 2: Design: Screen Design

Informational Screen



Phase 2: Design: Screen Design

Menu screen



Phase 2: Design: Storyboards

- Storyboards contain all the information that will be placed on the screens.
- It also provides information to help the production team implement the application and develop the multimedia components.
- It is the “blueprint” for the project.
- Should provide all the information that will appear on the final screens

Phase 2: Design: Storyboards

- Example of a Hypermedia storyboard template
- Narration or text for individual storyboards can be provided separately but it must reference the corresponding storyboard number

Hypermedia Storyboard

Group name: _____ Storyboard Number: _____ of _____

Detailed Screen design

Navigation

Button/icon/action: _____ Link to: _____ Action: _____

Button/icon/action: _____ Link to: _____ Action: _____

Button/icon/action: _____ Link to: _____ Action: _____

Text

Color: _____ Size: _____ Font type: _____

Graphics

Color: _____ Size: _____ Placement: _____

Background

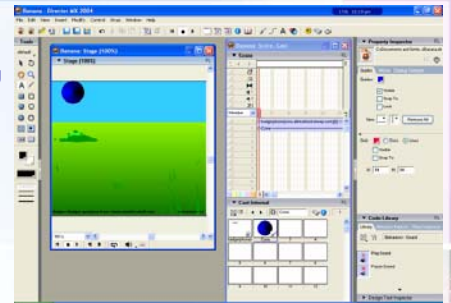
Color: _____

Audio	Video
Source: _____	Source: _____
File: _____	File: _____
Description: _____	Description: _____

Narration:

Phase 3: Develop: Director etc

- Macromedia Director is an authoring tool that allows users to build applications using a movie metaphor.
- It has a scripting language – Lingo, and can incorporate many different media formats (e.g. AVI, BMP, QuickTime, PNG, JPEG).
- A demo and a full lecture on Director will be given by Chris.



Picture obtained from wikipedia

Phase 3: Develop: Media guidelines

- **Graphics guidelines**
 - Graphics should be used to enhance the application and to illustrate important concepts
 - Graphics that distract from the application should not be included
 - Several simple graphics are better than one complex graphic
 - If a complex graphic is unavoidable, add arrows or highlight boxes to help focus attention on the relevant areas
 - If icons are used associated with functions, always use the same icon for the same function
 - Be consistent when placing graphics – use always the same part of the screen
 - If possible, use 256 colours or fewer to keep file sizes small
 - Graphics that will be displayed on a computer screen should be created or scanned at 72-100 dpi
 - Check copyright constraints on all graphics used outside the classroom

All guidelines obtained from Ivers and Barron (2002)

Phase 3: Develop: Media guidelines

- **Animation guidelines**
 - Use animations if there is the need to illustrate an abstract concept (e.g. tsunami)
 - Keep the animation sequences short, or allow the user to pause and play the animation
 - Test the animation on different computers to ensure the speed is acceptable
 - Do not include animations that distract from the content
 - Restrict the number of colors and frames per second to keep files small

Phase 3: Develop: Media guidelines

- Audio guidelines:
 - Employ audio only if it appropriate to the content
 - Record audio at the lowest acceptable sampling rate to reduce file space
 - Employ synthesized speech for programs that require a large amount of spoken words
 - If possible, use MIDI or MP3 for music to keep files small
 - Avoid audio that will distract from the application
 - Check copyright constraints if audio will be played outside the classroom environment

Phase 3: Develop: Media guidelines

- Video guidelines:
 - Use digital video only if absolutely necessary
 - Keep the window size as small as possible to aid improve performance
 - If possible experiment with different compression choices looking for the one that gives the best quality with the smallest file size
 - Check copyright constraints on video segments if they will be used outside the classroom environment

Phase 4: Evaluate

- This phase aggregates three types of evaluations
 - Self-evaluation
 - Peer evaluation
 - Usability evaluation (another class)
- } Forms will be provided