

# **Integration of QuickTime Movies with Flash Interactivity**

## **Introduction**

Flash is an authoring tool developed by Macromedia for vector-based web animation solution. It has a scripting component, video and audio capabilities, and offers streaming, object-oriented web animation technology. QuickTime is a set of tools developed by Apple for downloading, playing, and developing multimedia. It uses the browser plug-in for downloading, and the standalone application for playback and editing. This paper is intended to explore the possibilities to integrate these two powerful tools so as to extend their capabilities and better serve the web development purpose.

## **Significance of the Topic**

Both Flash and QuickTime has becoming powerful yet popular web multimedia development solutions. However, each of theses tools has its specific strengths that are appealing to web multimedia developers. Then, which one should we use? The problem is that by deciding on the particular tool to use, we always have to sacrifice certain features provided by the other tool. Is there a solution to this dilemma? The good news is that Flash 4 has brought in the new ability to import QuickTime movies, while QuickTime 4 has introduced a new media track - the Flash track. A new movie type come into being – the QuickTime Flash Movie, with file extension **.mov**. By combining both technologies, we are able to create astounding effects and functionalities that none of these tools can achieve alone.

## Flash and QuickTime Integration

### Import QuickTime into Flash

We can simply import QuickTime movie into Flash using the *File*  $\Rightarrow$  *Import* command.

However, the actual importing of QT movie can be tricky in order to achieve the desired effects.

- a. The most important thing to consider is the frame rate for both QT movie and Flash content. Since one frame of QT video is not equivalent to one frame of Flash movie, we have to set the frame rate of the Flash movie to match the frame rate of the QT movie. Otherwise, the final QuickTime Flash movie may have slow or weird playback.
- b. We also have to provide enough frames in the Flash movie to hold the entire QT movie. If less than enough frames are provided, the duration of the Flash movie determines the duration of the QT movie. Thus, the QT movie will be cropped in the Flash file.
- c. While importing QT movies, Flash does not make a copy of the QT movie; instead, it creates a link to the external QT movie. Therefore, we have to keep the original QT movie file in the same folder.

### Export Flash with QuickTime content to QuickTime Movie/QuickTime Flash Movie

We can export Flash files with QuickTime content to QuickTime movie or QuickTime Flash movie using the *File*  $\Rightarrow$  *Export Movie/Publish Settings* command. However, just like importing QT movies, there are several things to consider while exporting Flash with

QT content to QT movie. I will mainly discuss Publish Setting command here due to its extra power to create other linked file formats.

- a. In order to export a self-contained QuickTime Flash movie, in the Publish Settings dialog box, we have to check the “Flatten” option so as to export one QT movie that copies the imported QT movie and Flash content into its video, audio, and Flash track respectively. Also, there should be a checkmark next to Flash and QuickTime to make it a QuickTime Flash movie.
- b. In order to export a QuickTime movie that only links to the reference file, just do not check the “Flatten” option. In this case, all the linked files should be in the same location for playback.
- c. Since QuickTime Flash movie can only be played with QuickTime 4.0 or later, we have to export files into QuickTime movie if the audience has older versions of QuickTime. The drawback is that QuickTime movie has a much larger size than QuickTime Flash movie due to its raster-based animation.

#### Export a QuickTime movie to a SWF file?

Generally speaking, we can't export a QT movie into a SWF file. However, if one wants to use only a few frames of a QuickTime movie in a SWF file on a web site, he can use QT Player Pro or other video editing applications such as Premiere to convert a short video clip into a sequence of still images. These still images can then be played as an animation or movie clip in Flash ([webview.com](http://webview.com)).

## Importing and Exporting QTVR Movies

It is indeed amazing that Flash can also support QuickTime Virtual Reality movies. We can import and export QTVR movies in Flash. Yet, besides those considerations mentioned above about regular QT movies, there are a few other things to keep in mind while using QTVR in Flash.

- a. While importing QTVR panoramic movie in Flash, we can only see the first frame of the QTVR movie on the stage. Thus, it is very important to make sure that the timeline spans to the exact length of the QTVR movie. The trick is that if the timeline spans beyond the length of the QTVR movie, the movie area will be replaced by a striked rectangular box .
- b. In order to export QTVR panorama movies, we have to specify the Controller type to “QuickTime VR” in the Publish setting or Export dialog box.
- c. To export QTVR object movies, it is better if we specify the controller type to “None” but use a Flash button to provide the *play* action. Otherwise, the playback of the QTVR object movie will be very poor.

## Flash features that do not work in exported QuickTime movies:

At the current stage, the solution to Flash and QuickTime integration is not perfect. There are still certain limitations .

- a. The use of keyframe action to trigger a Get URL action has no effect in the exported QuickTime movie.
- b. The Load Movie action does not work to place external SWF files into the current Flash movie.

- c. The cursor does not always turn into a hand while passing over buttons.
- d. Mask layers can't mask the QuickTime content.

(adapted from Macromedia TechNotes).

The best solution to these problems is to design with the audience in mind. If you are designing for QuickTime, try to avoid the Flash features that are not supported by QuickTime. Moreover, the Get URL action can be exported to QuickTime movies if it is attached to a button instead of a frame.

## **Summary**

Both Flash and QuickTime are powerful web multimedia development solutions. By integrating Flash and QuickTime, web developers can go far beyond the limitation of each tool and create amazing multimedia effect. However, there are still certain restrictions while integrating these tools. Therefore, we have to be extremely careful during the developing process so as to not only make the best use of each tool but also make the final product work

## References and Related Links

### *Web Developers' Resources:*

<http://webreview.com>

Cross-training for web teams. A lot of good tutorials and articles on heated topics. All the topics are listed by categories and a search function enable you jump freely among topics. It's all you need to be a web developer.

<http://hotwired.lycos.com/webmonkey/>

A good reference page for web developers from beginning level to advanced level. Comprehensive How-to Library with nice tutorials; quick reference for web developers; and featured articles showing the current trend in web development.

<http://www.stars.com/>

A comprehensive web site for all you want to know as a web developer. It's the web developer's virtual library online. The materials it contains range from web authoring languages to E-commerce solutions.

<http://www.coolresources.com/>

It is good resource site for web developers. This websites featuring live tutorials. Each tutorial is animated to lead you through each step one by one. Thus, it's really a good site for beginning learners to go for.

### *Flash Resource Site:*

<http://www.macromedia.com/software/flash/>

The authoritative Flash resource site. Macromedia's homepage for Flash with professional help on Flash and great exemplary Flash showcases, which give you great ideas on Flash design and development.

<http://www.flashkit.com/>

An excellent site for Flash developers. The tutorials are not that comprehensive, however, it has a lot of exemplary Flash movies. These movies are submitted be Flash developers all around the world with all different levels. They can give you great ideas on what Flash are capable of doing.

<http://www.extremeflash.com/tutorials/>

If you are looking for good Flash tutorials, this is the site to go for. The tutorials provided by this site are with a lot of step by step graphics, which make the tutorials much easier to follow than traditional text-based tutorials online.

<http://www.flashzone.com>

The definitive flash resource site. It has a lot of users and great tutorials on Flash. The good thing is that you can search through the library of tutorials quickly without going through all the ones you are not interested in.

<http://www.virtual-fx.net/>

A good Flash site with a comprehensive collection of tutorials, movies, resources, Flash books, etc. Plus, the Flash 5 tutorials are already online. It's a good place to start learning Flash 5!

<http://www.tutorialindex.com/Flash/>

A large, growing database for a comprehensive listing of all kinds of free Macromedia Flash tutorials and resources online. You can also search the database for other related topics such as JavaScript, HTML, Photoshop, etc.

<http://www.netkontoret.dk/flashecho/sitet.html>

This is one of the first Flash tutorials on-line. Although the design of the interface is simple, it's clean and elegant, which represents the core design principle for web development. It also has an archive of FLA files that you can download and learn by yourself.

*Flash Forums:*

<http://flashquicktime.listbot.com/>

Flash & QuickTime Discussion list Home Page. A web forum for Flash & QuickTime developers to post Q & A. An on-line community for multimedia developers to help each other. A lot of solutions for Flash QuickTime integration.

<http://www.macromedia.com/support/flash/technotes.html>

Macromedia Flash TechNotes. The professionals answer the most frequently asked technical questions in Flash. You can also search for your interested topics. Moreover, good learning and training materials on Flash are provided.

<http://64.224.111.148/forums/index.php>

We're here forums. It's one of the most frequently visited forums with some of the best help of Flash around. Flash and Database interaction methods are discussed here. Other topics such as Director, 3D are also mentioned and discussed.

<http://pub28.ezboard.com/btexasflashers>

Texas Flashers. A Texas Flash developer's on-line resource designed to provide Texas Flash developers with resources and help they need. If you want to keep up with the current trend in Flash, visit this site frequently to see what's going on.

<http://www.flashbio.com/>

It's a good web site to go to if you need help with your Flash works. It's an online Flash community to help each other out. You can upload your work and download others. You can post Q & A and also help out others in the Flash Forum.

<http://i-technica.com/flashlist/>

This page allows you to search through more than 1000 selected posts from the Flash 4 lists at [flasher@chinwag.com](mailto:flasher@chinwag.com) and [flashmacromedia@egroups.com](mailto:flashmacromedia@egroups.com). It's a comprehensive collection of Q & A on the use of Flash.

*Thirty Party Flash Tools:*

<http://www.flashtool.de/en/index2.html>

This is a good site for Flash tools. You can find many 3<sup>rd</sup> party tools, which expand the possibility of Flash uses and make the use of Flash easier. Many of them are on-line freeware. You can register for FlashTool's newsletter to get the latest news on Flash tools.

<http://www.goldshell.com/flashforge/>

Try this website. FlashForge, the well-known screensaver creator, can convert the Macromedia Flash files into a screensaver plus an installer. This is a good application to try if you want to add some creativity to your computer. Plus, it's Flash 5 compatible.

<http://buraks.com/asv/>

Action Script Viewer (ASV) is a Windows application that lets you see the ActionScripts in SWF files.

Many times, the amazing Flash sites we find on-line are SWF files which we have no way to see through its design. However, with ASV, You can have a look at code of any SWF you got, which will help a lot in learning ActionScript.

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