



Flash Tutorial: Part One

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Introduction

An extraordinary feature of QuickTime is its ability to play over 200 different media types. One of the most exciting types is the .swf file. These .swf files are commonly called Flash, but would more accurately be titled Flash media. Macromedia's Flash 3 and 4, as well as Adobe's LiveMotion create or export .swf files that can be played back in QuickTime.

Flash media is very popular on the web because it has a very small file size. The small size results because Flash media is generally made from vector graphics. Vector graphics have small file sizes and can be scaled up without losing quality. For example, if you scale or zoom a JPEG image it starts to exhibit 'blocking' and a general degradation of perceived quality. Vector graphics do not exhibit this degradation; they stay smooth and crisp as the image is scaled.

However, vector graphics require considerable computer power to animate and display. When using Flash within QuickTime, this issue is very important. QuickTime's strength comes from its ability to play multiple media types at the same time, often compositing them in real time. All of this uses significant computer power so advanced construction of Flash content within QuickTime must be carefully thought out. For example, it is generally a good idea to stop intricate Flash media animations when video is playing. As computer CPUs get faster this issue will become less important. Small limitations aside, QuickTime and Flash make an unbeatable and powerful combination for multimedia projects and experiences, and LiveStage Professional 3.0 has integrated Flash media content into the work flow better than ever.

This Flash Tutorial is very similar to the Sprites Tutorial. We will create a VCR-type controller for our HipBot video using a Flash Track rather than a Sprite Track. Although we are going to use Flash media as a movie controller, Flash media can be used much more creatively. Try blending video and animation seamlessly into a single presentation. Exploit the media skin features in QuickTime 5 and create Web applications using Flash media as the UI. A good example of this can be found at <http://www.TODDisHERE.com>. Use QuickTime's inter-movie communication and database connectivity to control Flash media playback as found at <http://www.TotallyHip.com>.

This tutorial does not cover authoring Flash content. If you are unfamiliar with Flash, we suggest you visit www.macromedia.com to learn more.

We will build upon what we learned in the Sprites Tutorial. If you have not completed the Sprites Tutorial, we recommend that you complete it before starting this tutorial.

Getting Started

- 1 Create a new Project Folder and label it “***MyFlashTutorial***”.

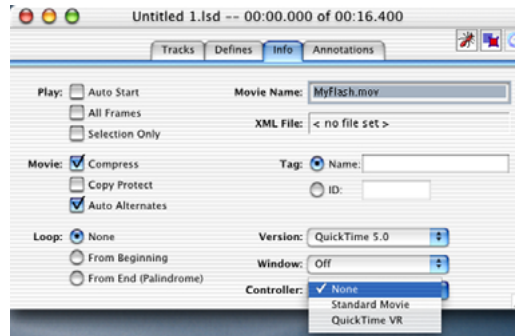
- 2 Bring in the “***Library***” folder into your project folder.

We have created a library of media for you already; it is located in the same folder as this pdf document. Drag this “***Library***” folder into the Project Folder you just created.

- 3 Start up LiveStage Professional if it is not already open, and create a new project.

Immediately save this project to your project folder. Call it “***Flash_Tutorial.lsd***”.

- 4 You will start off in the Info Tab. In the Movie Name field enter ***“MyFlash.mov”***.



This will be the name of your exported QuickTime movie when it is complete. As with the Sprites Tutorial, we will not need the default QuickTime controller, so select “none” in the controller menu.

Bringing in Media

- 1 Click on the Tracks Tab.

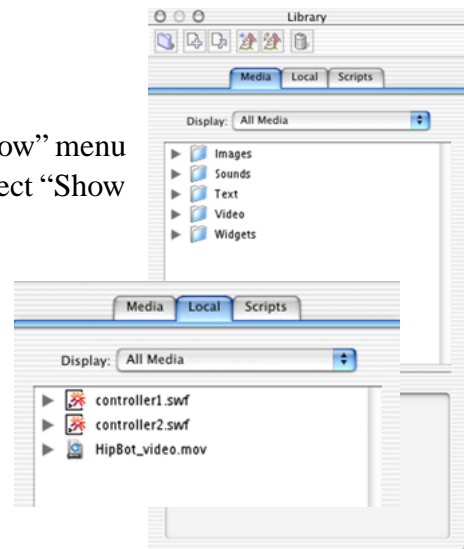
This is our main work area and will be where we import all of our media.

- 2 Open the Library window.

If it is not open, click the “Window” menu at the top of your screen and select “Show Library Window”.

- 3 The Library window has three tabs: Media, Local, and Scripts. Click on Local.

You will see three files titled ***“controller1.swf”***, ***“controller2.swf”***, and our



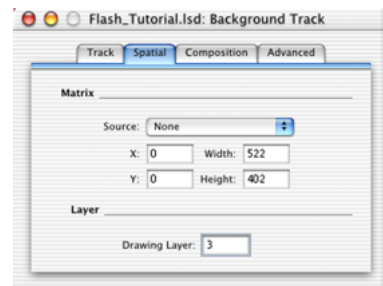
“HipBot_video.mov”. There is also a folder named ***“Frame-Skin”***. If you do not see these items in your Local Library, ensure that both the LiveStage Professional document and the Library Folder are located in the same Project Folder that you titled ***“MyFlashTutorial”***.

- 4 Drag the ***“HipBot_video.mov”*** to the Tracks Tab.

Adding a Background

- 1 As done in our Sprites Tutorial, add a background to your movie by dragging ***“hip_main.gif”*** to the Tracks Tab.

This file can be found in the ***“Frame/Skin”*** folder located in the Local Library folder. In the Picture Track Properties window, change the track's name to ***“Background”*** and the Drawing Layer to 3. This process is detailed in full in the Sprites Tutorial.



- 2 In the Stage Window you will also need to center your Video Track on your background, just as in the Sprites Tutorial.



Note: For detailed instructions on these steps, please see the Sprites Tutorial.

Working with the Flash Track

Now we are ready for our controller, but rather than create it with a Sprite Track, we are going to use a Flash Track.

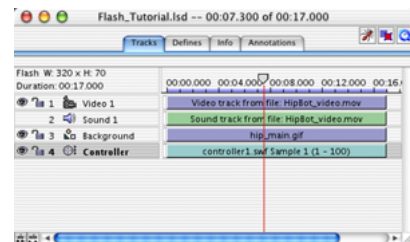
- 1 From your “Local” tab in the Library, drag the file “*controller1.swf*” to the Tracks Tab.
- 2 Change the track name to “*Controller*”.

You can change the track’s default name by double-clicking on the Track Header to open the Properties window and changing the name in the name field as we did in the Sprites Tutorial.



Although the importance of changing track names is not evident in these tutorials, it is a good practice and will make your work much simpler when you begin creating more complex projects in the future.

- 3 Extend the Flash Track duration by dragging the right edge of the sample. If you option-click the sample while you drag, it will snap to the lengths of the other tracks. This will ensure your controller is visible throughout the length of your movie.



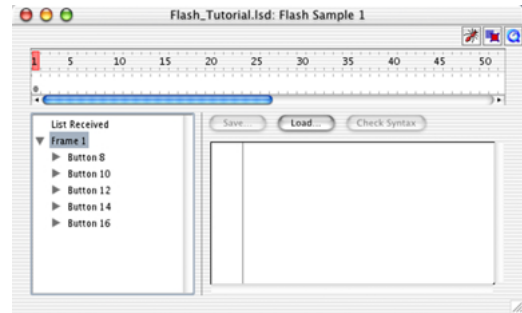
The Flash Controller

- 1 Double-click the Flash Sample.

This is where we can gain access to the Flash buttons. In our example the buttons are all contained in Frame 1 of our movie. If you open Frame 1 by clicking on the triangle indicator, you will see the list of Flash buttons for this file.

Notice that they do not have names, they have numbers. This is how Flash exports its media, and this makes it very difficult to determine which button is which.

There is a work around that uses Flash's FSCommand which will be described in Part 2 of this tutorial. In this example, we will access the Flash buttons directly from the Stage.



2 Close the Flash Sample and open the Stage.

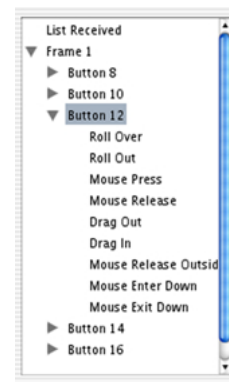


Notice that the Flash controller is positioned at the top left of the movie. Simply drag and drop the controller so that is located at the center bottom of the movie.

The Flash controller has five buttons. We need to add some scripts to these buttons, similar to what was done in the Sprites Tutorial.

3 While still on the Stage, double-click on the Play button and the Flash Sample will open up.

Notice that "Button 12" has automatically opened, revealing a list of Mouse Event Handlers.



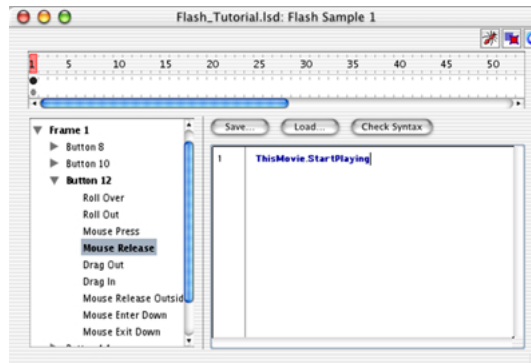
You can see a preview of the movie we are creating at any time by simply clicking the blue QuickTime icon on the top right hand corner of your project window.



4 Select the Mouse Release event handler.

This is the Flash equivalent to QuickTime's Mouse Click event that we used in the Sprites Tutorial. In the Edit field, type the following script:

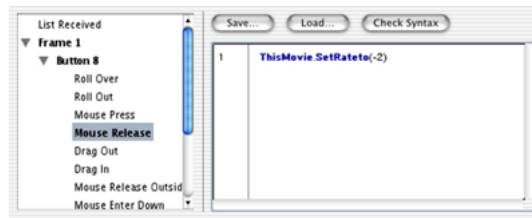
ThisMovie.StartPlaying



5 Double-click on the Rewind button.

The Flash Sample will open with Button 8 selected. Again, choose the Mouse Release handler and enter the following script:

ThisMovie.SetRateTo(-2)



6 Follow the same procedure for the rest of the buttons.

Pause: **ThisMovie.StopPlaying**

Fast Forward: **ThisMovie.SetRateTo(2)**

Restart: **ThisMovie.GoToBeginning**

A quick note on Alpha Channels:

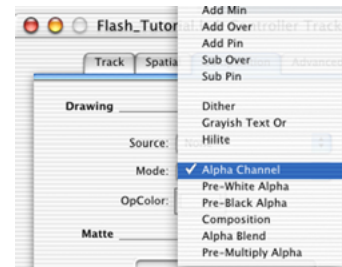
Be sure to use Alpha Channels sparingly. QuickTime composites tracks in real-time, so it is very CPU-intensive to composite large Alpha Channels. If you can avoid using Alpha Channels by constructing your movies in a different manner, you can ensure your movies will play back properly on slower computers.

7 Preview your movie.

The Flash buttons now control your movie's playback. You will notice the Flash Track's white background is a bit unsightly. In the Sprites Tutorial, we simply made the white track transparent. However, all Flash media files are exported with an Alpha Channel. All we need to do is activate it.

8 Double-click on the Track Header of the Flash Track.

Click on the Composition Tab, and change the mode to “Alpha Channel” from the default, “Dither”.



9 Export your movie to your desktop. You are done.

Flash Tutorial: Part Two

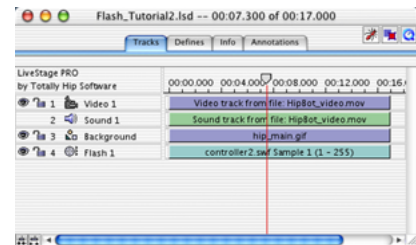
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In the first part of the tutorial we were able to access the Flash buttons directly from the stage. We could do this because our Flash track was static, but many Flash controllers are enclosed in a one frame movie clip - they have an animation that reveals the controller. This makes it impossible to access them from the Stage. Yet as we mentioned in Part 1, there is no way to tell which button is which if we open them up from the Sample. Here is the solution:

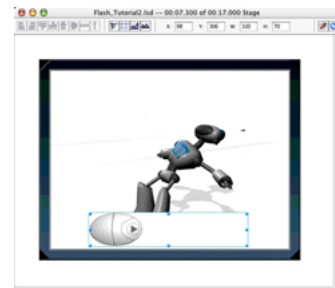
- 10 First open “*Flash_Tutorial.lsd*” (if it is not already open) and immediately save it as “*Flash_Tutorial2.lsd*” in the same project folder. This way it will still have access to the Local Library.
- 11 Select the Flash Track named “*Controller*”, and delete it. Simply hit the delete key on your keyboard.

- 12 Now drag the file named “*controller2.swf*” from the Local Library to the Tracks Tab.

You may also want to activate the Alpha Channel for this Flash Track as we did in Part 1.



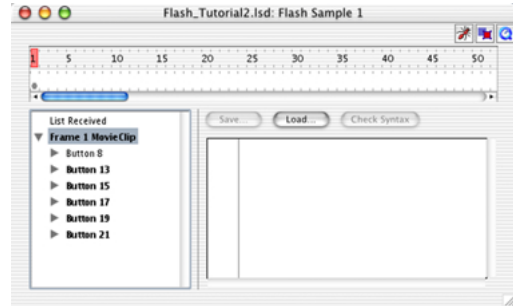
- 13 If you open the Stage, again you will notice that the controller is on the top left of the movie. Drag it to the bottom center of the movie.



If you preview the movie, you will notice that if you click on the controller's gray triangle, it will open up. However there is no way to access those buttons from the Stage as we did in Part 1 of our tutorial.

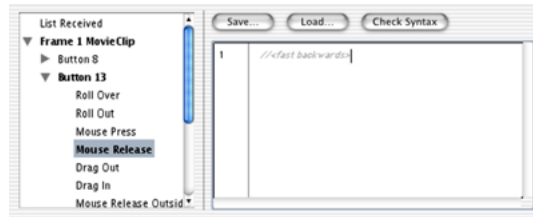
- 14 Double-click on the Flash Track sample. And open the Frame 1 place holder.

Notice that five of the six button names are bold. Button 8 is actually the gray triangle that opens up the Flash controller.



- 15 Open up "Button 13", by clicking on the triangle. Notice that the Mouse Release event handler is also bold. If you select it, you will notice the following script:

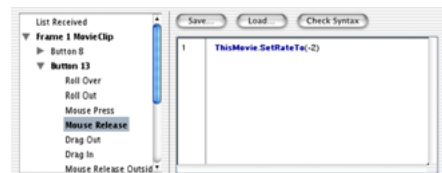
`//<fast backwards> ---` which is International ici Media Inc Superstar, Guillaume Iacino's way of saying rewind.



The `//` is QScript for "ignore whatever follows here". Programmers use this to 'comment out' code. This way they can make notes to themselves and not have QuickTime think that it is actual code. So `<fast backwards>` tells us that this is the rewind button.

- 16 Delete the comment and replace it with:

`ThisMovie.SetRateTo(-2)`



- 17** All the remaining buttons have the same types of labels. Enter the scripts for the remaining buttons.

So how did those labels (QScript comments) get there?

This was done in Macromedia's Flash using the FSCommand (FlashScriptCommand):

On (Release)

FS Command ("QuickTimeScript(QScript)", "//BUTTON NAME")

End On

If you are not creating the Flash media yourself, be sure to inform your Flash developer to add these lines of code in his or her work. It will save you hours of work and frustration.

Experienced Flash users will immediately see how easy it is to code within LiveStage. For example, controlling Fast Forward, Rewind, and Slow Motion is a simple script setting the movie rate. Other controls such volume are just as simple to code.

Finally, it is important to reiterate that Flash content can be incorporated in many more ways than just a simple video controller. Be creative.