

Audio and Video on the Web

Multimedia for Web Designers

Multimedia

- Can be text, graphics, animation, audio, and video
- Most web authoring applications include multimedia tools
- Multimedia can help you to better communicate
- Multimedia has many challenges for web designers

Multimedia

- Use multimedia sparingly
- Think of how you can use media to communicate
- All media in your site should have a purpose
- The purpose should be to help your site communicate to it's audience

Multimedia

➤ Guidelines to follow:

- Understand the affect on bandwidth
- Offer low-bandwidth alternatives
- Avoid requiring plug-ins if possible
- Offer links to appropriate plug-ins as necessary

Multimedia

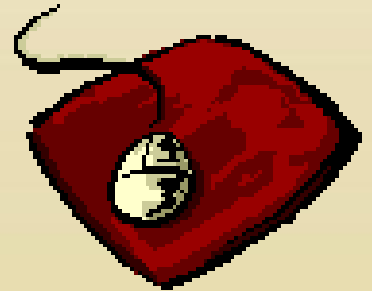
- **Use strategies to save bandwidth:**
 - Compression
 - Streaming
 - File chunking
 - Linking instead of embedding
 - Avoid multimedia unless necessary

Downloadable vs. Streaming Media

- **Downloadable media** must be fully downloaded before users can hear or see it
- **Streaming media** begins to play as soon as data begins to stream
 - Examples: YouTube, Netflix, RealPlayer
 - Requires web developer to set up a streaming server

Using Audio on the Web

- Many users are annoyed if web pages start playing music for no reason
- Give the user control to be effective
 - Embed the audio into a .swf
 - Include controls for play, pause, etc.



Editing Audio

- Use compressed formats on web pages whenever possible
 - .WAV (Windows) and .AIFF (Mac OS) are uncompressed
 - .mp3 format is compressed

Editing Audio

➤ Audio Editing Software

- Audacity (open source)
- Adobe SoundBooth
- Pro Tools (high-end professional)

Editing Audio

➤ Copyright

- You cannot use any sound files without written permission from the owner, including sampling small pieces
- Many music websites violate copyright laws
- Be very careful
- Only original sound is safe

Video on the Web

- Requires most bandwidth
- Requires user to have fast connection (US avg. 5MB/s*)

Video on the Web

- Consider low-bandwidth alternatives
 - Animation
 - Linking to video hosted elsewhere (YouTube) instead of embedding video hosted on your site
 - Resizing video to be smaller
 - 640x480 pixels is the full 480p size (web large)
 - 320x240 px is often called web medium
 - 160x120 px is often called web small
 - Providing small and large versions of videos for users to choose from

Video Formats

➤ Web Video Formats

- .FLV (Adobe) and RealVideo (Real Media)
 - Proprietary formats that allow compression and streaming
 - Both require a free plug-in to view
- MPEG-4
 - Compatible with lots of computers
 - Can be compressed as H.264, which has high quality and small file sizes
 - Requires software to compress (many commercial and open source choices)

Video Formats

- **Computer Video Formats** (not appropriate for web delivery)
 - .AVI (Windows Video)
 - .MOV (QuickTime Video for Macs)

- **More Information**
 - Website Helpers.com: [Web Video Demystified](#)
 - W3Schools: [Multimedia Video Formats](#)

Effective Use of Multimedia

- *Multimedia should be essential to the web site's purpose*
 - Every website should have a purpose
 - The multimedia should be necessary to help the site accomplish it's purpose
- *Multimedia should help the site communicate effectively*
 - Every media communicates differently
 - The same message will come across differently depending on whether you use text, pictures, video, animation, or sound to share that message
 - The multimedia you use should communicate your site's message perfectly

Effective Use of Multimedia

- *Multimedia should be integrated into the design of the site*
 - Multimedia shouldn't just appear on top of your site's style
 - It should be integrated into the design of the site
 - Multimedia, when used effectively, should be part of how your site works, it should feel like it belongs
- **Web Resources**
 - Smashing Magazine: [10 Principles of Effective Web Design](#)
 - Smart Webby: [Web Design Tips](#)