Animation

Basic Concepts

ExplorNet CareerTech

from The Centers for Quality Teaching and Learning
Animation in Multimedia

**What is animation?**

- Animation is movement of graphics or text
Some common uses of animation include:

- **Advertising**
  - Example: Web site advertisements that are animated to attract attention

- **Information**
  - Example: Kiosk for directions or information

- **Education**
  - Example: Tutorials using animated graphics for demonstration
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Uses of animation (cont.):

✓ Games
  - Example: Games using animation to simulate action

✓ Websites
  - Example: Animated navigation button that changes when the cursor passes over it (rollover)
Types/Categories of Animation:

✓ **Frame-Based (Flip book)**

Animation of a series of continuous frames, where each frame shows the graphic moved slightly in position each frame to create a continuous motion when placed together with all frames.
Types/Categories of Animation (cont.):

- **Vector (Path)**
  Animation where the movement is defined by computer generated formulas to create paths of movement.
  - *Small file size with clean images*
  - *Utilizes tweening of keyframes*

- **2 Dimensional (2D)**
  Animation exists in two dimensions. Has a flat look.
  - *Example: Cartoons such as Scooby Doo, The Simpsons or Family Guy*
Types/Categories of Animation (cont.):

✓ **3 Dimensional (3D)**
  
  Animation exists in three dimensions
  
  - Has depth, and more realistic in appearance
  - Example: Video games like Halo or Madden or 3D movies
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Common Animation Formats:

- Animated GIF
- SWF
- MOV
- AVI
Animated GIF:

- Pronounced je-if
- .gif file extension
- A bitmap file format often used on the Internet
- A series of individual GIF frames joined together to create animation
- Used for small animations and low-resolution film clips
- Easiest way to create and view simple animations
- Supports frame-based animation
Animation Formats

SWF:

✓ Pronounced swa-if
✓ .swf file extension
✓ The dominant format for displaying animated vector graphics on the Web
✓ Used in programs and games with Actionscripting
**MOV:**

- Pronounced moo-v
- `.mov` file extension
- Developed by Apple computers for Quicktime video player
- Also known as Quicktime movie or movie format
- Used for streaming
AVI:

- Pronounced a-v-i
- .avi file extension
- Developed by Microsoft computers for Windows media video player
- Not good for streaming
Animation editing programs have features for creating animations to include:

- Importing resources
- Drawing
- Scaling (Resizing)
- Layering
- Keyframing
- Tweening
- Anchor point adjustment
- Transitions
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Creating Animation:

- **Importing resources**
  Bring files or images into the animation software to animate

- **Drawing**
  Use of mouse or graphic tablet with stylus to sketch or draw images to animate

- **Scaling (Resizing)**
  Changing the size of the image in width and height
Creating Animation:

- **Layering**
  Technique used to separate images from other images. In order to make adjustments to individual items, each item must be on a separate layer.

- **Keyframe**
  Intermediate frames that blend so one appears to change into the next. The point were a change occurs in the animation.
Creating Animation:

- **Tween**
  Animation process, or change that occurs between keyframes.

- **Anchor point**
  Axis or point of rotation. Spot where rotation spins from.

- **Transition**
  Change from one scene to the next
Creating Animation

✓ **Rollover**
  Animation of two or more images that switch when the cursor moves over that image or navigation button

✓ **Morphing**
  Transformation of one thing into another
Virtual Reality:

✓ Animation technology that allows a user to immerse and interact with an artificial, realistic environment
Types of equipment utilized in animation:

✓ **Cameras**
  - Digital photo
  - Video
  - Stop motion
  - Motion picture

✓ **Computers**
  - hardware and animation editing software
Types of equipment utilized in animation (cont.):

- **Scanners**
- **Drawing tablets**
  - Used to draw images and sketches with a stylus (pen) and tablet
What Do You Need to Know?

✓ What is animation?
✓ How is animation utilized?
✓ What are the types or categories of animation?
✓ What are the types of animation file formats?
✓ Editing features of animation software
✓ Equipment used in digital animation