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Multimedia Technology

Jonathan Sidi

Faculty of Computer Science and Information Technology
Universiti Malaysia Sarawak



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Contemporary and Forward Looking

Multimedia Technology

LEARNING UNIT 6

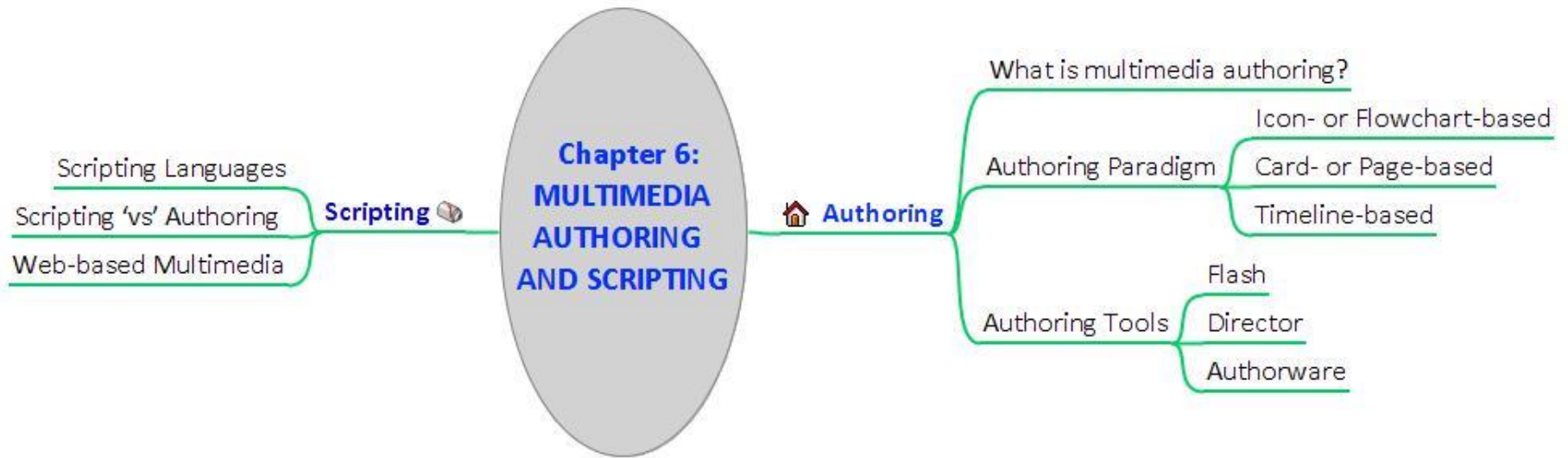
MULTIMEDIA AUTHORIZING AND SCRIPTING



LEARNING OUTCOMES

- Understand about multimedia authoring, paradigm and tools
- Discuss about multimedia scripting and programming



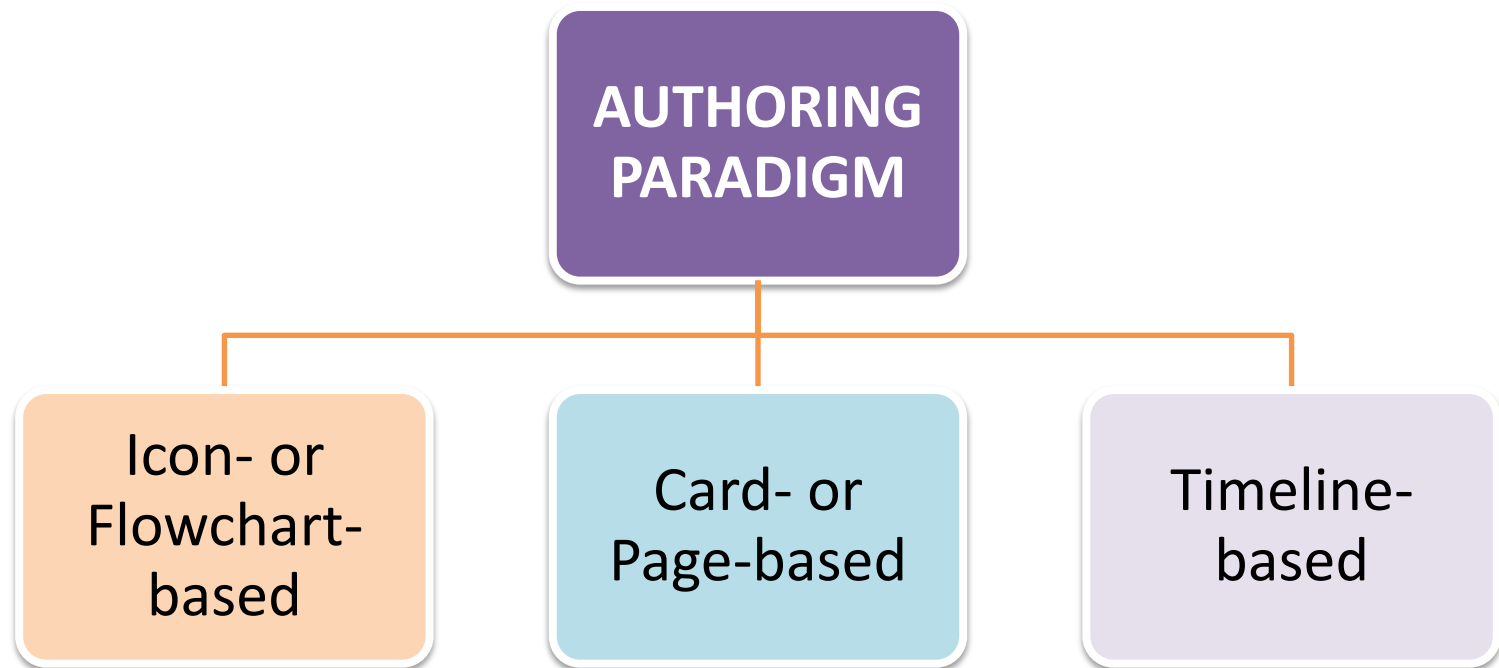


What is an authoring system?

- A program which has **pre-programmed** elements
- development of interactive multimedia software titles.
- vary widely in orientation, capabilities and learning curve
- just a **speed-up** form of programming

"AUTHORING" refers to "programming by non-programmers."

Authoring Paradigm

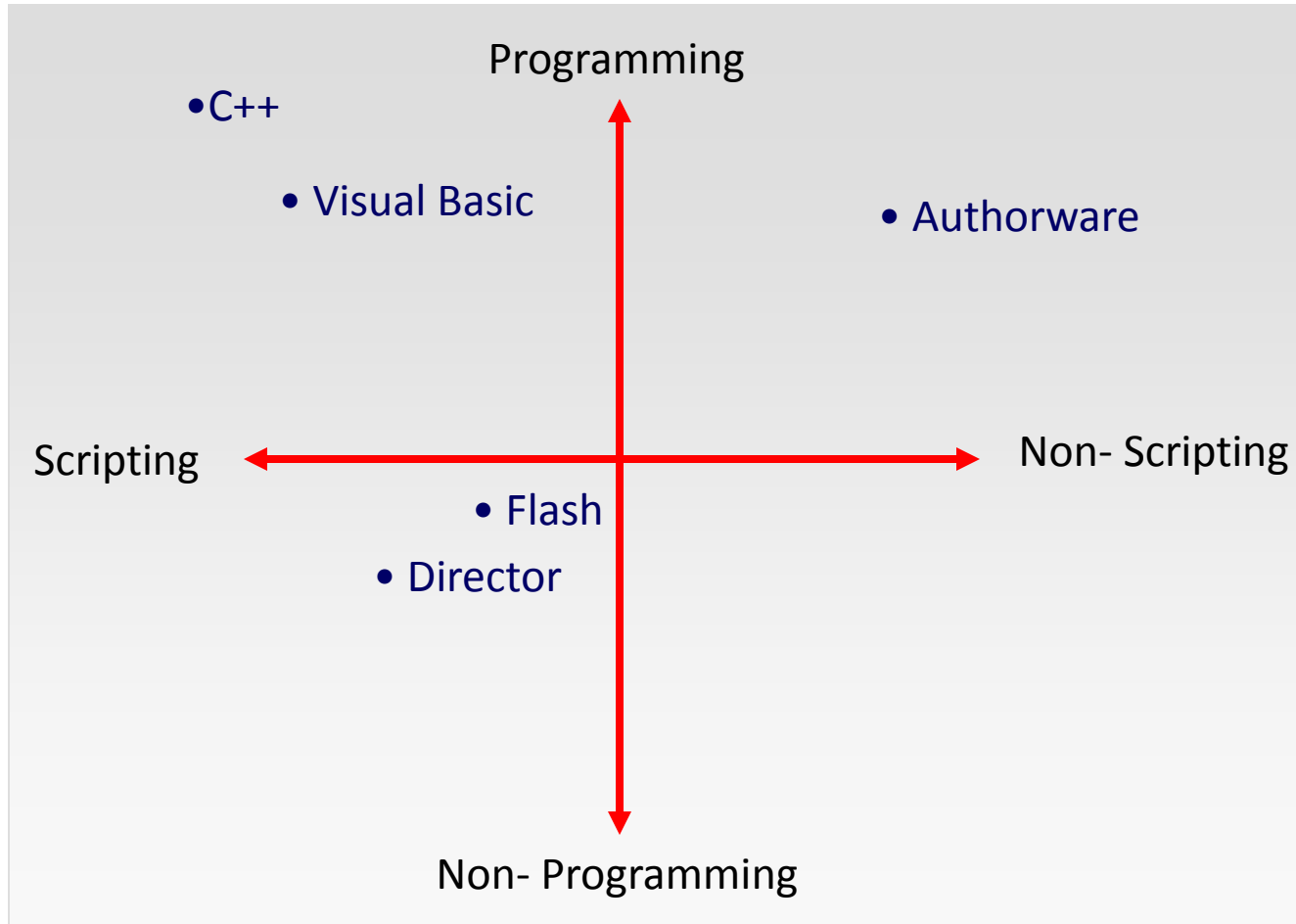


Multimedia Authoring Paradigms

- Scripting Language Metaphor
 - use a special language
- Slide Show Metaphor
 - linear presentation
- Hierarchical Metaphor
 - tree structure
- Iconic/Flow-control Metaphor
 - graphical icons and flow
- Card/Scripting Metaphor
 - index-card structure,
- Cast/Score/Scripting Metaphor
 - with cast members, music scores, and scripting language



Authoring Paradigm



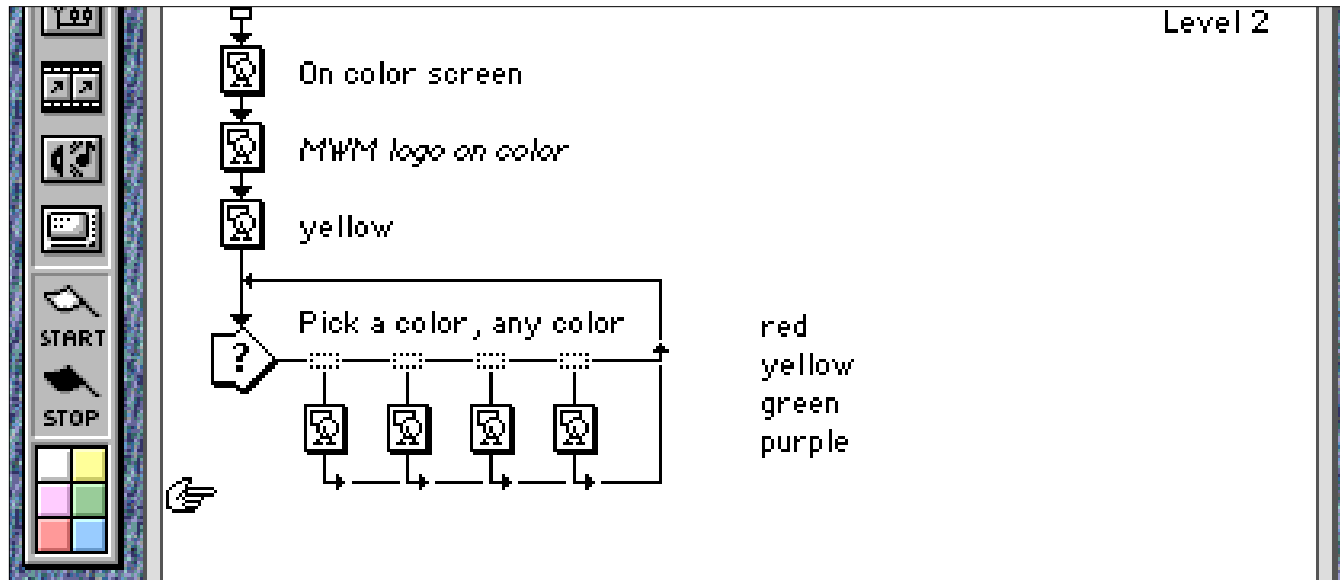
Taxonomy of Authoring Systems

Icon- or Flowchart-based

- Icon-based, event-driven tools provide a visual programming approach to organize and present multimedia.
- Multimedia elements and interaction cues are organized as objects in a flowchart.
- Flowchart can be built by dragging appropriate icons from a library, and then adding the content.
- E.g., Authorware



Icon- or Flowchart-based



Macromedia Authorware iconic/flow control.

Source : <http://www.cs.cf.ac.uk/Dave/Multimedia/authorware.gif>

Card- or Page-based

- Card- and page-based authoring systems provide a simple and easily understood metaphor for organizing multimedia elements.
- It contains media objects such as buttons, text fields, and graphic objects.
- It provides a facility for linking objects to pages or cards.
- E.g., HyperCard, MetaCard, ToolBook



Timeline-based

- Time-based tools are best suited for messages with a beginning and an end.
- Some time-based tools facilitate navigation and interactive control.
- Adobe Director and Flash are time-based development environments.
- E.g., Director, Flash.



Time-Based Tools

Macromedia Director:

- A multimedia database, ‘Cast’, contains still images, sound files, text, shapes, scripts, movies, and other Director files.
- Score is a sequencer for displaying, animating, and playing Cast members.
- Lingo is an object-oriented scripting language that enables interactivity and programmed control.



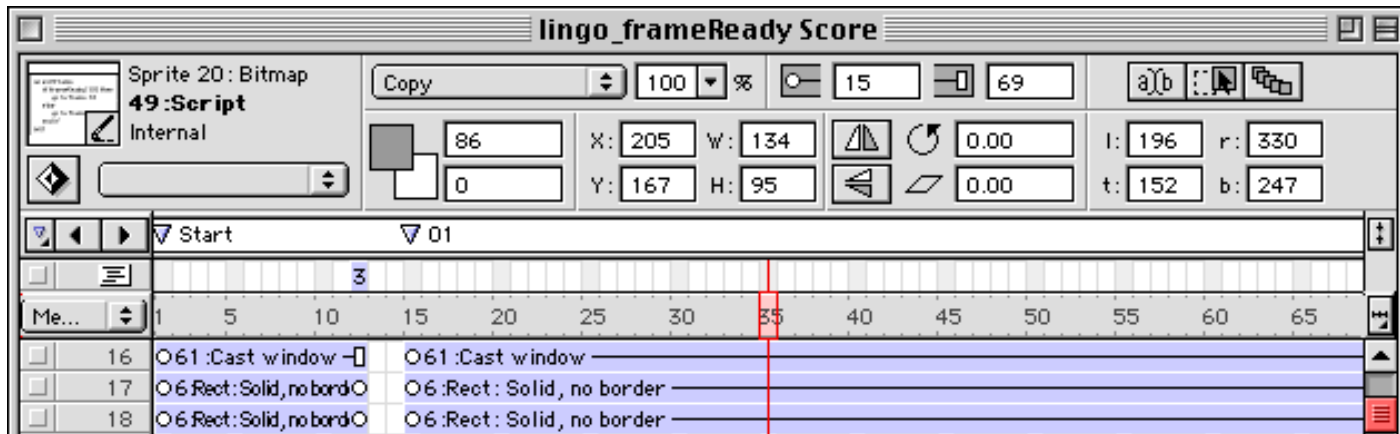
Time-Based Tools

Macromedia Flash:

- Flash is used for delivering rich multimedia content to the Web.
- It allows the creation of simple static HTML pages with the Flash Player plug-in.



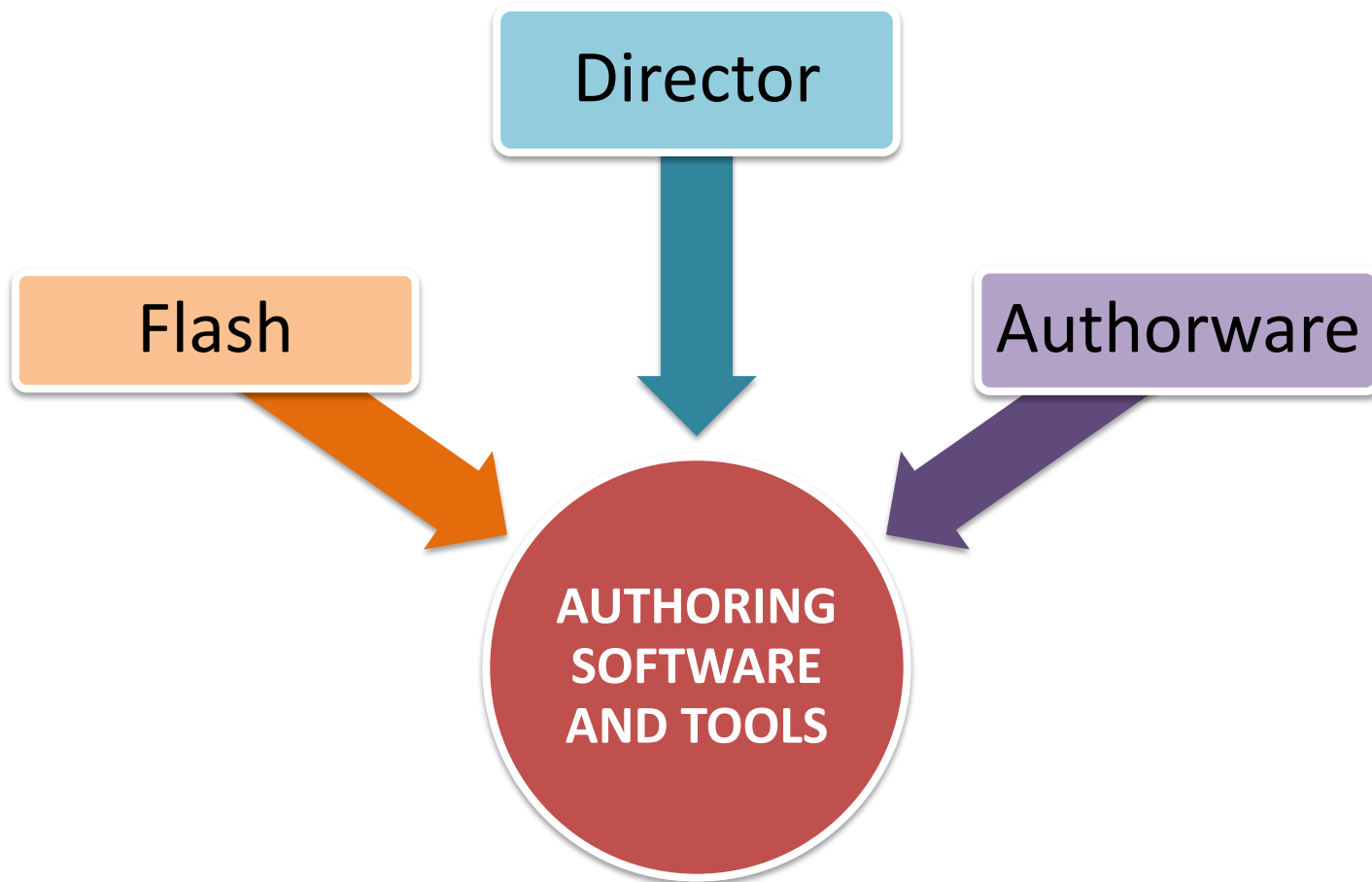
Timeline-based



Director score window.

Source : http://www.cs.cf.ac.uk/Dave/Multimedia/dir_score.gif

Authoring Software

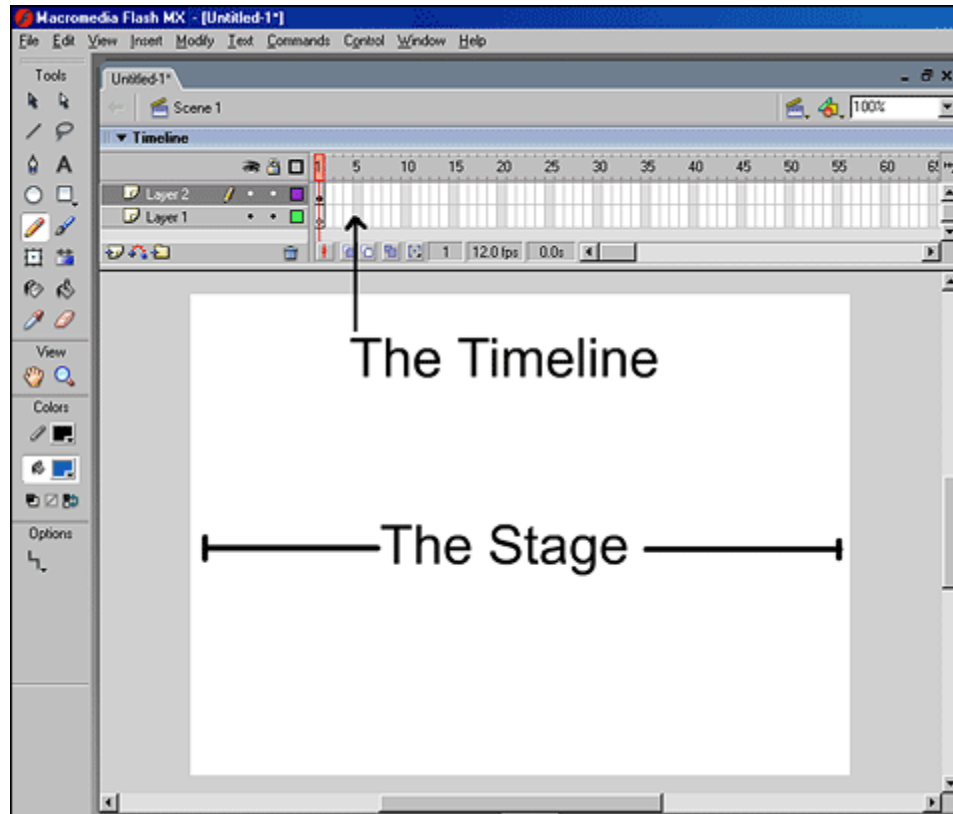


Features of Authoring Tools

- Editing and organizing
- Programming
- Interactivity
- Playback
- Delivery and playability



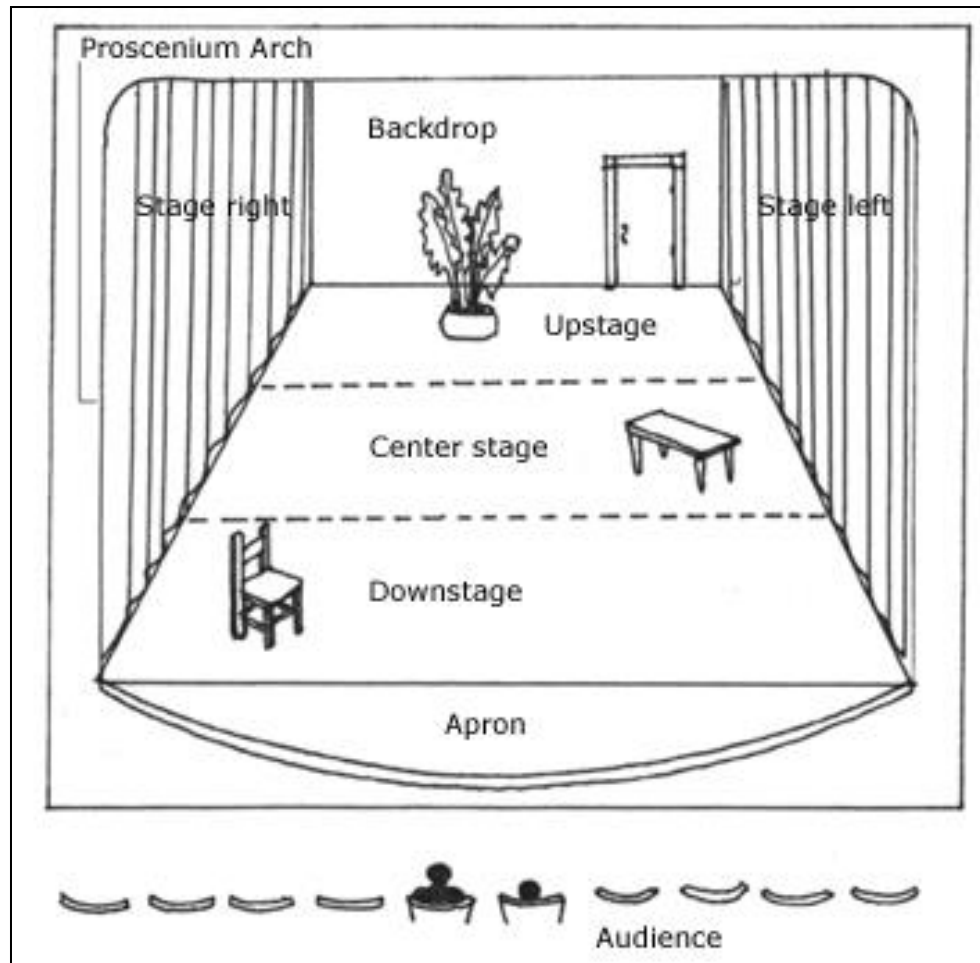
Authoring Software



The Flash MX authoring environment.

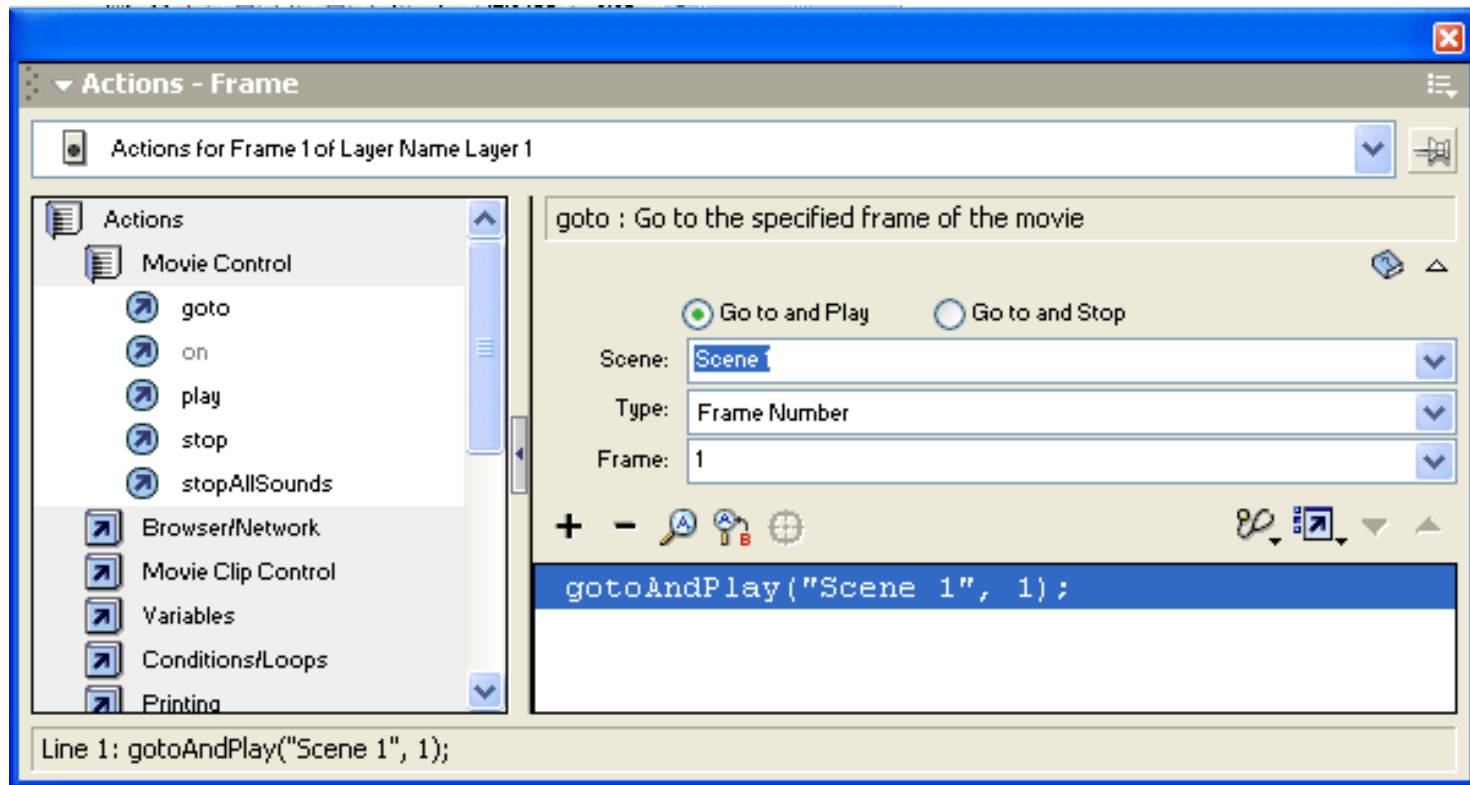
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Authoring Software and Tools



Source : http://www.museum.state.il.us/muslink/pdfs/cc_stage.html

Authoring Software and Tools



Action Script in Flash

Authoring Software and Tools

Scripting Language

- Closest in form to traditional programming
- Can generate powerful interaction.
- May be object-based or object-oriented.
- Example of scripting language is Lingo in Director.
- A scripting language is a way to communicate with a program.



Authoring Software and Tools

Action Script

- is the scripting language of Flash
- adds interactivity to a movie
- provides flexibility in controlling movies



Authoring Software and Tools

Flash Advantages

- Generates very small file sizes.
- Producing high-quality animation.
- Any multimedia file format can be integrated into Flash.
- Receive information from a database.
- Several Flash movies can be loaded into one large movie.



MM Authoring Vs MM Programming

MM Authoring

involves the assembly and bringing together MM data with possibly high level graphical interface design and some high level scripting

MM Programming

Involves low level assembly and construction.

Control of MM data

involves real languages like C and JAVA



Summary

- Multimedia authoring is the process to assemble multimedia components using authoring tools.
- Basic multimedia paradigms are Icon- or flowchart-based, card- or page-based and timeline-based.
- The most popular authoring tools are Flash, Director and Authorware.
- Script-based technique adds the power to create more interactive multimedia authoring.
- Development of web forms and database involves programming using ASP, PHP, ColdFusion.

