Video

- Is a visual multimedia source that combines a sequence of image to form a moving piture
- The video transmits a signal to a screen and processes the order in which the screen captures should be shown.

Characteristic of Video

- Type of video
  - Normal Television and PC Monitors
  - High-definition Television and Wide-Screen Monitors
  - Cinemascope Movies

Video Quality

- Video quality depends on:
  - The resolution and clarity of individual video frames.
  - The frame rate or speed at which video frames appear. Frame rate is measured in frame per second (FPS)

Video File Size

- The size of the video varies based on the following factors:
  - Data rate for every second of the movie (measured in FPS)
  - Duration of the movies (measured in seconds)
  - Compression and Coded (formats)
  - The quality and compression of the audio track

Common File Formats

- Audio Video Interleave (.avi)
- Advanced Systems Format (.asf)
- QuickTime (.mov or .qt)
- Advanced Video Coding High Definition (AVCHD)
- Windows Media Video (.wmv)
- MPEG (Motion Pictures Expert Groups) compresses audio and video (.m4v & .mp4)

Video Software

- Windows Movie Maker
- iMovie
- Final Cut Pro
- Adobe Premiere
- Quicktime Pro
- PowerDirector

Digital Video Editing and Outputs

- Linear Editing
  - Start from the beginning of the video and move through it until you find the scene you want to edit.
- Non-linear Editing
  - Go directly to the scene you want to edit without having go through all the earlier scenes in the video.

The Production Process

- Preproduction
- Production
- Postproduction

The Production Process

- Preproduction Process (Before you shoot
  - The big idea
  - Scripting
  - Planning the shoot
- Production (Acquiring Media)
  - Borrow from others
  - Create your own video
- Postproduction
  - Capturing
  - Editing
  - Compression
  - Delivering

Camera Movements

Camera moves can make your project look super professional or incredibly amateurish depending on how well you use them.

Professional videographers usually follow this one rule of thumb: when it comes to camera movement, it must be motivated. Because it looks cool, is usually not a valid reason for using tricky camera moves. Instead, you can use camera moves to change the viewer's perspective making what you shoot look bigger, smaller, or even scarier. You should use camera movement to tell your story better and to enhance the viewer's experience.

Camera Movements into 3 Easy To Follow Sections:

1. Mounted camera creates the move.
    - Pan
    - Tilt
    - Pedestal
2. Camera and operator or devices move together.
    - Dolly
    - Floating Stabilizer Device
    - Crane and Boom
    - Handheld
3. Only the camera lens moves.
    - Zoom
    - Rack Focus

Mounted Camera Creates the Move

1.) Pan

How: Panning is when you move your camera horizontally: either left to right or right to left, while its base is fixated on a certain point. You are not moving the position of the camera itself, just the direction it faces. These types of shots are great for establishing a sense of location within your story.

Why: To follow a subject or show the distance between two objects. Pan shots also work great for panoramic views such as a shot from a mountaintop to the valley below.

Rule: Always start on a still shot, begin the tilt, and finish on a still shot. Practice first. Look at the scene as the tilt reaches the middle portion between top and bottom of the tilt. If there is nothing worth seeing, then the tilt isn't worth shooting.

2.) Tilt

How: Tilting is when you move the camera vertically, up to down or down to up, while its base is fixated to a certain point. Again, like panning, this move typically involves the use of a tripod where the camera is stationary but you move the angle it points to. These shots are popular when introducing a character, especially one of grandeur, in a movie.

Why: Like panning, to follow a subject or to show the top and bottom of a stationary object. With a tilt, you can also show how high something is. For example, a slow tilt up a Giant Sequoia tree shows its grandness and enormity.
Here's a good tip. In general, when you tilt up and shoot an object or a person they look larger and thicker. The subject looks smaller and thinner when you tilt down.

Rule: Always start on a still shot, begin the tilt, and finish on a still shot. Practice first. Look at the scene as the tilt reaches the middle portion between top and bottom of the tilt. If there is nothing worth seeing, then the tilt isn't worth shooting.

3.) Pedestal

How: A pedestal is when you move the camera vertically up or down while it is fixated in one location. This term came from the use of studio cameras when the operators would have to adjust the pedestal the camera sat on to compensate for the height of the subject. A pedestal move is easy to do when the camera is fixated to an adjustable tripod.

Why: You pedestal the camera up or down to get the proper height you prefer. If you want to get "eye to eye" with a six-foot-six basketball player, you would pedestal up. While shooting a flower or a small child, you would pedestal down to their level.

Camera and Operator or Devices Move Together

1.) Dolly

How: A dolly is when you move the entire camera forwards and backwards, typically on some sort of track or motorized vehicle. This type of movement can create beautiful, flowing effects when done correctly. If you want to attempt a dolly, make sure your track is stable and will allow for fluid movement.

Why: To follow an object smoothly to get a unique perspective. In some movies directors combine the dolly and a zoom shot for a real sense of doom. To do this, the camera lens zooms into the subject at the same time as the camera physically dollies out, and the person in the shot remains the same size, but the background appears to move. It's difficult to master smoothly, but done right, the shot conveys a real sense of tension and feeling of vertigo.

2.) Floating Stabilizer Device

How: The device straps to the photographer and the camera is mounted by a series of metal joints controlled by gyroscopes. These machines are quite complicated and a real Steadicam can cost several thousand dollars. But you can buy an inexpensive alternative that uses counterweights to get a Steadicam-like effect.

Why: To follow an object through twists and turns. Although the dolly is great, its movements are limited. With the stabilizer, you can follow someone through hallways, doors and around rooms.

3.) Crane or Boom

How: This works and looks similar to a construction crane. It is used for high sweeping shots or to follow the action of your subject.

Why: Gives a bird's eye view. It looks as if the camera is swooping down from above. Movie directors use this for street scenes so they can shoot from above the crowd and the traffic, and then move down to eye level.

4.) Handheld

How: You hold the camera without tripod, monopod or other device. Professional cameras are large and rest on the user's shoulders. This balances the camera and keeps shaking to a minimum. Because of their size, most consumer cameras can't rest on your shoulder, so you'll need a few tips to shoot steady well-executed handheld shots.

Why: Due to the spontaneity of the action, many news crews and most documentaries use hand-held shooting techniques. Sometimes, it is used in TV shows and movies. Notice that in horror or action movies they often use hand held shots when something bad is about to happen.

Rule: When shooting handheld, do not zoom in! The more you zoom in, the shakier the shot gets. It is better to move closer to your subject and shoot with as wide of a setting as you can. Handheld is best when you are shooting someone or something that is moving. It looks very bad when shooting landscapes, buildings, or stationary objects.

Only the Camera Lens Moves

1.) Zoom

How: Without a doubt, zooming is the most used (and therefore, most overused) camera movement there is. It is often used as a clutch when the videographer is not sure what else to do to add interest to a shot. If you are going to use zoom, try to use it creatively. Zoom in or out from an unexpected, yet important, object or person in your shot. Use a quick zoom to add energy to a fast-paced piece. Don't get stuck with your zoom as your default move!

Why: To bring objects at a distance closer to the lens, or to show size and perspective.

Rule: Continuous zooming in and out is annoying to viewers. Don't zoom while shooting unless the scene calls for it. Use a tripod if you zoom. Start on a still shot, then zoom smoothly, and end your zoom on a still shot. Practice first. Look at the scene as the zoom reaches the middle portion between the close up and wide angle. If there is nothing worth seeing, then the zoom isn't worth shooting.

2.) Rack Focus

How: Focus on one object, like an actor's face, and have everything behind him out of focus. Then adjust the focus so his face becomes blurred and the actress behind him becomes clear. In this movement, you are changing the focal length so that one subject will go out of focus while the other comes into focus. The two subjects must be at a correct distance from each other and from the camera for this shot to work.

Why: You are actually making a transition similar to an edit by constructing two distinct shots. You often see the rack focus in dramas and soap operas, changing focus from one actor's face to another during their conversation or tense moments.

Rule: Use a tripod. A rack focus looks bad if the camera is shaky.

Establishing Shots, Medium Shots, Close-up Shots

When shooting video, you want to vary the types of shots for a more interesting feel. There are three types of shots that you'll always see in videos and movies from big Hollywood productions to commercials and even wedding or occasion videos.

The **Establishing shots** are the wide shots. It allows the viewer to take in the entire scene and as an establishing shot is often the first shot in a scene.

Medium Shots can be of a subject (full length or cropped); or a medium shot can be a tighter shot of a scene, that doesn't include all of the surroundings that a wide or establishing shot.

Close-up shots are tightly cropped shots showing fine detail. Close-up shots can be of a person's face, an action occurring that is important to the storyline of your movie or simply a tightly cropped shot that shows details of an object.

Where to Crop or Frame a Shot of person

Similarly to still photography, you want to make sure when deciding where to crop for shots that show people, that you do it in a way that will make the final footage look pleasing to the eye. Cropping at major joints should be avoided.

For example, if you're showing a person full length, you don't want to accidentally crop them at the ankles. Likewise, for a medium shot, don't crop a person at the knees. Frame your shot just above your subject's knees. Let's go for a little bit tighter of a shot now, but don't crop your subject at the wrist, as the viewer will be left wondering where their hands are. Lastly, when framing a tight close-up of a person, you can actually get away with cropping part of their head, so long as their eyes fall on the top line of your imaginary rule of thirds grid.

Headroom and Lead Space

Headroom is the amount of space above your subject's head in a frame. Too much space isn't good, so make sure that you're only leaving a small amount of airy space above your subject's head.

Head Space / Headroom

When taking close shots of people there is often some space between the top of the head and the top of the frame. This is called "headspace" or "head room."

Too much space makes the person look like they are slowly disappearing down an unseen elevator shaft and too little causes the mouth and chin area of the face to become unnaturally prominent.

Looking for this point and adjusting the shot to what "feels right" will help a lot and you can also use the Rule of Thirds to guide you.

Try to frame the shot so that the person's eyes or eye line is a close as you can get to the upper third grid line. (See the Rule of Thirds image above)

Lead Space / Noseroom

When you are taking a shot of someone and they are looking in a particular direction or, they are moving in a particular direction, always leave as much space as possible in the frame where they are looking or going.

The same applies to a moving car or any moving subject for that matter.

If you don't leave that space, called "lead space," the moving subjects will look like they are going to hit something and make the viewer feel uncomfortable.

Although they are really not going to hit something the illusion created by lack of lead space is that they will hit the edge of your frame.

A similar effect is created when the subject is looking at something out of view. If there is no lead space in that direction within the frame the viewer will experience a kind of blocked or squashed sensation.