



User Manual

Fluition is a trademark of Confluent Technologies Inc.
<http://www.confluenttechnologies.com>

All other trademarks are owned by their respective rights holders and are used with permission.

Introduction

The advancement of streaming media technologies and the improvement of data connection speeds continue to evolve the World Wide Web into the most sophisticated multimedia delivery platform in history. As the web continues to evolve, the ability to broadcast interactive multimedia to a mass audience becomes increasingly accessible to anyone. The development concept behind Fluition was to create a powerful, widely compatible multimedia production software that was as easy to use, or easier, than any other tool available.

Ease of use however, as proven by select technology companies of the past and present, does not mean the sacrifice of power and flexibility. Fluition builds its presentations based on standard technologies allowing the maximum value of a production to be realized. Using SMIL and streaming media files, Fluition is the ideal software tool for creating interactive multimedia productions accessible by the largest group of potential viewers.

Fluition Features

Easy to use interface

Fluition makes the creation of streaming multimedia presentations easy and fast with an intuitive interface that has easy access to commonly used features, as well as sophisticated advanced options for expert users.

Visual Layout Environment

The need for manually writing SMIL code is eliminated through the use of graphical presentation layout tools.

Advanced Hyperlinking

Linking to other content within player software, to external browser software or time based hot spots are all possible, creating a unique interactive experience.

Widest Compatibility

Presentations can be played back using any SMIL compatible player and the final presentation is exported to completely SMIL compliant code.

Exceptional Value

Fluition comes bundled with enough information and extra media to allow presentation creation immediately out of the box.

Fluition Overview

Fluition is a fully SMIL compliant, multimedia presentation layout and sequencing tool. Fluition was designed to be easy to use but offer all of the power and flexibility that SMIL offers. Fluition eliminates the need for manually writing code and allows full multimedia layout and sequencing capabilities in a visual environment. Fluition makes use of a wide range of media file formats making it possible to create very sophisticated productions limited only by the producer's imagination.

What is SMIL?

SMIL (Synchronized Multimedia Integration Language), was approved by the World Wide Web Consortium in 1998 as the standard markup language for streaming multimedia presentations. The easiest comparison which makes the description simple, is that HTML is the language used for the layout of web pages with text and graphics, SMIL is the language used to layout video presentations like those you'd find using RealPlayer G2 and, now QuickTime 4.1. Examples of what SMIL can do would be things like interactive video, video on demand, online training, etc

Apple Computer Inc. announced the incorporation of SMIL compatibility in the next release of QuickTime** at Macworld Expo 2000. "QuickTime 4.1 will feature enhanced functionality, including seamless ad insertion; improved firewall navigation; AppleScript® support for easy digital media creation and streaming; and support of synchronized multimedia integrated language (SMIL), the emerging standard for interactive media creation." (for more information visit www.apple.com).

Through Fluition and the power of SMIL, Synchronised Multimedia Integration Language (pronounced "SMILE"), the ability to create and broadcast interactive multimedia presentations is simplified and becomes accessible to anyone with a computer and an Internet connection. This technology is of interest to anyone involved with web building or media production.

Content Creation

SMIL is a very flexible language that makes the creation of very sophisticated interactive multimedia productions possible. Fluition makes the creation of these presentations easier and more efficient.

A SMIL presentation contains regions and regions contain media that is played back through a sequence. The regions are defined and then media files are assigned to regions for playback. Playback can be in sequential order, or in parallel. It is also possible to add graphical elements, text and hyperlinks.

There are three steps to creating a SMIL presentation: choosing the content, designing the layout and sequencing the playback.

The creation, organization and assembly of media for a SMIL presentation is a process which can involve many factors. There are a number of media file formats that can be used within a SMIL presentation. Fluition can use any SMIL compatible streaming media file formats for presentation creation.

Various streaming media file types including video, audio, animation, photos, graphics and text can be assembled within the presentation and combined for a robust and interactive multimedia experience. Any production can then be played back using any of the SMIL compliant player programs that are currently available.

Fluition has an easy to use interface that allows for rapid creation of sophisticated SMIL presentations. The software interface consists of a number of menus and windows. The menus offer access to the various window features and the windows either display information about components of the presentation, or allow modification of those components.

Fluition Interface

Fluition has a number of easily accessible features that allow for the rapid creation of interactive multimedia presentations. There are many powerful features that offer complete control over all of the elements in a presentation. These features are available through windows, menu options and keyboard commands.

Windows

Windows display the majority of information about the various aspects of the design of a presentation. Some windows contain a “more or less” indicator. By toggling the arrowhead of the “more or less” indicator, the window will show or hide more options. The various windows in Fluition are treated equally in both type and stacking order. To bring a window to the front, click on that window. Window elements will be highlighted to indicate that they are selected.

Menus

Menu options offer many useful functions for creating and changing a presentation. Menu options can open, hide, or expand windows; alter presentation attributes; and some have associated keyboard commands

Keyboard Commands

There are a variety of keyboard commands available which offer quick access to commonly used features. Some keyboard commands are associated with menu options and others are unique to their context. Keyboard commands are listed beside their menu counterparts.

Layout Window

The Layout Window contains all of the attributes of the presentation being assembled. The attributes of a presentation can be modified by changing the values in the available fields or pop-up menus of the Layout Window. The Layout Window appears when a new presentation is created or the Modify Layout menu option is selected.

Regions Window

The Regions Window displays information about the various regions within the presentation. The Regions Window contains many functions for

altering the layout aspects of a presentation. The Regions Window will appear with a new presentation and can be shown or hidden using the “Windows” menu option.

Tools Palette

The Tools Palette displays the various tools that are available for the creation of the presentation. The Tools Palette offers quick access to the options available for the creation of various presentation elements.

Presentation Window

The Presentation Window graphically displays the layout of the presentation and is similar in appearance to the actual presentation.

Saving Presentations

Once a presentation has been completed, that presentation can be saved to disk. This file is completely SMIL compliant and can be used in any of the compatible players programs that are widely available.

Opening Presentations

After a presentation has been saved to disk, Fluition can open these files for use within the Fluition graphical layout environment. Although Fluition is capable of handling almost any SMIL compliant file, it opens files easier if they were created using Fluition.



The Preferences Window

The Preferences Window contains options that affect the use of Fluition. The first and most important is the Player Software Location field. By clicking the browse button, you can locate your SMIL player program on your hard drive. Fluition will use the program selected here to preview the presentation being created. If no player is selected, presentations can still be created, cannot be previewed from within Fluition.

The Preferences Window also has three display options. The “Optimize Displayed Groups” option, the “View Code After Save” option and the “Add Multiple Files” option. These options can be selected and deselected using the check boxes located beside each option.

The Optimize Displayed Groups option affects the display of groups when a presentation is opened. When this option is not selected, a new sequencing group will be created for each instance of a group contained within a presentation being opened. When this option is selected, then only one of each group will be created when a presentation is opened. This option will not affect the saving of the presentation.

The View Code After Save option, when selected, will cause the SMIL code window to open after a presentation has been saved. The SMIL Code Window will also open when the Build SMIL Code menu option is selected.

The Add Multiple Files option determines the type of file window that will open when adding clips to the Clip Library. When this option is not selected, a basic file window will open allowing you to select a single file for addition to the Clip Library. If this option is selected, then a Fluition Multiple File Window will open for selecting clips to add to the Clip Library.

Presentation Layout

A SMIL presentation consists of a main display window or what is called a Root Layout. The Root Layout contains information about the attributes of the presentation. Presentation attributes include appearance qualities, such as size and background color. Production information also includes the title, author and copyright.

Presentation Layout Window

The different attributes of a presentation can be modified using the Presentation Layout window. The Layout Window contains fields and popup menus that are used to change the various attributes of the presentation and can be accessed using the Modify Layout menu option.

Presentation Attributes:

ID (filename)

Fluition uses the ID attribute to store the filename for the presentation.

Title

The Title attribute contains the title that is displayed when the presentation is being played.

Description

The description of the presentation, also referred to as the abstract for the presentation.

Author

The Author field contains the author of the presentation.

Copyright

The Copyright field contains the copyright information about the presentation.

Width

The width of the presentation is measured in pixels and can be changed in the width field or by selecting from the popup menu sizes.

Height

The Height of the presentation is measured in pixels and can be changed in the height field or by selecting from the popup menu sizes.

Background Color

The background color of a presentation can be any one of sixteen different available colors and is selected using the popup menu.

Base URL

The base URL of a presentation describes the location of the media used within the presentation. The server type can be selected using the popup menu and the address can be entered in the URL field.

Fluition also adds a line of SMIL code to the presentation to identify the file as being created by Fluition. This line does not affect the presentation in anyway except to make it easier to open within Fluition.

Regions

Contained within the Root Layout are regions. Regions are areas that contain media that can be layered and sequenced for playback in an almost unlimited array of possibilities. Using the graphical layout capabilities of the multimedia producer tool, it is possible to assemble presentation root layouts in a very short period of time.

Creating Regions

You can create a new region by drawing the border of the region using the Draw Region Tool. When the Draw Region Tool is selected, regions are drawn onto the main presentation in much the same way as most common drawing programs. By dragging the mouse across an area of the presentation window, a new region will be created with dimensions and locations based on the starting and ending point of the dragging of the mouse.

Until the region has been completed (when the mouse button is released) the region border will be a bright green color to distinguish it from other elements within the presentation. Once the region has been completed, it will have a shaded gray outline to frame the border of the region. This shaded border is only visible within the Fluition layout environment. The border does not appear within the actual presentation.

Region Attributes:

ID

The ID of the region is the name that is used for sequencing. Media is assigned to regions based on their ID for playback in the sequence.

Left

The Left attribute of a region indicates the number of pixels from the left edge of the presentation in which the region is located.

Top

The Top attribute of a region indicates the number of pixels from the top edge of the presentation in which the region is located.

Width

The width of the region is measured in pixels and can be changed in the width field of the Regions Window.

Height

The Height of the region is measured in pixels and can be changed in the height field of the Regions Window.

Layer

This attribute refers to the layer (or z-order) of the region within the presentation. This number represents a stacking order for the region allowing for layering of regions.

Background Color

The background color of a region can be any one of sixteen different available colors and is selected using the popup menu in the Regions Window or the popup menu in the Tools Window.

Fit

The fit attribute describes how the media will conform to the physical size of the region in comparison to the media placed inside the region.

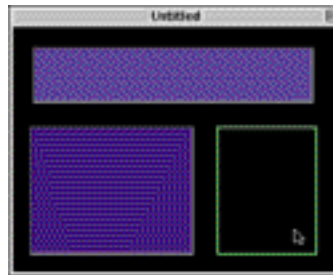
Regions can be any height or width within the presentation. Regions can also have background colors that can be used to compliment the clips contained within the Region or to blend into the background of the presentation



Modifying Regions

Region attributes are listed in the Regions Window in table form. Once a region has been created, any of its attributes can be modified using a variety of easy to access functions. A region can be changed using the Select Region Tool, keyboard commands or changing the values of the options available in the “more” portion of the Regions Window.

When the Select Region Tools has been chosen, regions within the main layout window can be selected and modified. Clicking on a region selects that region and displays its attributes within the “more” portion of the Regions window. When a region is selected, four small selection indicators highlight it. These boxes are placed at the corners of the region and indicate the position of the region borders.

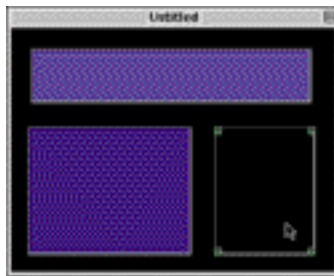


Once a region has been selected, the attributes of that region can be easily modified. A region can be dragged to a new location using the Select Tool and by dragging the region anywhere within the presentation. The size of the region can be modified by dragging the selection indicators. Region attributes can be modified by changing the values in the fields of the “more” portion of the Regions Window and then clicking the Apply Button.

Selecting Regions

Fluition offers many functions for easily modifying the layout of a SMIL presentation. Regions can be selected using the Region Select Tool or by choosing it in the Regions Window. Any attribute of the region can be changed based on which one has been selected.

Regions can be easily modified using the Draw and Select Regions Tool and then manipulating the regions in the presentation window. Regions can also be precisely modified and altered using the fields in the Regions Window. When a region is altered in the Presentation Window, the attributes of that region will be displayed in the Region List.



Copying Regions

Fluition makes it very easy to add regions quickly using the Region List in the Regions Window. By selecting a region in the Region List, it is possible to cut, copy or paste the region into the presentation. You can cut, copy or paste regions only when the region has been selected by clicking on the Region List in the Regions Window.

Media Clip Library

There are many different types of media that can be used within a SMIL presentation. The only limitations of a SMIL presentation are based on the delivery technology. As the Internet becomes more capable of delivering high quality multimedia, the improvement of presentation quality will also improve. Fluition has the ability to import many different media formats and can even directly read information from those files to make their inclusion within a presentation easier.

Clip Library Window

The Clip Library Window contains all of the information about the various clips contained within the presentation. The playback sequence of the clips is determined by a combination of factors. Regions are used to determine the location and size of an area to be used for displaying media. Clips are assigned to the various regions and are then played back in sequential or parallel order. The playing order of the clips is determined by the order in which they are listed within the Clip Library Window.



Adding Clips to the Clip Library

SMIL presentations contain clips of media that can be played back in an infinite number of ways. Fluition directly supports all major streaming media and SMIL compatible file formats for inclusion in a presentation. Because SMIL is compatible with the majority of media formats in use on the Internet, the advancement of streaming media delivery technologies is always beneficial to the use of SMIL. The Clip Library Window allows for the easy addition of media clips to a presentation. Using the Add button, a media source file can be selected and is then added to the Clip Library List.

If the clip is a compatible file format, Fluition will automatically identify the clip type and read the appropriate information into the Clip Library. Fluition will also allow the importation of files formats that are not directly supported. In those cases, Fluition will treat the file as any other file, when the presentation is saved, there will be not be a “clip type” associated with the clip.

Inserting Ads (RealSystem G2)

Fluition Supports the RealAdInsert Tag for the insertion of advertisements that can be used via the Advertising Extension for RealServer. To add an advertisement to the Library, add a file (the ad or otherwise), and then change the Clip ID to a name starting with “ad”. The Clip Type will then change to “Ad” and the File Field will act as the AdURL field for the RealAdInsert tag. Consult the Real Server documentation for information about the use of Advertising Extension for RealServer.

File Types

Fluition supports a wide range of streaming media file formats. Below is a list of all of the file types that Fluition supports directly when building the SMIL code. Other file types can be inserted into the presentation, but the type of clip in the SMIL code will have to be specified by changing the value in the Code Window or after the presentation has been saved. Fluition determines the clip type based on the file type and name.

File Type Support in Fluition:

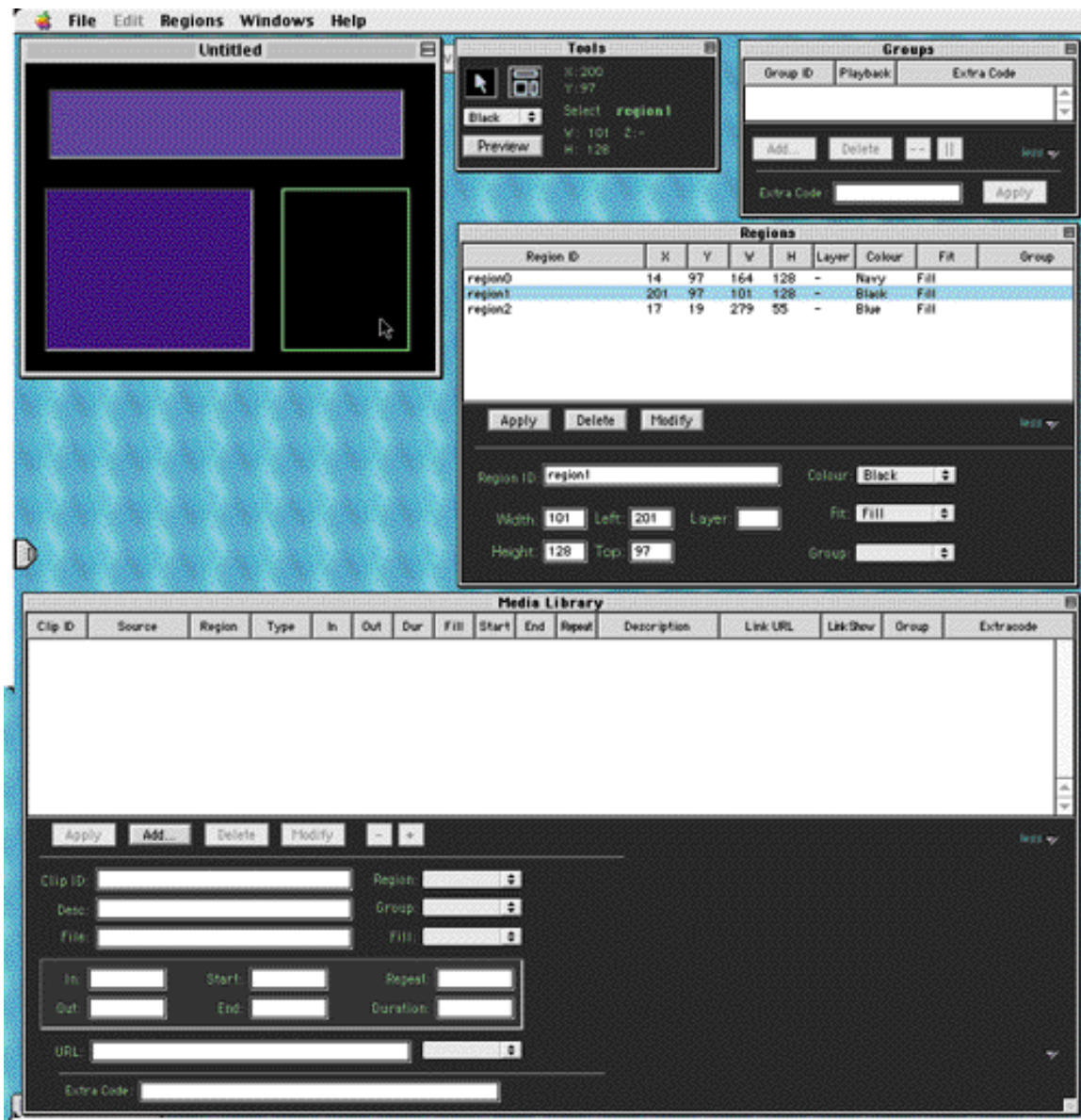
Media Type	File Type	File Name Extension
Video	RealSystem G2	.rm
	QuickTime	.mov
	Advanced Streaming Format	.asf
	Vivo	.viv
	Windows Video	.avi
Audio	RealSystem G2	.rm
		.mp3
	QuickTime	.au
		.aif
	Windows Waveform Audio	.wav
Images	QuickTime	.gif
		.jpg
Graphics and Animation	RealFlash	.swf
	RealPix	.rp
Text	RealText	.rt
	PlainText	.txt

Relative Paths

As with any internet related authoring tool, it is important to describe the use of paths when files are being used. In order for Fluition to manage relative paths automatically, the presentation must be saved before adding clips to the library. Fluition will then automatically create relative paths for files contained within sub-folders of the presentation. If the file is located in a folder outside of the presentation location, the entire path will be entered. When the file is outside of the folder containing the presentation, the full path will be placed in the File field when a clip is added to the Clip Library. If the files are to be uploaded, the paths may require alteration in the File Field in the “more” portion of the Clip Library Window to playback properly.

Assigning clips to regions

When a media clip is added to the Clip Library, if a region is selected, that clip will automatically be associated with that region. If no region is selected, the clip will not be assigned to a region for playback. Once a clip has been added to the Clip Library, the attributes of that clip can be modified. The clip can be assigned to a different region by using the region popup menu in the Clip Library Window. A clip can also be assigned to a region by selecting the region and then dragging the clip on to the presentation from the clip window.



Grouping clips

Clips can be played back in parallel or sequential order with the possibility for advanced timing of events and user interaction. Media can even be played in sequential order but in parallel with the content of other regions. This type of sophisticated synchronized playback is what makes the use of SMIL so advantageous. Fluition accomplishes this function by allowing the grouping of both clips and regions. There are two types of groups, sequential and parallel. Sequential groups play their content one after the other with the next item starting at the end of the previous. A Parallel group plays simultaneously with the two starting at the same time and then playing to the end of each.

If an object in the presentation is not assigned a group, then that object will not be included in the SMIL code. Fluition relies on groups to determine how a clip should be played and how regions relate to each other for playback.



In the Preferences Window, there is an option for Optimizing Displayed Groups. This option applies to opening SMIL presentations and how the sequencing groups will be displayed once the presentation is open. When the groups are not optimized, a new group will be created for each use of a playback sequencing tag. Optimized Groups, will only display one of each group that is used to sequence the playback of the presentation.

Linking

SMIL offers the capability to link to other presentations within the player program or to link to a web site in an external browser. Linking in SMIL works very similarly to linking in HTML. A clip can be assigned a destination link and that link can be defined as being within the player software or to the browser.

You can apply a link to a clip by entering the URL into the Link URL field in the more section of the Clip Library Window. You can also link to a local file, by clicking on the browse button beside the Link field. The relative path handling for the linking browse button works in the same way as adding clips to the library. The popup menu beside the Link URL field determines the method in which the link is performed. The Replace option causes the destination presentation to replace the current presentation in the player program. The New option causes a new occurrence of the player program to open. The Pause option pauses the presentation and launches the destination inside a web browser. After the URL has been selected, clicking the Apply button will create the link in the presentation code.

Link Paths

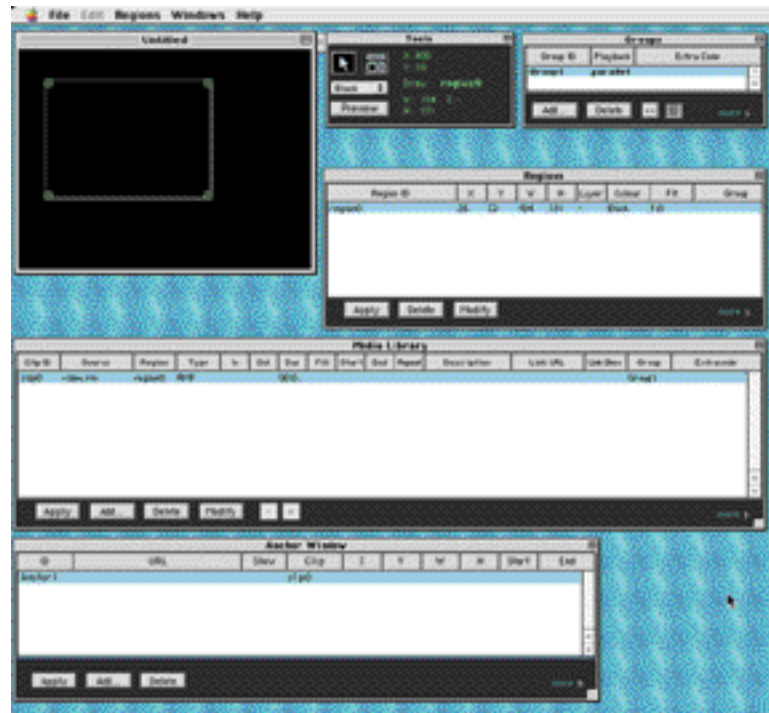
Linking to other presentations or media relative to the location of the presentation is vital to the interactive experience. The path for a link will be automatically created providing the main presentation has been saved on disk. Saving the presentation gives Fluition a base location for the presentation allowing the paths to be created. The files must be contained within folders that are subfolders of the main presentation location. If the file is located outside of the folder where the presentation is located, or the presentation has not been saved, then the full location of the file is placed in the link field in the Clip Library Window.

Anchors

Similar to linking, Anchors offer the capabilities for a presentation to link to another presentation within the player program or to an external web site in a browser. Anchors are different from links because they can be contained within a clip and can occur over or during a period of time.

An anchor is an area defined within the boundaries of the clip that acts in the same manner as a link to another presentation or page. These areas can also have a start and end time so they can occur over the playback of a media clip.

You can create an Anchor within a clip by opening the Anchor Window, using either the option under the Windows menu or by clicking the button on the Tools Palette. The Anchor Window has buttons that allow you to Add, Delete and Apply changes made to the attributes of an Anchor.



Using the fields in the Anchor Window, you can determine the location of the Anchor using the Top, Left, Height and Width fields. The Begin and End fields determine when the Anchor will be active. The URL field works the same as linking in the Clip Library Window. The clip in which the Anchor will be contained can be selected using the clip popup menu.

Entering Time Values

Time Values are used in Fluition and SMIL presentations to determine the start and end times for media clips and anchors. Time values in SMIL code are represented in HH:MM:SS (Hour, minute, second) format. Fields that make use of time formats in Fluition will automatically format any values entered that are not formatted properly. To make the use of time formatting easier, the values of the time can be entered without the colons, and Fluition will automatically insert them. In the event that a quantity of time is not required, such as a duration of 1 minute and 10 seconds, the starting zeros can be omitted and Fluition will format the numbers accordingly.



Previewing a presentation

A presentation can be viewed by clicking a Preview Button or selecting the Preview option in the Presentation Menu. This will play the presentation in the player program selected in the Preferences Window. When the Preview button on the Tools Palette is clicked (or the Preview option is selected under the Presentation Menu), the current presentation code is built and the player program is launched to play that presentation.

The other way to preview a presentation is by selecting the Build SMIL Code option under the Presentation menu. Clicking this option under the Presentation Menu will open the SMIL Code Window. This Window displays the SMIL code for the presentation being created. Once the SMIL code has been created in the Code Window, the code can be copied to the clipboard so it can be pasted into other applications. The code in the SMIL Code Window can also be exported to a new SMIL file using the Export Button in the SMIL Code Window. The SMIL Code Window also has a Preview Button. The SMIL Code Window Preview Button will launch the player program and use the code in the SMIL Code Window for playback.

When a presentation is going to be previewed in a player program, the presentation must contain clips within the Clip Library. Player programs will not play a presentation without clips. If there are no clips in the library, the player program will not be launched. It is still possible to view the SMIL that will be created by Building the SMIL Code from the Presentation Menu. If the clips contained within the presentation are not grouped for sequencing, then the player program will still launch, but the presentation may not play, since sequencing is required to determine the playback order of the clips in the presentation.

The files contained within the presentation can be of any streaming media type. However, not all SMIL players are capable of using all of the streaming media file formats available. The documentation accompanying the SMIL player program will explain any compatibility issues concerning individual player programs. Fluition can use any SMIL player program, providing it can be launched from where Fluition is located, and the application is capable of opening a SMIL file from where Fluition is located.

Glossary

Advertising Extensions

An addition to RealServer™ which makes the integration of advertising into presentations easier.

Anchor

An area within a media clip that can be assigned a hyperlink and can be temporal.

Compression

The ability to reduce the amount of space a file uses on disk.

Download

Receiving data from a remote computer.

Encoding Software

Software that takes standard media files and compresses them so they are efficient enough to stream over the Internet.

Full Path

The full file location of a file on a hard drive.

Group

Groups are used to determine the playback order of a clip or region. Groups can be parallel or sequential.

Hyperlink

An area on the screen that, when clicked, results in the loading of media. Hyperlinks can launch the SMIL player software or the web browser.

Linking

See Hyperlink.

Media Clip

A media clip can be text, graphics, sound, video, animation or any other file that can be streamed over the Internet.

Path

A path is a representation of a directory name where a file is located.

Popup Menu

A menu that “pops” up when clicked to reveal more options.

Presentation

The multimedia show created with Fluition.

Protocol

Rules for computers to communicate with each other regardless of the type of operating system.

Region

A region is an area within a presentation that can contain media for playback within a presentation.

Relative Path

Displays only the folder information for folders that are subfolders of where the presentation is located.

SMIL Player

A software program that allows the playback of SMIL presentations. E.g. RealNetworks™ RealPlayer™ or Apple Quicktime™ 4.1

Streaming

The ability to playback a media file as it downloads, rather than waiting for the entire file to download before playback begins.

Streaming Media Server

A server dedicated and optimized for the delivery of streaming media over the Internet. E.g. RealNetworks™ RealServer

Upload

Sending data to a remote computer.

URL

Uniform Resource Locator. An address used as a destination for linking.

Web Browser

A software program used for viewing web pages.

Web Server

A server dedicated to delivering web pages over the Internet.