

Chapter 11

How to add audio and video to your web site

Common media types for video

- MPEG-4
- Flash Video
- Ogg
- WebM
- ASF
- AVI

Descriptions of these file types are listed on page 377.

Common media types for audio

- MP3
- AAC
- Ogg
- WMA

Descriptions of these file types are listed on page 377.

Video codecs

- H.264
- Theora
- VP8

Descriptions of these file types are listed on page 379.

A codec decodes video or audio for playback.

What a media player does when it plays a video

- Determines the media type that the user is attempting to play.
- Determines whether it has the capability of decoding its video and audio streams.
- Decodes the video and displays it on the screen.
- Decodes the audio and sends it to the speakers.
- Interprets any metadata and makes it available.

Audio codecs

- AAC
- FLAC
- MP3
- Vorbis
- WMA

Descriptions of these file types are listed on page 381.

Audio codec support in current browsers

Browser	Ogg Vorbis	MP3	AAC
IE	-	9.0+	9.0+ (with VP8 codec)
Firefox	3.6+	-	-
Safari	with QuickTime installed	3.0+	5.0+
Chrome	5.0+	10.0+	6.0+
Opera	10.5+	-	-

Video codec support in current browsers

Browser	Ogg Theora	H.264	WebM
IE	-	9.0+	9.0+ (with VP8 codec)
Firefox	3.5+	-	4.0+
Safari	-	3.0+	-
Chrome	5.0+	10.0+	6.0+
Opera	10.5+	-	10.6+

MIME types for identifying audio and video files

Media type	MIME type	Codec
MP3	audio/mp3	
Ogg Vorbis	audio/ogg	
WebM	video/webm	theora, vorbis
Ogg Theora	video/ogg	theora, vorbis
Flash	application/x-shockwave-flash	

The object and param elements

Element	Description
object	Embeds a media file into a web page.
param	Provides parameters to the media player that's used to open a file.

Attributes of the object element

- type
- data
- width
- height

Attributes of the param element

- name
- value

An object element for playing a Flash file

```
<object type="application/x-shockwave-flash"  
        data="media/sjv_anniversary.swf" width="400"  
        height="150">  
    <param name="autoplay" value="true">  
</object>
```

Attributes of the embed element

- type
- src
- width
- height

Older than the object and param elements.

An embed element for playing an MP3 file

```
<embed type="audio/mpeg"
      src="media/sjv_welcome.mp3"
      width="300" height="25"
      autoplay="true">
```

An embed element that plays a YouTube video

```
<embed type="application/x-shockwave-flash"
      src="http://www.youtube.com/v/LgDqE2T1z_U"
      width="560" height="349">
```

Web sites for information about other attributes

QuickTime attributes

<http://support.apple.com/kb/TA26485>

Flash attributes

http://kb2.adobe.com/cps/127/tn_12701.html

Windows Media Player attributes

<http://www.microsoft.com/windows/windowsmedia/howto/articles/adsolutions2.aspx>

Common attributes for audio and video elements

- src
- poster
- preload
- autoplay
- loop
- muted
- controls
- width
- height

The attributes for the source element

- src
- type

The easiest way to add a video or audio element

```
<video src="media/sjv_speakers_sampson.mp4"></video>  
<audio src="media/sjv_welcome.mp3"></audio>
```


A video element for playing MPEG-4, Ogg (Theora), and WebM media types

```
<video id="videoplayer" width="480" height="270" controls  
  autoplay>  
  <source src="media/sjv_speakers_sampson.mp4">  
  <source src="media/sjv_speakers_sampson.webm"  
    type='video/webm; codecs="vp8, vorbis"'>  
  <source src="media/sjv_speakers_sampson.ogv"  
    type='video/ogg; codecs="theora, vorbis"'>  
</video>
```

An audio element for playing MP3 and Ogg (Vorbis) media types

```
<audio id="audioplayer" controls autoplay>  
  <source src="media/sjv_welcome.ogg" type="audio/ogg">  
  <source src="media/sjv_welcome.mp3" type="audio/mp3">  
</audio>
```

HTML for playing a video that falls back to Flash

```
<video id="videoplayer" width="480" height="270" controls
      autoplay>
  <source src="media/sjv_speakers_sampson.mp4">
  <source src="media/sjv_speakers_sampson.webm"
        type='video/webm; codecs="vp8, vorbis"'>
  <source src="media/sjv_speakers_sampson.ogv"
        type='video/ogg; codecs="theora, vorbis"'>

  <object type="application/x-shockwave-flash"
        width="480" height="270">
    <param name="movie"
          value="media/sjv_speakers_sampson.swf">
    <param name="wmode" value="transparent">
    <param name="quality" value="high">
    <!--[if !IE]>-->
      <object type="application/x-shockwave-flash"
            data="media/sjv_speakers_sampson.swf"
            width="480" height="270">
        <param name="wmode" value="transparent">
        <param name="quality" value="high">
      </object>
    <!--<![endif]>-->
  </object>
</video>
```

Flash
Fallback

HTML for playing an audio that falls back to Flash

```
<audio id="audioplayer" controls>
  <source src="media/sjv_welcome.ogg" type="audio/ogg">
  <source src="media/sjv_welcome.mp3" type="audio/mp3">

  <object type="application/x-shockwave-flash"
    width="50" height="50">
    <param name="movie"
      value="media/sjv_welcome.swf">
    <param name="wmode" value="transparent">
    <param name="quality" value="high">
    <!--[if !IE]>-->
      <object type="application/x-shockwave-flash"
        data="media/sjv_welcome.swf"
        width="50" height="50">
        <param name="wmode" value="transparent">
        <param name="quality" value="high">
      </object>
    <!--<![endif]-->
  </object>
</audio>
```

Same
syntax as
the video
element.
Fall back is
the
<object>
element.