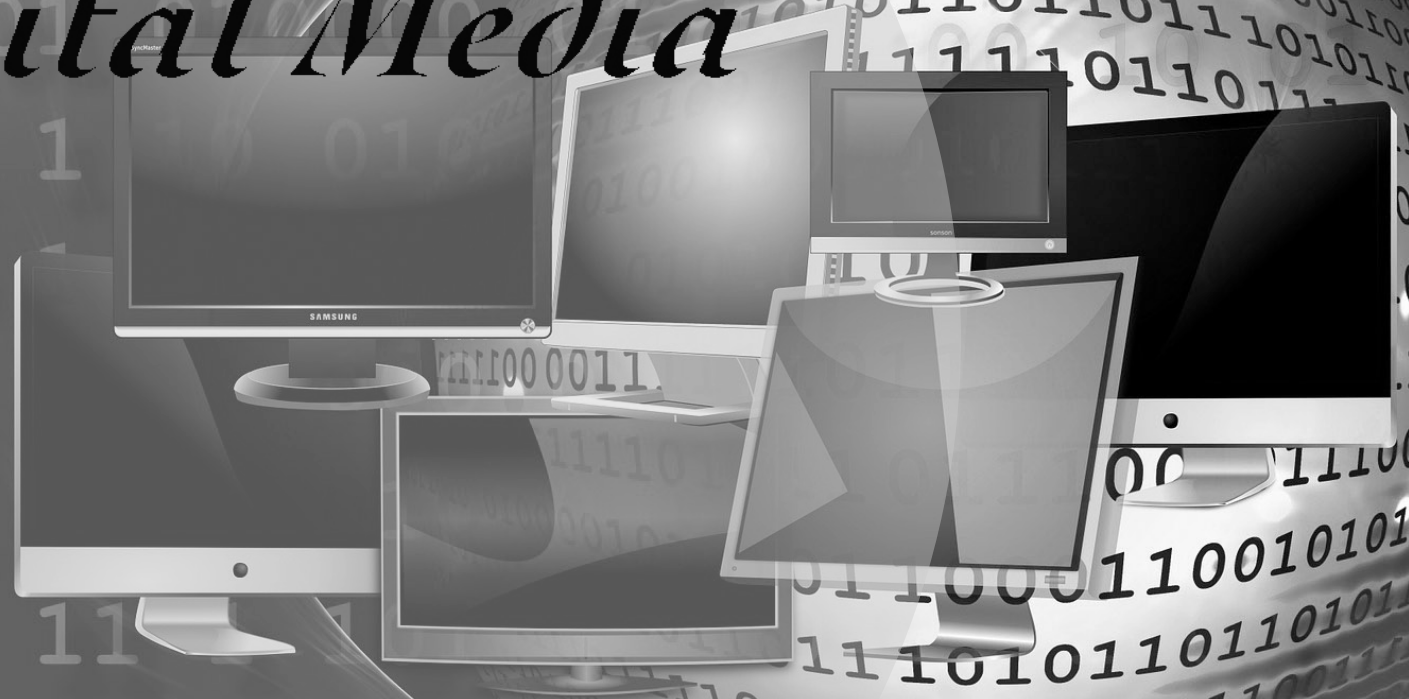
ExplorNet's

Digital Media



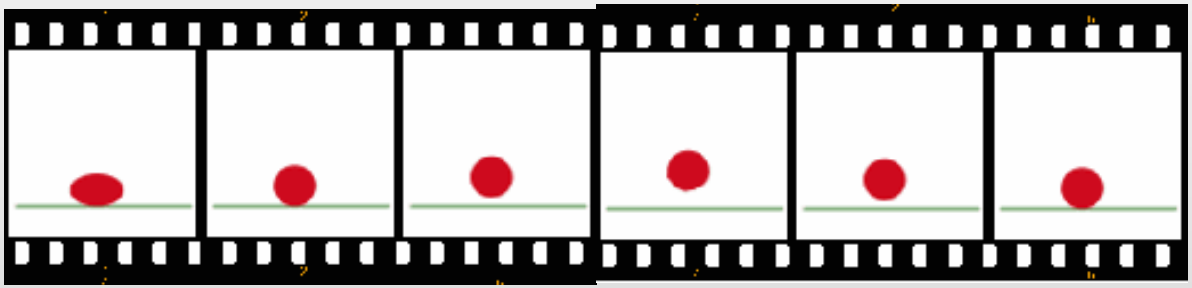
Objective 103.01
Explain concepts used to create digital animation.

DIGITAL ANIMATION

- Creating the illusion of movement of graphic(s) and/or text.
- Used in:
  - Interactive/Dynamic Advertising
  - Games (Online or Standalone Consoles)
  - Clickable Tutorials
  - Animated Visual Demonstrations
  - Film/Television

FRAME-BASED ANIMATION (CEL)

- A series of individual still frames that create the illusion of animation when viewed continuously (flip book).
- The graphic(s) in each frame have slight changes in position from the previous frame.
- 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.

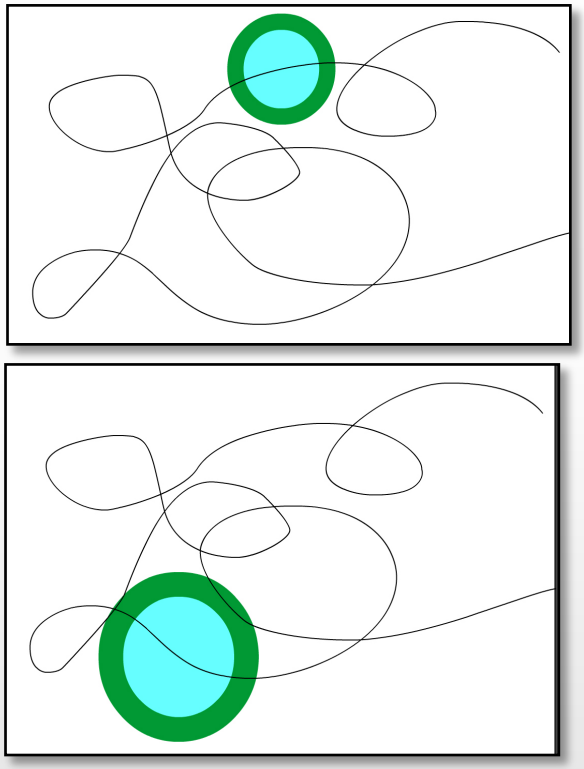
- Rotoscope
  - Traced photographic or video images with a hand-drawn appearance.
- Claymation
  - Clay characters or moquettes moved in small increments between still photographs.
- Paper cut out animation
  - Similar to claymation, but with cut out shapes.

QUESTIONS TO CONSIDER

- Can you think of animation examples that you have seen? Do you enjoy a specific type of animation?
- Why might someone use a certain style of animation? Are there benefits to using say a Rotoscope animation compared to a Cel animation?

VECTOR ANIMATION (PATH)

- Uses computer generated formulas to make objects move along a path.
- Utilizes tweens between keyframes.
- Result is a relatively smaller file size with clearer images, smoother movement, and loads more quickly on the internet than frame-based animation.

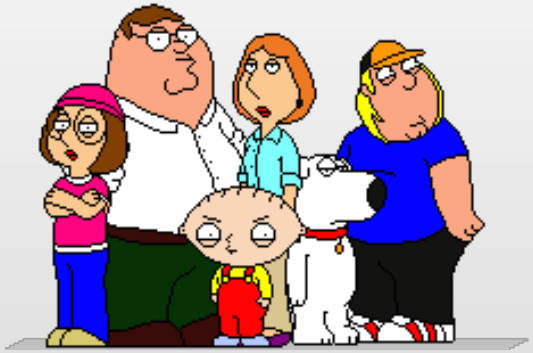


QUESTIONS TO CONSIDER

- 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

- 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?
- 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?

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.

ANIMATION FILE FORMATS

.FLA

- Native project file used by Adobe Animate (Flash).
- Preserves the project's layers, scenes, and library for future editing.
- Can only be opened or edited by Animate (Flash).

.SWF

- Flash animation format for use on the Internet because it loads quickly.
- Can support frame-based or vector animation.
- Supports ActionScript coding, user interactivity.

ANIMATION FILE FORMATS

.FLV

- Adobe Flash Player video format for animation playback.
- Common format for embedded video on the Internet.

.MOV

- QuickTime proprietary format.
- Converts an animation to a video file.
- Can be imported and edited by a video editing software.

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?