EVENT BASED Authoring of a Multimedia Presentation

- Card-based authoring - layout in 2D space
- Time-based authoring - layout along a timeline
- Event-based authoring - layout control structure
  - multimedia elements and interaction cues (events) are organised as objects in a structural framework or process
  - use a flow diagram to show flow of a presentation

Event Driven Systems

- A multimedia presentation can be viewed as a sequence of events
  - user interaction: mouse clicks, data entry
  - elapsed time
  - start and end of video and sound clips
- Actions in response to events
  - e.g. take particular branching path in presentation
- Objects / events / actions define control structure

Flow Diagrams

In complicated navigational structures, this kind of flow charting can be particularly useful during the developmental stages.

Flow diagrams show:
- sequential paths
- decision points
- branching structure
An Example: Online Tutoring

- Online tutoring systems typically employ complex navigational structures
  - choice of lessons
  - navigation based on the student’s answers
  - rapid progress
  - Repetition
- Flow diagrams represent this well.

Adobe’s Authorware

Adobe’s Authorware is an authoring tool that uses the event-based metaphor for building multimedia presentation.

Authorware uses two separate production environments:

- The Design Window
  - features a Flow Line in which the structure of a presentation is created
- The Presentation Window
  - where the content is placed

Building a Presentation with Authorware

- The design process involves selecting icons from a palette and placing them on the Flow Line in the Design window.
- After icons have been placed on the flow line the designer must open and set the options:
  - content and/or
  - control instructions
- When the presentation runs, the icons on the flow line are executed sequentially
  - with exceptions we’ll talk about in a while.
The Presentation Window

- The *Presentation Window* is what the user will see in the final presentation or product.
- While placing icons on the flow line, the presentation window is not visible.
- To see a presentation during development, it is necessary to start it from the *Control* menu or panel.
- It is normal in the development of a presentation that a designer will play it over a number of times
  - *Start* and *Stop* flags used to play only a part of the flow line

Running the Presentation During Development

Authorware’s Icons

This is the *Icon Selector*...

The icon is selected by using the mouse to drag and drop it onto the flow line in the Design window.

Each of the icons has a specific function and set of parameters associated with it.

Now let’s look at a description of the main icons in turn...
The Display Icon
• Icon that contains text and graphic images for display
  – overlapping images are displayed in order

The Wait Icon
• There is no *time* associated with a Display icon
  – graphic is visible until it is overwritten by something else
• Changes in display are associated with an event
• The *Wait* icon pauses the display until the event
  – user clicks the “wait” button
  – set period of time elapses

The Erase Icon
• Graphics and other media that are no longer needed
  must be explicitly removed with an *Erase* icon

The Motion Icon
• Used to specify simple animation of graphics
• Images specified in Display icons can be moved
  along a path over a given length of time
• Basic tweening animation
  – author specifies path in Presentation window
  – sets length of time taken between start and end points
• Example to follow...
The Interaction Icon

- Defines a user interaction...
- Way of interacting
  - buttons to click
  - menus to choose from
  - data entry fields
- Response by user
- Result
  - anything Authorware can do
  - e.g. go to new section of presentation

The Decision Icon

- Directs flow down different paths...
- Sequential branching
  - presentation proceeds down the next path, from those listed in the icon, each time the decision point is reached
- Random branching to any path
- Random branching to any unused path
- Branching to path determined by a calculation
  - e.g. keep track of a user’s correct answers in a quiz or test, and branch accordingly

The Calculation Icon

- Calculation Icons both control and monitor the presentation
  - keep track of state information
  - collect and manipulate data
- Calculations are written using a scripting language
  - equivalent to using Lingo in Director
  - wide variety of inbuilt functions
  - e.g. quit the presentation: Quit(0)

The Map Icon

- Map Icons do not change the presentation’s content, but they help the designer to organise information
  - like file folders: they enable you to organise related objects.
  - necessary because there is limited room on a Flow Line.
Other Media Icons

- **Digital Movie Icons** control the presentation of movie files from applications such as Director and QuickTime.
- **Sound Icons** play sound files. Digitised sound files can easily be incorporated into presentations.
- **Video Icons** are used to control attached videodisk players and VCRs.

A Word About Content...

- The content is the multimedia objects to be included in your presentation—text, images, movies, sound clips etc.
- Each multimedia object file is loaded when needed.
- An object must be associated with an icon.
- Objects can be organised into libraries.

Delivering the Presentation

- As with Flash, you can deliver your Authorware presentation either—stand-alone or ready for the web.
- Standalone executable needs “Xtras” available in subdirectory.
- If intended delivery is via the web, post-processing by the Authorware Web Packager fragments presentation into small bits for streaming.
  - users need the Authorware Web Player.

End Of Lecture