EXAM # 2 Review
Sound
Video
Animation
Web Accessibility
Frame Animation

• Displays a series of still images, or frames, at a certain rate to give the impression of motion.

• Can be created Photoshop and special GIF animation software.
Vector Animation

• More complex and used to move an object along a path, or vector
• Objects defined by mathematical equations rather than drawn
• “Adobe Animate” is a popular software for vector animation
• The Timeline organizes and controls a document’s content over time in layers and frames.
Flash Animation based on two basic operations called Tweens

Motion Tween

Shape Tween or Morph

Keyframes are inserted on the timeline -- Instances on the stage (e.g. tweens, sound, background) start and end with a keyframe.
Web Accessibility
Awareness of the Web Accessibility Issue

The foundation of any kind of commitment to web accessibility is awareness of the issues. Most Web developers are not personally opposed to the concept of making the Internet accessible to people with disabilities. In fact, most accessibility errors on web sites are the result of ignorance, rather than malice or apathy. A large proportion of developers have simply never even thought about the issue.
The major categories of disability types are:

- **Visual**
  - blindness, low vision, color-blindness

- **Hearing**
  - deafness

- **Motor**
  - inability to use a mouse, slow response time, limited fine motor control

- **Cognitive**
  - learning disabilities, distractibility, inability to remember or focus on large amounts of information
Policies and Procedures

The best approach for a large organization is to create an internal policy that outlines specific standards, procedures, and methods for monitoring compliance with the standards and procedures.

Content Accessibility Guidelines of the W3C (World Wide Web Consortium), that no content is allowed to go live on the web site until it has been verified to meet this standard, and that the site will be re-examined quarterly for accessibility errors.
Sound on the Web
Sampled Sound

• Sound wave is digitized by sampling at twice the highest frequency
• Converted to a number representing the volume (amplitude)
• Stored in a computer file
• Can represent any sound
• Referred to as a wave file or Raw sound file e.g. wav extension
• Often compressed to reduce file size e.g. MP3
• Can be used for any sound – voice, instrument, etc.
Musical Instrument Digital Interface (MIDI)

• Not sampled – includes a code representing --
  • Musical note
  • Loudness
  • Length of time
  • Type of instrument
• Not compressed
• Generated by a synthesizer
• File extension .mid
• Only used for musical instruments
Characteristics of sampled, compressed and Midi files

• Sampled files are very large depending on the highest frequency being recorded and length of recording. E.g. wav extension, mysound.wav
  • voice – less than 8 kHz – sample 16kHz
  • symphony orchestra – 22 kHz – sample 44 Hz, Mono

• Compressed sound is sampled sound processed to make the file smaller without sacrificing sound quality e.g. mp3 extension, mysound.mp3

• Midi are much smaller files but can represent only musical instruments e.g. mid extension, mysound,mid
Preparing Sound for the Web – Create a File

• Use pre-recorded sound
• Record from microphone
• Use “text-to-sound” synthesizer
• Edit – mix sounds, cut, cut-and-paste, add effects (Audacity)
• Export as MP3
• Add to Dreamweaver with Insert -> Html5 Audio
• Record musical instrument sounds from synthesizer (not usually edited in computer)
Video on the Web
What is Video?

• Video is a series of images played at a certain rate – frame rate
• Digital Video
  • Each image consists of a number of pixels depending on size and color depth
Video Compression
codec – (coder-decoder plugin)

• Similar to image compression
  • repetition and patterns
  • averaging
  • range reduction
  • frame difference

• Several formats
  • quick-time .mov
  • Moving Picture Experts Group (mpeg) – .mpg
  • Audio-Video Interlace - .avi
    -- Windows Media Video - .wmv
Using Photoshop to produce a movie

1. Design the movie on paper
2. Get images – resize to common size
3. Get music
4. Open Photoshop application and produce movie
   a. Create video timeline
   b. Add images
   c. Sequence the images and adjust display time
   d. Transitions between slides and within slide
   e. Add music
   f. Render movie
   g. Preview movie
   h. Add to Dreamweaver with Insert -> Html5 Video
Three ways to use web pages

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WWW via the Internet

Local via an Intranet

Individual Computer