

Video Shooting Concepts

TULIP 2007 – IITS, CSUSM

1. Use what you already know

Many people are already familiar with taking digital photos. Shooting movies uses many of the same principles of composition and lighting. But there are a few techniques that are new for most people who are already familiar with photography: recording action, getting high-quality audio, and creating sequences.



Using what you already know means you can put to work everything you know from watching the thousands of hours of television shows and movies you've probably seen. While most people don't usually pay too much attention to how movies and films are constructed, there is a lot of visual grammar that you probably already know but may not have thought much about—until now.

So here's a suggestion: The next time you see a television program or movie, notice how long each shot lasts, how often the camera moves, and how the shots are edited together.

To focus your attention on the visuals alone, try watching a show without the audio. Analyze the shots and how they are edited together, and you'll see that series of shots edited together—called *sequences*—provide the basic building blocks in the edited footage.

2. Shots and Sequences: Building Blocks of Movies

When you watch television or DVDs, you see that in general, the camera doesn't really move that much. Instead, series of individual static shots are edited together into sequences, much as we use words to make sentences. In a way, movies aren't that different from slideshows, except that instead of using still photos, movies use moving images.

Sequences are made up of a variety of shots, usually framed in different sizes or from different points of view. These shots are fairly standardized into three main types: long, wide (establishing) shots; medium shots; and close-up shots.

In creating your own movies, you'll want to record footage of these different types of shots to make into sequences when you edit your movie.

When you watch a movie, try to see how often sequences are created using the three basic types of shots:

- **Long shot, wide shot, or establishing shot** —A *long*, or *wide*, *shot*, also called an *establishing shot*, is a broad shot that shows "the big picture" and helps viewers locate the scene in time and space. It can be the exterior of a house, the outside of a building, or a landscape. It might be two or three characters walking together on a street or getting in and out of cars. There is often no dialog in this type of shot.

Example: the TV show, Seinfeld, often uses a "Restaurant" establishing shot — an exterior shot of a restaurant that is followed by interior shots of the characters inside.



Establishing shot.

- **Medium shot** —A *medium shot* is from a person's waist up and tells you more about the person and less about the space. It gives much more visual information about the person and can often include audio with the person.



Medium shot example.

- **Close-up shot** —A *close up shot* is generally of the head and shoulders. A close-up is used in narrative films for dialogue and for more intimate information about the subject. In interviews, the camera often switches back and forth between medium and close-up shots.



Closeup example.

In addition, you may also see these two types of shots:

- **Full shot** —A *full shot* is of a whole person and is used to tell more about the person in the context of his or her environment.



Full shot example.

- **Extreme close-up shot** —An *extreme close-up shot* is a shot of the face and neck. It provides a very intimate feeling of the person and his or her emotions or words.



Extreme closeup



Extreme CU of pastrami sandwich (drool)

A good, tight shot brings the audience very close to the image onscreen— both literally and emotionally. The sandwich's proximity to the camera and its dominance of the frame force you to look at the details in the image and take notice. If you're a vegetarian, or otherwise opposed to the consumption of beef, this may be a very unpleasant photo, especially because it's shown as such a tight close-up. Had it been taken in wide or medium shot, it wouldn't have nearly the same impact.

- **Cutaways or B-roll**

A cutaway is a shot that relates to the primary subject of the video, but isn't the primary subject. For example, when ESPN interviews the winning coach after a football game, the coach might attribute the win to a goal-line stand late in the fourth quarter. During the interview, while the coach is still talking, ESPN switches to a view of the play and then cuts back to the coach once the play is done.

Or maybe it's the weatherperson describing the wonderful spring-like weather that just descended in mid-December. The shot starts with the weatherperson, and then cutaways show joggers running in shorts, couples sunning on the grass, and babies crawling on blankets. Then back to the weatherperson for tomorrow's forecast.

Here's what I like about cutaways. Number one, they allow you to show the flavor of the entire event. Rather than simply keeping the camera on little Sally during the softball game, you shoot the coaches cajoling, the parents praising, the shortstop shuffling, an uproar from the umpire—all the shots that make softball such a compelling game.

Second, cutaways can serve as patches for badly shot video that you can't cut from your sequence, as may occur when you're capturing an entire song, speech, or sermon to use as the background track for your audio as described earlier.



These stills show six images of a shot from the Fiddler's Convention. Much of the fun action occurs away from the stage, and this dynamic duo had generated an amazing amount of dancing, shuffling, and stomping. The main subjects of the video sequence were the two performers; all other shots not directly of them were cutaways.

Remember to get shots to cover edits, establishing shots, B-roll, and ambient sound from the environment. You can't hardly get enough cutaways or B-roll.

3. Framing shots

- a. **Aspect ratios** – this is the ratio of the width of the screen to the height. Modern cameras come in 4:3 and 16:9 aspect ratios. 4:3 is what you are used to seeing on TV. 16:9 is widescreen, or more what you are used to seeing at the movies.
- b. **Basic camera moves**
 - i. Pan - The framing moves left & right, with no vertical movement.
 - ii. Tilt - The framing moves up & down, with no horizontal movement.
 - iii. Zoom and dolly

A dolly shot means physically moving the camera closer to or farther away from the subject. Zooming means using the lens to create an appearance of moving closer to or further away from the subject. When a shot zooms in closer to the subject, it is said to be getting "tighter". As the shot zooms out, it is getting "looser".

- iv. Follow

Any sort of shot when you are holding the camera (or have it mounted on your shoulder), and you follow the action while walking. These shots are hard to keep steady without special equipment, but very effective when done well.

c. Some basic rules

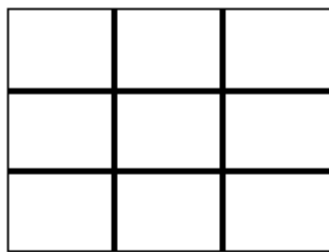
i. Horizontal and vertical lines

Look for horizontal and vertical lines in the frame (e.g. the horizon, poles, etc). Make sure the horizontals are level, and the verticals are straight up and down (unless of course you're purposely going for a tilted effect).

ii. Rule of Thirds

A basic rule of composition is the rule of thirds. This guideline gives you ideas on where to place your subject within the frame. Though your tendency may be to position your subject dead center on the screen, the rule of thirds will give you a more compelling picture. First, imagine that two vertical and two horizontal lines divide your viewfinder into thirds. (Think of a slightly elongated tic-tac-toe board). The rule of thirds suggests that the main subject in your shot should fall on one of the points where these imaginary lines intersect. The resulting image will be much stronger than if you simply place your subject in the crosshairs.

When videotaping a person, that person's eyes are your main focal point. Whether using a wide shot or a close up, compose the shot so that the person's eyes fall on one of the uppermost imaginary intersections. The intersection you choose depends on which direction the person is looking. Frame someone looking screen left on the right third of the screen. This places the subject slightly off center and builds in another element of composition called "look room."



Points (or lines) of interest should occur at 1/3 or 2/3 of the way up (or across) the frame, rather than in the centre. Like many rules of framing, this is not always necessary (or desirable) but it is one of those rules you should understand well before you break it.



In most "people shots", the main line of interest is the line going through the eyes. In this shot, the eyes are placed approximately 1/3 of the way down the frame.

Depending on the type of shot, it's not always possible to place the eyes like this.

In this shot, the building takes up approximately 1/3 of the frame and the sky takes up the rest. This could be a "weather shot", in which the subject is actually the sky.



Long shot following rule of thirds.

iii. "Headroom", "looking room", and "leading room"

Look room is the space that you leave in front of someone's face on the screen. This space gives the person room to breathe, as well as gives the impression that the person is looking at or talking to someone just off screen. If you don't leave enough look room, your subject will appear to be boxed-in and confined.

Be aware that the amount of look room necessary is dependent upon the angle of the subject to the camera. A person looking directly toward the camera will require less look room than someone shot in full profile.



Moving objects such as cars require a similar buffer called "**lead room**." Allow extra space in front of a moving car so that the viewer can see that it has someplace to go. Without this visual padding, the car's forward progress will seem impeded.

Headroom is another element you should consider when framing

your subject. Headroom is the amount of space between the top of someone's head and the top of the frame. If you leave too much space, the person will appear as if sinking in quicksand. If you don't leave enough room, the person will seem in danger of bumping his head. By positioning the subject's eyes on the top third imaginary line, you will be building in the proper amount of headroom.

When considering headroom, be sure the shot is loose enough so that you see part of the subject's neck or the top of the shoulders. If not, you'll end up with what looks like a severed head on a platter. However, don't be as concerned with cutting off the top of someone's head. Viewers do not perceive this as abnormal as long as you frame the actor's eyes where they should be.

iv. Backgrounds

Many composition pitfalls lie in the subject's environment. Trees and phone poles, vases or pictures on walls may all cause problems. Be aware of lampposts, trees or other such objects that are directly behind your subject. A flagpole protruding from the top of an actor's head looks ridiculous, as does a vase that may seem to be balanced on someone's shoulder. Likewise, a power line running through the frame may appear to be going in one of your subject's ears, and out the other. It's best to steer clear of any such visual distractions. Even if these objects are not directly behind your subject, they can still cause problems. A lamppost running vertically through the middle of the frame will not only disrupt the balance achieved by the Rule of Thirds, it can also isolate or box-in the subject. It may also take away the look room that you've built into the shot. Be aware of these background objects, and work to avoid them whenever possible.

Tip: Watch out for backlight – strong light behind the subject.

v. Point-of-view

Think about the best way to convey the meaning of the shot. If it's a baby crawling, get down on the floor and see it from a baby's point-of-view (POV).



Over-the-shoulder shot



Point-of-view shot



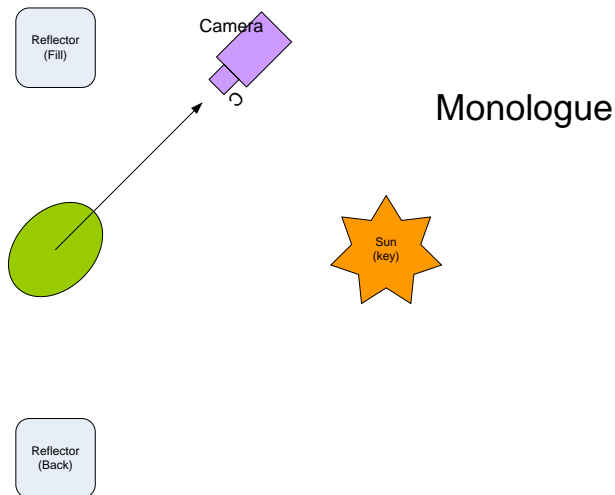
vi. Framing Devices

While objects in the background can cause problems, objects placed in the foreground can lend a hand. This technique can add depth and character to your shot. Try using something in the environment to obstruct part of your shot. Place a piece of furniture in your foreground and shoot past it by framing it to the extreme right or left. You can shoot through open doors, where the doorjamb frames the edges of the screen. Be careful, however, not to over-do it. Using the environment to frame your shots should not be so blatant as to distract from what is happening in the scene.

4. Setup and blocking

- a. **Monologues** – usually a person in a relevant place. Office, workplace, research area, at an event, ?.

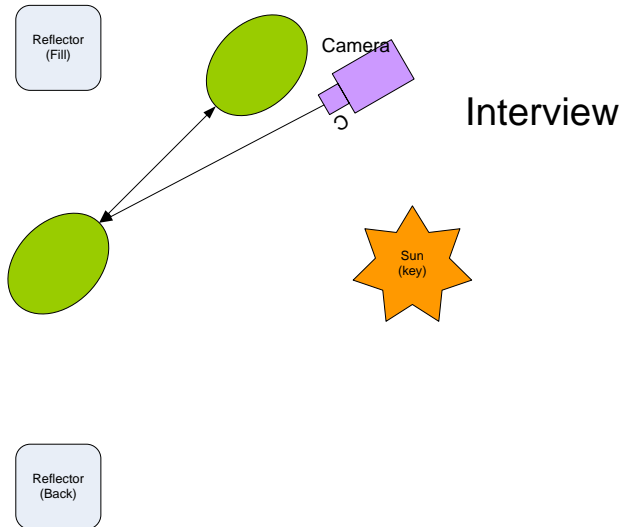
Hopefully the person is sitting or standing still so you can use a tripod and get a nice clean shot. Here's how the blocking might work outdoors on a sunny day:



On a bright clear day, you may want to add some kind of diffusion between the sun and the subject. Diffusion is a porous fabric that allows light through but softens hard shadows.

b. Interview/dialog

In an interview you add another person, an interviewer, to the mix. The setup will be very similar for a sunny day outdoors:



c. Groups

Think of a group as a series of individual interviews. You may need to work handheld to keep up with the pace.

d. Tips

- i. Don't stop an interview, awkward pauses lead to great material.
- ii. Have the subject of an interview state the "Question In The Answer" (for example- Q: Why do you work with x? A: I work with x because...)
- iii. People are often willing to tell their story if allowed. Asking and patience can go a long way

5. Camera settings

a. Focusing.

Quite often you can leave many modern cameras on auto focus. Be aware that items in the foreground of your shot (e.g. a glass window, a tree branch, a chain link fence) can confuse an auto focus camera, but if there's nothing between you and your subject auto focus is usually fine.

If you do use manual focus, it is best to zoom in to your subject to see fine details, focus, and then zoom back out to the actual shot. This will help to overcome the lack of detail in the viewfinder as well as any aberrations in your own eyesight.

b. White Balance or Color Balance

Different lighting situations will create different overall color tones in your video. For instance, if you shoot part of an interview outdoors in the sunlight and part inside under fluorescent lights without changing the settings on your camera, the skin tones of the person you are interviewing will vary quite a bit. This won't be so noticeable when you are shooting, but later when you are editing and you want to cut a comment from one into the other, it will become quite apparent.

Even the changes in light from one time of day to another can create differences. To adjust for these differences you use a control called White Balance. This is one of those features that separates professional from consumer cameras. Pro cams have it, consumer ones don't.

Since the white balance control is needed so often, it is usually a prominently-labeled, easy to find button. The basic process is to aim the camera at something white, a piece of white paper or card stock for example, and press the button once. This will set the white point for the camera, what it considers white under the present lighting conditions, correctly.

There's no penalty for doing this as often as you like. If you think the light has changed, white balance again. It will pay off in a more consistent look and easier editing. Note that if you end up with strangely colored footage, this can be corrected using post-production tools.

Note that creative use of color balancing can create very different looks on purpose.

c. Aspect ratio

The **aspect ratio** of a two-dimensional shape is the ratio of its longer dimension to its shorter dimension. The two most common you will encounter in video are 4:3 and 16:9. 4:3 is what you are used to seeing in broadcast television until 2009 – this is sometimes referred to as NTSC. 16:9 is what you are used to seeing in letterbox format when you watch a film on DVD. This can be a bit confusing in the computer world as monitors with both aspect ratios are now common. The new high-definition (HD) standards are 16:9.

Choosing which aspect ratio to shoot in will depend on your material. 4:3 is most common, unless you need to show vast sweeping panoramas, crowds, or other things that lend themselves to the wider format. The choice of aspect ratio on most cameras is hidden away in a menu somewhere.

d. Iris/gain

Also known as aperture, this determines how much light the lens will let in. Usually best to leave on auto, unless you are in darkness, when you may need to go manual and even add additional "gain" to the image. Gain amplifies the video image, making it possible to see some details in darker situations, but also inserting noise into the signal. Don't use it unless you have to.

e. Audio – inputs, phantom power

If the camera you are using has multiple audio inputs, another difference between pro and consumer models, then there will be either menu items or physical switches to turn them on/off.

There is also this thing called “phantom power”. Don’t let the name freak you out. It just means that some mics need power supplied to them either by battery or from the camera. Shotgun mics usually fall into this category.

6. Audio

a. **Tip: Don’t use the internal camera microphone unless it’s the last resort.**

If you want good audio, you have to put a mike where the sound you want is (or, at the very least, you have to point a shotgun, or directional, mike toward it). This is not a natural, intuitive thing that most human beings understand right away.

Cameras work so well from a distance, so why doesn't audio work the same way? That is just the way things are. You have to be much more accommodating in the world of audio than in the world of video. But luckily, humans have invented a marvelous array of audio devices to capture sound, which gives you a chance to buy more fabulous gear! Fortunately, even a \$20 investment in an external clip-on mike will get you good sound.

If you want good audio, you'll have to use external microphones to get the mike where the sound you want is. Your camera will also have to be connected to the external microphone with an audio extension cord (unless you have an expensive radio mike).

It cannot be emphasized enough how important it is to get good audio. While it seems like extra work, taking a few minutes to get people properly miked makes the difference between a movie that's not very fun to watch and one that's riveting.

b. Microphones

i. Physical Types

1. Handheld (wired or wireless)

One of the simplest mics is the simple wired handheld we have seen a thousand times on the TV news. The advantage of the handheld mic is your ability to put it where it needs to be. This is what leads to the scrum of reporters around a person of interest. A disadvantage is that you need another person to point the camera while you’re pointing the mic. Handhelds come in both wired and wireless versions.

2. Wired shotgun

A shotgun, or directional, mike (which can be mounted on your camera) records audio from a narrow sector of space (that's why it's called *directional*), rather than all the noise in a room, for instance. Most of the sidewalk interviews you see on TV news are recorded with a shotgun, or directional, mike which makes it easier to hear the speakers than the surrounding noise.

Shotgun, or directional, mikes are much more commonly used than omnidirectional mikes, but because they usually cost more than clip-on mikes, they tend to be used in interviewing more than one person or when you don't want to be connected by a cord from your camera to the subject.

- a. attached to camera



- b. handheld



Note fluffy wind screen.

- 3. Clip-on or Lavalier (wired or wireless)



Lavalier unassembled.



Lavalier assembled.



Lavalier on shirt.

ii. Connectors

One of the most confusing things about audio is all of the different connectors required. Most pros will have a kit with all kinds of adapters for getting from one kind to another. The most common types of connectors on modern video equipment include:

1. RCA



RCA connectors are commonly used for home stereo and video equipment

2. TRS (1/4" or 1/8")



2.5 mm mono, 3.5 mm (1/8") mono and stereo, and 6.3 mm (1/4") stereo jack plugs

3. XLR or Cannon



XLR3 cable connectors, female on left and male on right

It's important to take a look at your gear ahead of time to make sure that you understand what kinds of connectors are on the camera, microphones, and any adapters you may need.