Interactive video using Flash – a guide

By H.C. Huurdeman

Overview

It is possible to make interactive video using Adobe Flash 8 and higher. This is a short guide with some starting points to explore the subject.

Interactive video

The basic meaning of interactive video is navigating through video content in an interactive way. There are many possibilities for the implementation of it. You can for example influence the order, subject or flow of a video sequence by clicking in the video. Or you could access extra information by hovering over objects with your mouse pointer.

Right now it is possible, using internet-based technologies, to create advanced interactive video applications that are usable online (streaming). Especially Adobe Flash offers great opportunities to create immersive video which is usable on a wide range of platforms.

Getting started

To make interactive video using Flash, you need Adobe Flash Professional 8 or CS3 (the Flash Video Encoder is included). Trial versions are available at Adobe's website.
A prerequisite is thorough knowledge of both Adobe Flash and ActionScript 2.0. You can find basic tutorials on the internet.

Then it is advisable to read the basic information about the usage of video in Flash:
http://www.adobe.com/devnet/flash/articles/video_guide.html

A Flash application for interactive video can consist of the following elements:

- The FLVPlayback component
    - this is a Flash component to play Flash video files (FLV). It is automatically added to your project if you add a video in Flash Professional (using import > import video)
- A (dynamic) playlist for videos
    - via ActionScript (possibly combined with XML)
        - This playlist needs to be dynamic, i.e. adjusted if choices are made by the user
        - It is played via the FLVPlayback component
- Video files
    - via separately encoded FLV-files (using the Flash Video Encoder)
- A method to add clickable areas to the video
    - by encoding them as metadata in the FLV-files (cuepoints)
- An event handler for cuepoints in Flash videos
    - The metadata in the FLV-files must be read by Flash. Using that data, an image overlay can be placed on top of the video (to be able to click on a spot of a video)

Note that this is not the only way to achieve interactive video in Flash, other methods can also be used (by e.g. embedding the video into the Flash-project itself). An advantage of the method mentioned above is that it is flexible; you can add new videos later.

Tutorials for the different parts of an interactive video application:

- Making a playlist via actionscript:
    - http://www.adobe.com/devnet/flash/articles/flvplayback_behaviors_03.html
- Making a playlist via XML:
    - http://www.adobe.com/devnet/flash/articles/prog_download.html
- Basic information about cuepoints and event handlers:
    - http://www.mediacollege.com/flash/video/cuepoints.html
- Using the Flash CS3 Video Encoder:
    - http://www.adobe.com/devnet/flash/quickstart/video_encoder/

Another useful information source is the standard help function in Flash Professional. In addition to that there's a lot of information available via the Adobe website.

Tools:

- Adobe Flash CS3 Professional
    - http://www.adobe.com/nl/products/flash/
- Rich FLV (a tool to edit the cuepoints of a FLV-file after encoding)
    - http://www.richapps.de/?p=48

Futher information:

- Adobe Developer Center
    - http://www.adobe.com/devnet/flash/
- Adobe Flash Resources
    - http://www.adobe.com/support/documentation/en/flash/
- Examples of interactive video applications
    - http://www.interactive-film.com/