

Building a Custom Streaming Video Player with Flash

Part 2 – Flash Video Basics
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Topics

- Development workflow for creating Flash with video
- Using the Insert Flash Video command in Dreamweaver 8
- Building a media player with
 - The FLVPlayback component
 - FLVPlayback Custom UI components
- Binding playback properties and components
- Building a playlist and video picker
- Skinning FLVPlayback Custom UI Components

Flash Video Development Workflow

Flash Video Development Workflow



Workflow: Convert

Any digital media format supported

- Live video (Sorenson Squeeze / Flash Player / On2 VP6)
 - QuickTime (MOV)
 - Video for Windows (AVI)
 - Windows media (WMV, ASF)
 - MPEG (MPG, MPEG)
 - Digital video (DV, DVI)
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Workflow: Convert

FLV Exporter

- Converts media into video that can be displayed with the Flash Player
 - Available as a plug-in for professional video editing tools
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Workflow: Publish

Use Flash Professional 8 to

- Create a custom media player for your video
- Add simple play controls
- Add advanced controls and playlists
- Design your own player to fit your website

SWF files can range from 10 – 33k

Workflow: Embed

Use **Dreamweaver 8** to

- Easily embed a pre-built player
 - Use the Insert Flash Video command
 - Use Flash Video without knowing Flash
 - Embed a custom player
 - Allows full creative control
 - Use Flash Professional 8 to build a custom video player
 - Embed the published SWF in a page
 - Static HTML or dynamic CFM, PHP, etc.
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Workflow: Upload

- Upload FLV files to
 - Web server
 - For progressive download
 - Flash Media Server / Flash Media Server 2
 - For streaming
 - CDN provider
 - Macromedia Flash Video Streaming Service
 - HTML / SWF
 - Upload to your web server
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Workflow: Deliver

- Flash Player
 - Plays SWF embedded in an HTML page
 - Connects to FLV file
 - Start playing the FLV right away
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Workflow: Analyze

- Analyze usage reports
 - Most CDN providers (FVSS) provide site traffic status reports on
 - Stream access
 - Bandwidth reports
 - Bandwidth usage and network costs
 - Number of viewers
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Flash Video in Dreamweaver

Using the Dreamweaver 8: Embed
Flash Video command

Dreamweaver 8 FLV Features

- Embed a FLV player into any HTML template
- Nine different player skins available
- All delivery forms supported
 - Progressive download
 - Streaming from Flash Media Server
 - Macromedia Flash Video Streaming Service

Dreamweaver 8 FLV Features

- Auto size detection
- Auto HTML embed tag insertion
- No Flash knowledge required**

Inserting a Flash Video Dialog



Exercise 1.3 - Inserting Flash Video with Dreamweaver 8 (Demo)

- Stream a Flash Video in an HTML page *without* using Flash Professional 8
- Using the Insert Flash Video command in Dreamweaver 8
- Use different video control skins

Using Pre-Built Versus Custom Players

- **Dreamweaver:** Insert Flash Video player functionality
 - Video display
 - Play/pause/stop controls
 - Seek bar
 - Volume control with mute capability
 - onMouseOver control bar visible
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Using Pre-Built Versus Custom Players

- Now build a custom player in Flash!
 - With components, behaviors, and bindings
 - With Movie Clips, embedded Video objects, and ActionScript
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Using the FLVPlayback Component to create a Player

The FLVPlayback Components (Full Set)

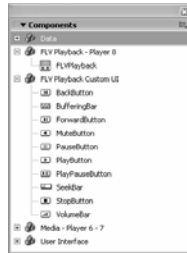
- Pre-built user interfaces for video playback control
- Drag-and-drop solutions
- No ActionScript code required
- Integrated into the Flash 8 component architecture



Custom UI Components

□ The Custom UI Components

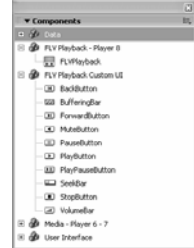
- 10 custom UI components "pieces"
- Can be used individually or together
- Are customizable
- Work with an instance of an FLVPlayback component
- FLVPlayback component skin
- Control FLVPlayback component using FLVPlayback class
 - mx.video.FLVPlayback



Custom UI Components

□ The Custom UI Components

- add flexibility vs. FLVPlayback Component
- Uses the FLVPlayback ActionScript class
- Controls are managed using ActionScript
- Can be used in any combination
- Can be customized
- Allows creative integration of a video player within an interface



FLVPlayback class

□ FLVPlayback ActionScript Class

- Programmatically control video playback
- Bind custom user interfaces to control the video
- A class of the package **mx.video**
- More than 50 events, methods and properties to control the FLVPlayback / FLVPlayback Custom UI components
- ActionScript overrides parameters set in Parameter panel
- Absolute control over the playback experience

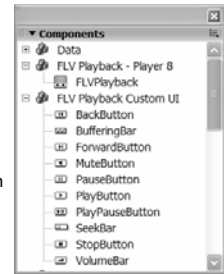
Exercise 1.4 - Using the FLVPlayback Component

- Create a video player interface in Flash
- Use the FLVPlayback component
- Play an FLV Video from your local disk

Building a Custom Media Player with the FLVPlayback Custom UI Components

About FLVPlayback Custom UI Components

- The Custom UI Components
 - 10 custom UI components "pieces"
 - Can be used individually or together
 - Are customizable
 - Work with an instance of an FLVPlayback component
 - FLVPlayback component skin
 - Control FLVPlayback component using FLVPlayback class
 - mx.video.FLVPlayback



Steps to Using FLVPlayback Custom UI Components

- To use Custom UI Components
 1. Import mx.video.FLVPlayback class
 2. FLVPlayback component
 - Drag instance of component to stage
 - Assign instance name
 - Data type instance of FLVPlayback
 3. FLVPlayback custom ui component
 - Drag instance of component to stage
 - Assign instance name to UI component
 - Attach to property of FLVPlayback class
 - my_FLVplybk.playButton = my_plybbtn;

FLVPlayback Properties

- Are stored within an instance of the FLVPlayback class
- Control states of FLVPlayback Custom UI components
- Are attached to UI components using ActionScript
- Example


```
import mx.video.FLVPlayback;
my_FLVplybk.backButton = my_bkbbtn;
my_FLVplybk.forwardButton = my_fwdbbtn;
my_FLVplybk.playButton = my_plybbtn;
my_FLVplybk.pauseButton = my_pausbbtn;
my_FLVplybk.stopButton = my_stopbbtn;
```

FLVPlayback Properties

- Assigns FLVPlayback UI Components to assist in end-user management of the stream, i.e.
 - backButton
 - bufferingBar
 - forwardButton
 - muteButton
 - pauseButton
 - playButton
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Additional FLVPlayback Info

- Search the Flash help menu using the keyword FLVPlayback
- Discover all the properties, methods and events of FLVPlayback class



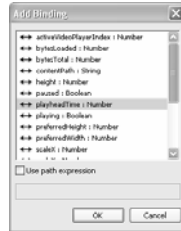
Exercise 1.5 – Using FLVPlayback Custom UI Components

- Play a video through a FLVPlayback component
 - Control the FLVPlayback component with FLVPlayback Custom UI components
 - Use playback properties of the FLVPlayback class
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Binding Playback Properties and Components

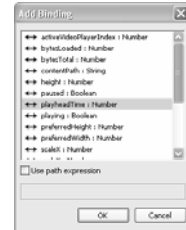
Media Data Binding

- FLVPlayback properties can be bound to UI components



Media Data Binding

- Binding will broadcast and handle events across all UI components
- Binding FLVPlayback component properties allows other components to
 - Respond to changes in the stream
 - Display time
 - Control the stream
 - Play/pause/seek



Binding a List Box to Data from FLVPlayback Component

- Bind FLVPlayback's playheadTime property to ListBox selectedItem.data property
- Use List Box properties and bind them to the FLVPlayback component to control
 - Time seeking
 - Load new movies
 - A TV station type environment

Exercise 1.6 - Binding Data from Media Components

- Build a simple Video Index / Chapter List
- Use data binding with a List and FLVPlayback components
- Skip forward and backward on the Video Stream

Building a Playlist / Video Chooser

- Binding Example: Playlist / Video Chooser
 - Interface for selecting video clips
 - Requires a List component and a FLVPlayback component
 - SelectedItem.data property of List instance contains path to FLV files
 - Bind SelectedItem.data properties of list with FLVPlayback component
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Exercise 1.7 - Building a Video Selector

- Build a simple Play list / Video Switcher
 - Use component binding to set the source of a stream
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Skinning FLVPlayback Custom UI Components

Skinning Components

- Custom UI Components consist of graphics and movie clips within the Flash Library
 - Library folder: FLVPlayback Skins
 - Edit MovieClip skins from library, just like normal symbols
 - Certain MovieClips affect all Custom UI component instances – so be careful
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Exercise 1.8 – Skinning the FLVPlayback Custom UI Components

- Customize the look of FLVPlayback Custom UI Components
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Need-To-Knows About FLVPlayback Component

- Duration important to determine progress
 - Progress bar may not operate if video is compressed with
 - Sorenson Squeeze 1.0 , 2.0
 - FLV Exporter 1.0
 - FLVPlayback and Custom Components will
 - Increase the file size of the SWF by 33k
 - Can be controlled using ActionScript and binding
 - But is not the only way to embed Flash Video
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Review

- What media types can be converted to FLV?
 - Name 3 places you can upload an FLV to.
 - What is the core of all Flash Video players?
 - Where is the SWF file uploaded to?
 - What is the FLVPlayback component?
 - How do you set the properties of the FLVPlayback component?
 - What is another way of controlling the FLVPlayback component?
 - Do you need to know Flash to use Flash Video?
 - What are Custom UI components?
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Summary (1 / 2)

- All media types can be converted into FLV
 - You can upload FLV files to
 - Web server
 - Flash Media Server
 - Macromedia Flash Video Streaming Service (CDN)
 - The Flash Player is the foundation of all media players delivering Flash Video
 - The FLVPlayback component is a Drag and Drop solution for creating a video player
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Summary (2 / 2)

- FLVPlayback component properties managed by Component Inspector and Parameters Tab of Properties Panel
 - One can control FLVPlayback component by binding with a List component.
 - The Insert Flash Video command in Dreamweaver can be used to deliver Flash video solutions without knowing Flash
 - Custom UI components allow customized playback controls
 - Custom UI components can be skinned
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