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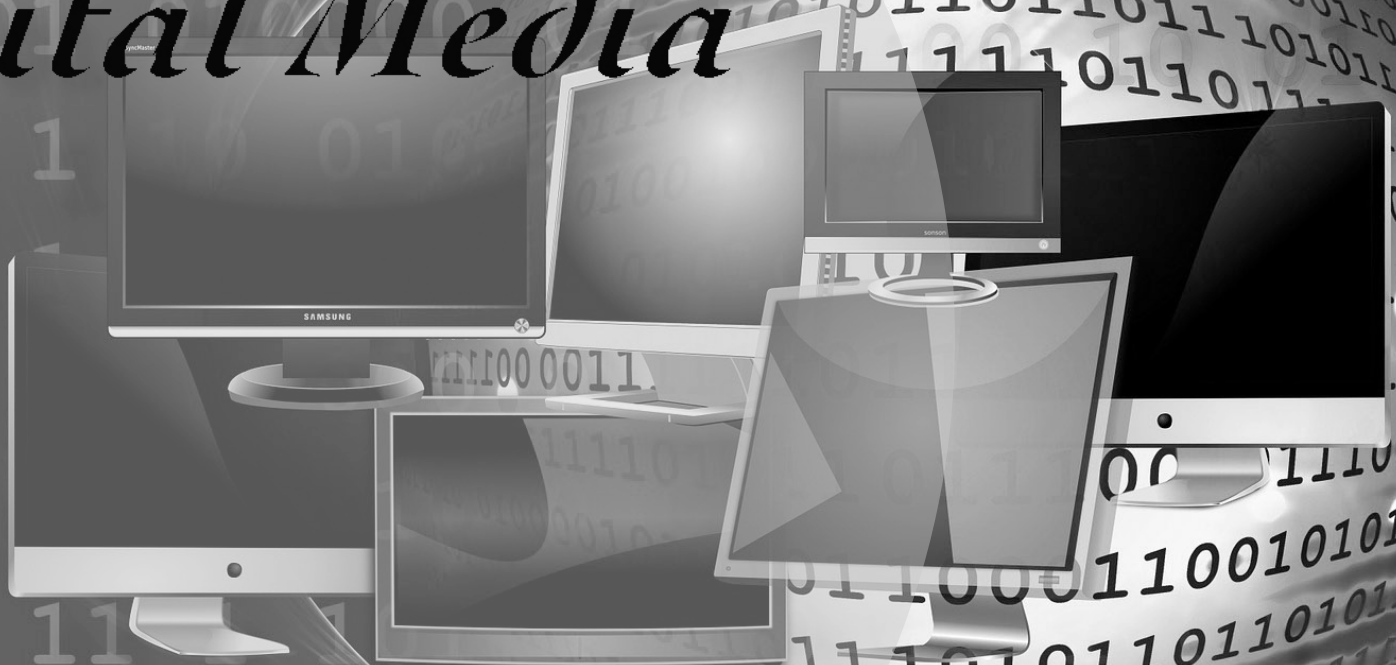
Digital Media

Objective 103.01
Explain concepts used to create digital animation.

DIGITAL ANIMATION

o Creating the illusion of movement of graphic(s) and/or text.

o Used in:

  - Interactive/Dynamic Advertising
  - Games (Online or Standalone Consoles)
  - Clickable Tutorials
  - Animated Visual Demonstrations
  - Film/Television

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FRAME-BASED ANIMATION (CEL)

o A series of individual still frames that create the illusion of animation when viewed continuously (flip book).

o The graphic(s) in each frame have slight changes in position from the previous frame.

o Traditional animation

  • Each frame and background hand drawn (not typically covered in this course).
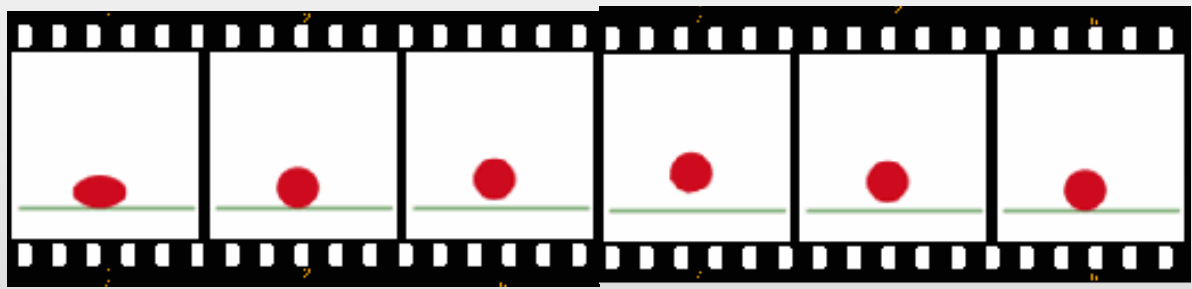
STOP MOTION ANIMATION

Frame-based techniques are commonly used with digital photographs to create stop motion animation.

o Rotoscope

- Traced photographic or video images with a hand-drawn appearance.

o Claymation

- Clay characters or moquettes moved in small increments between still photographs.

o Paper cut out animation

- Similar to claymation, but with cut out shapes.

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QUESTIONS TO CONSIDER

o Can you think of animation examples that you have seen? Do you enjoy a specific type of animation?

o Why might someone use a certain style of animation? Are there benefits to using say a Rotoscope animation compared to a Cel animation?

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VECTOR ANIMATION (PATH)

o Uses computer generated formulas to make objects move along a path.

o Utilizes tweens between keyframes.

o Result is a relatively smaller file size with clearer images, smoother movement, and loads more quickly on the internet than frame-based animation.
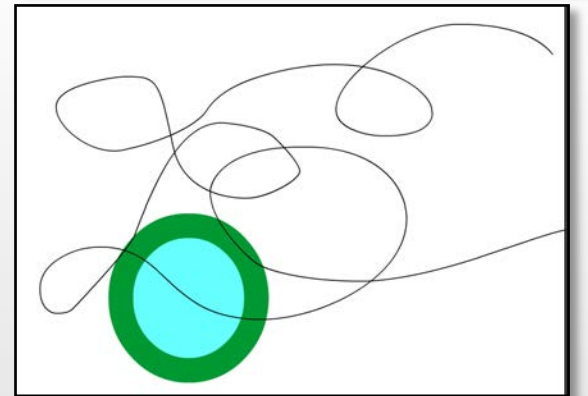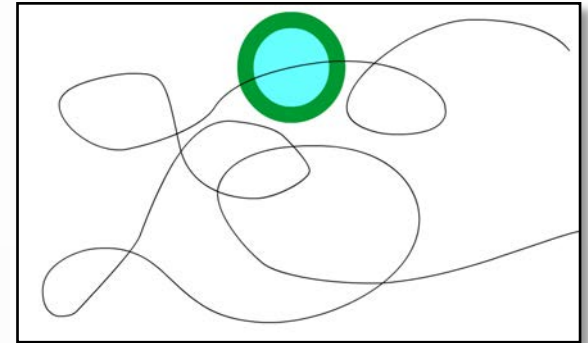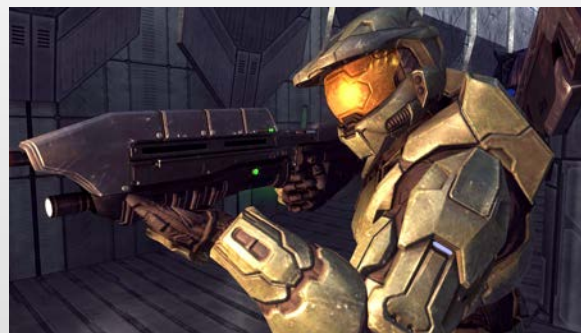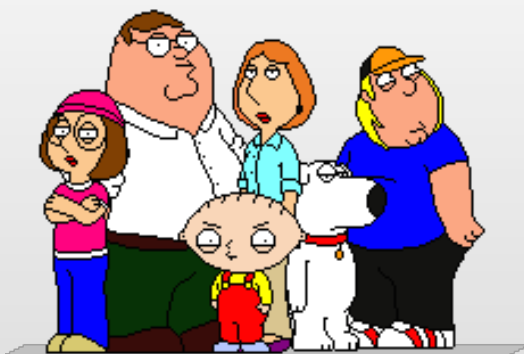
QUESTIONS TO CONSIDER

○ If an animation studio was under a tight deadline, why might they decide to use vector animation instead of frame based animation?

2D ANIMATION VS. 3D ANIMATION

- Uses two dimensions of movement.

- Has a flat look in appearance.

- Examples include cartoons like *Family Guy* and *The Simpsons.*

- Uses three dimensions of movement.

- Has more depth and realistic appearance.

- Examples include video games like *Halo* or movies like *Toy Story* and *Frozen.*

QUESTIONS TO CONSIDER

o Consider 3D and 2D animation. Which style do you think is more likely to be frame animation and which is more likely to be vector animation? Why?

o Why do you think 3D animation is more realistic? Do you think that because it looks more realistic that it does a better job of capturing emotions?

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ANIMATION FILE FORMATS

.GIF

- Supports only frame-based animation.
- Supports only 256 colors.
- Commonly used for web.
- Only animation format that cannot play audio.

.SWC

- Contain the project Adobe Animate components.
- Contains a compiled movie clip, ActionScript code, and any assets that the component requires.

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ANIMATION FILE FORMATS

.FLA

o Native project file used by Adobe Animate (Flash).

o Preserves the project's layers, scenes, and library for future editing.

o Can only be opened or edited by Animate (Flash).

.SWF

o Flash animation format for use on the Internet because it loads quickly.

o Can support frame-based or vector animation.

o Supports ActionScript coding, user interactivity.

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ANIMATION FILE FORMATS

.FLV

o Adobe Flash Player video format for animation playback.

o Common format for embedded video on the Internet.

.MOV

o QuickTime proprietary format.

o Converts an animation to a video file.

o Can be imported and edited by a video editing software.

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QUESTIONS TO CONSIDER

○ Why might you choose to use different animation formats in specific situations?

○ How do different file formats affect the quality of the animation? Are the differences noticeable?

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