

## What do you do?

- What courses do you have on-line?
- In what format are these materials?
- How do you communicate with your students?
- What would you like to be able to do?

## Enhancing Your Web-Based Courses with Multimedia

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BookMark It! Joint Conference  
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<http://www.leighzeitz.org>

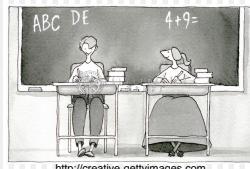
## Agenda

- Overview courses & materials
- Show a sample course
  - Various forms of multimedia
- Show the “tricks” for creating these forms of multimedia
- Brainstorm how this applies to you

**In 50 minutes!!!**

## Types of Courses

- Face-to-face
- Web-supported
- Totally on-line



<http://creative.gettyimages.com>

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## Web-Supported

- Traditional face-to-face course
- On-line components
  - Materials
  - Communication
  - Management



## Typical On-line Materials

- Syllabus
- Calendar
- Assignments
- Handouts



## Take it Up a NOTCH!!!



- On-line tutorials
- Introductory videos
- Posting presentation Handouts
- Video conferencing
- Delivering lecture videos

## Sample Course

Let's visit a summer course:

### Using Telecommunications in Education

## Media

- Digital Images
  - Presentation/instruction
  - Handouts
  - Tutorial - Screen captures
- Audio
  - Vocal introduction
- Digital Video
  - Introductory video
  - Lecture video

## Technology Primer

- Digital Imaging
- Portable Document Format (PDF)
- Digital Audio
- Digital Video

## Digital Images

<b>Content</b>	<b>Devices &amp; Tools</b>
<ul style="list-style-type: none"><li>• Photographs</li><li>• Clip Art</li><li>• Screen Captures</li><li>• Animation</li></ul>	<ul style="list-style-type: none"><li>• Digital cameras</li><li>• Scanners</li><li>• Photo CDs</li><li>• Smarter, cheaper software</li></ul>

## Digital Images: Properties

- Image Size & Resolution
  - Dimensions
  - Density
- File Formats
- Color
- Optimizing quality, file size

## Web Graphics

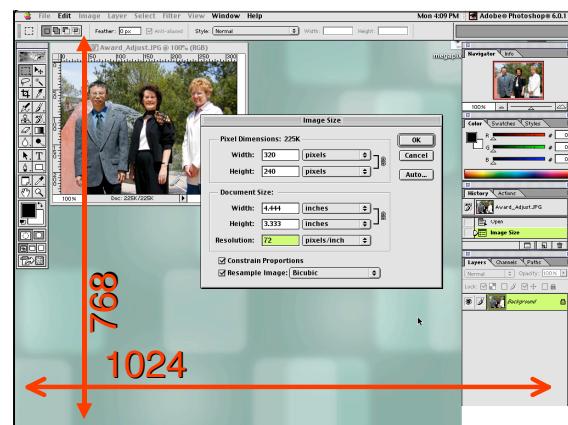
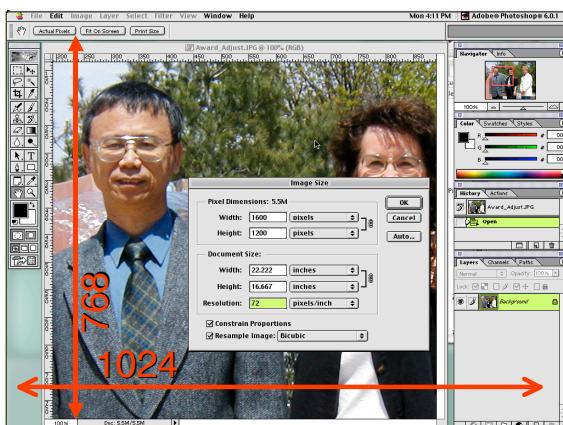
- Low-resolution graphic files saved in GIF or JPG file format

## Web Graphics

- Web is low-resolution medium
- 72 ppi accepted standard
- Design for a wide audience
  - Unknown factors that apply to web design

## Dimensions & Density

- Image Size & Resolution
  - Bitmap images (mosaic of pixels)
  - Pixels per inch (density)
  - Pixel dimensions (display size)
- Monitor Size & Resolution
  - Image dimensions relative to monitor dimensions
  - Pixel dimensions (800x600, 1024x768)
  - Monitor resolution (ppi, density)



## File Formats

- **GIF**
  - Graphic Interchange Format (.GIF)
  - Maximum 256 colors (8-bit)
- **JPEG**
  - Joint Photographic Experts Group (.JPG)
  - Millions of colors (24-bit)

## File Formats: GIF

- **GIF**
  - Maximum 256 colors
  - Logos, icons, clip art, line art, buttons
  - Solid areas of color
  - Sharp edges, contrast
  - Row-by-row compression scheme
  - Supports transparency & frame-based animation

**GIF**  
**File**

## File Formats: JPEG

- **JPEG (.JPG)**
  - Up to millions of colors
  - Photographs, Paintings, Gradients
  - Anti-aliased or blurred images
  - Compresses areas of blended colors
  - No native support for transparency, animation



## Which format is best?

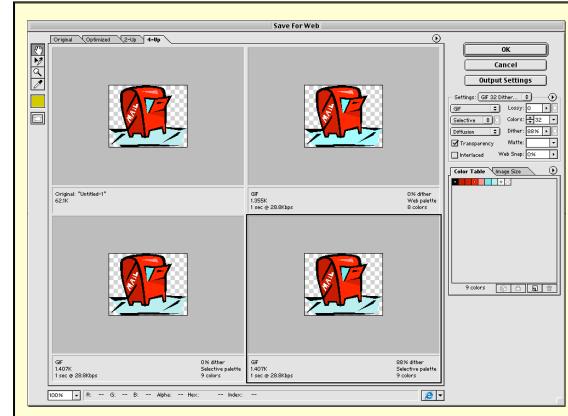
- **.GIF**
  - Solid, flat colors
  - Sharp edges, contrast
  - Transparent
  - Animated
- **JPEG (.JPG)**
  - Photograph
  - > 256 colors
  - Gradient, blended colors
  - Blurred image

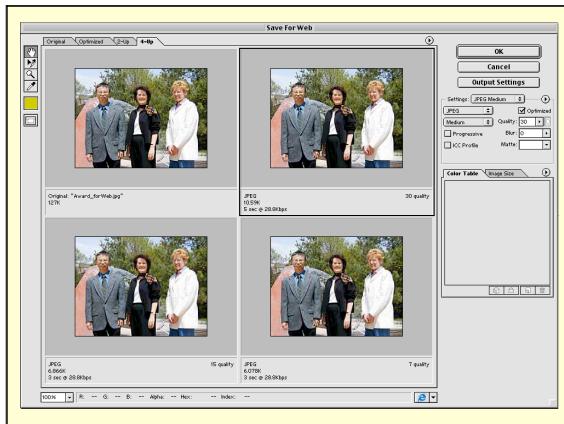
**GIF**  
**File**



## Optimizing Web Graphics

- File format options
- Compromise
  - Image quality
  - Number of colors (216 web safe colors)
  - Display size
  - File size
- Preview features
  - PhotoShop Elements: Save for Web





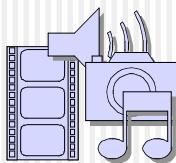
## Portable Document Format (PDF)

- Adobe Acrobat
- Picture of a document
- Maintains fonts and formatting
- Ideal for non-editable handouts
- Viewable with free Acrobat Reader

## Digital Audio

### Content

- Music
- Narration
- Sound bites



## Audio Media

- Cassette
  - audiotape
- DAT
  - digital audiotape
- CD-ROM
  - compact disc, read-only memory
- Disk-based formats
  - .wav, .aiff, mp3, etc.



## Digital Audio

### File formats:

- Music CDs - AIFF
- Digital Sound - WAV
- Most Popular on the Web - MP3, WAV

## The Digital Advantage

- Superior sound quality
- Ease of editing
- Resistant to damage
- Portable & Flexible
- Ease of use (cueing)



## Capturing Audio

- Microphone
- Rip
  - CD to mp3
- Digitize
  - analog to digital
- Combination
  - Multiple tracks
  - Multi-track editing

## Editing Audio

- Software-based editing
  - Crop, layer, work with multiple tracks
- Effects:
  - Echo
  - Fade in, fade out
  - Pitch, tempo, etc...
- Output
  - File format, file size, quality

## Digital Video

- Streaming video
- File formats
  - QuickTime (.mov)
  - RealPlayer (.rm)
  - AVI (.avi)
- Bandwidth issues
  - Frame rate (frames per second)
  - Movie dimensions (pixels again)
  - Compression schemes

## DV: IEEE 1394 Protocol

- “FireWire”, other nicknames
- Cross-platform industry standard
  - High speed data transfer
    - 400Mbps, 20x bandwidth of USB
  - Hot-swappable
  - Cameras, scanners, external hard drives, CD/DVD burners

## Digital Video: iMovie

- Capture
- Edit
  - Transitions
  - Effects
  - Sounds
  - Titles
- Output
  - CD, DVD, Web



## Any Questions?

