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Lighting and Camera Placement in Hammer:

When you start to tackle camera placement you will quickly discover the possibilities are infinite, and it is easy to get lost and confused. Remember what you are focusing on is the action (also called blocking). Hopefully by the time you sit down to place cameras the sets will be build, and the characters will be scripted to walk and talk.

First, watch through the action a few times, and find the angles that best show what is going on. One of the main rules I use is: Don't include anything that isn't important. If it important to see where there character are, show an extreme wide establishing shot. If you need to see the gestures a character is making do a wide or a Medium/Wide shot. If you need to focus on the words or reaction of a character, do a Close Up.
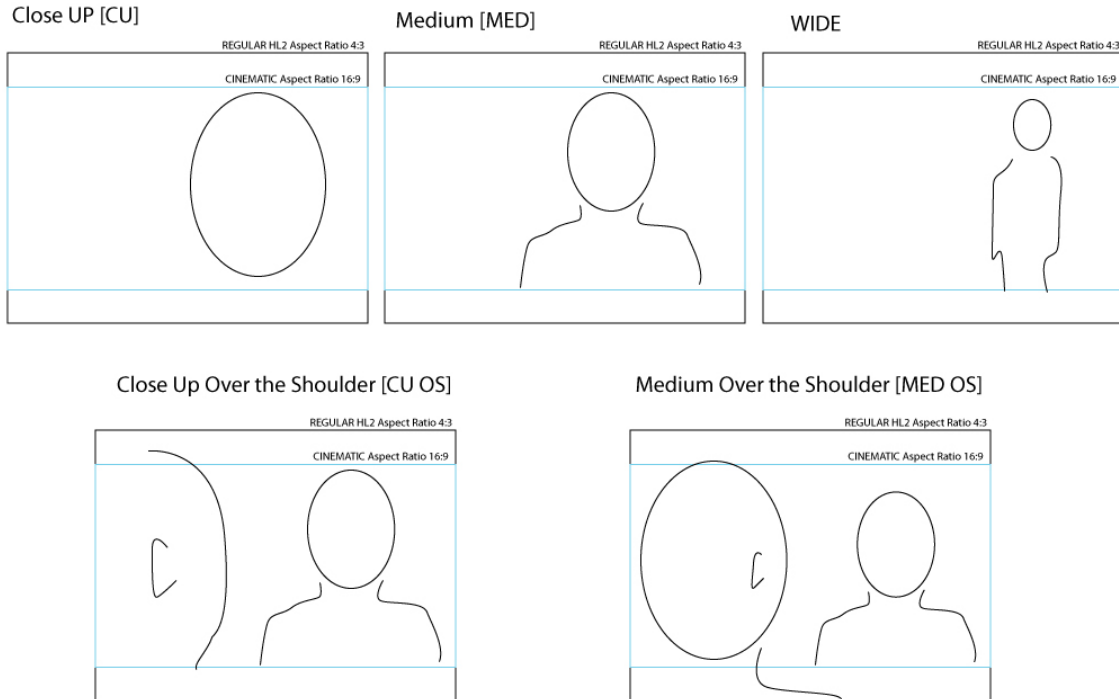
Remember your audience is a character too, and they get to see only what you choose to show them. If you show a dialogue scene in a wide shot, they will feel distant, and get bored. If you only show close ups they will get disorientated and confused.

My Grandfather told me that 2/3 of all the shots in a feature film are close ups. Whether this is true I have never taken the time to verify, because the concept is what matters; Close up's are important, in fact I don't think a film can work without them. Close ups in machinima are problematic, compounded by four factors: 1, Camera placement is a difficult trail and error process. 2, the characters looks bad closeup. 3, the characters tend to clip with the camera when you get too close. 4, the camera view in HL2 is essentially a wide angle, meaning the edges of the frame will warp, and the center will bulge. However, once you get over these problems, and start using close ups your machinima will be significantly better.

Below is a chart I put together to give a rough guideline for framing a shot. Most of the time it is a good idea to place the camera somewhere between chest and head height in the scene, this is the most natural point of view. If you want to go high angle, or low, have a good reason for doing it.

Here are some rough guidelines for camera placement.

Headroom: The amount of space in the frame above the characters head, it is the best guideline to follow when adjusting a shot

Close UP [CU]	Medium [MED]	WIDE
REGULAR HL2 Aspect Ratio 4:3	REGULAR HL2 Aspect Ratio 4:3	REGULAR HL2 Aspect Ratio 4:3
CINEMATIC Aspect Ratio 16:9	CINEMATIC Aspect Ratio 16:9	CINEMATIC Aspect Ratio 16:9

Close Up Over the Shoulder [CU OS]	Medium Over the Shoulder [MED OS]
REGULAR HL2 Aspect Ratio 4:3	REGULAR HL2 Aspect Ratio 4:3
CINEMATIC Aspect Ratio 16:9	CINEMATIC Aspect Ratio 16:9

Other shots in Machinima:

Parenting is a technique that can work really well for you. You can set a camera to track along side or in front of a character, really useful in an action sequence where setting a stationary camera can be difficult. Note: make sure you position the camera at the characters spawn position.

Entity Look At: One of the parameters in the camera is look at, with this you can set a camera to follow a specific character or object as it moves through a scene. It is a really simple way of doing a pan. However there are two problems associated with this. The first is the speed: half life will add dampening to the movement, which will sometimes result in the character moving too fast for the camera, and exiting the

frame. The second is framing: half life will default look at the characters feet. Either you can parent a target to the character (something my team and I never got to work properly), or you can set the variable in the target attachment box ('eyes' and 'chest' are the two most useful I could find).

The principles of lighting in film:

It is important to understand the principles of lighting for film before approaching the lighting in Hammer. In a typical Hollywood film, the lighting in every shot is closely controlled. The main purpose of this is to make the actors look as good as possible, and to set the mood of the film. Most of the lighting is dictated by the setting (ie a dark alleyway, a warm room, a bright street), so remember whatever lights you put into the scene must work towards making the setting look realistic.

The two types of lighting are Practical and Character lights.

Practicals are lights dictated by the set: Lamps, Daylight, Windows, Streetlights, anything that will be in the set and emit light. These are the first lights you should put in, it will give you a sense of where the light would be naturally coming from, and how you need to improve/modify it. Below is a shot with just the practicals illuminated. They give the set depth, but they don't cast enough light on the characters.

When you have the rough environment lighting in, you can focus on refining lighting for specific shots. The method I used was to turn on and off the lighting for a camera, when that camera was triggered (in the flags of a light check the box 'initially dark'). This allowed me to refine the lighting for a specific shot, without it impacting the other camera angles. Below is the same shot with the Character lighting in. As a general rule it is a good idea to try and mimic the Practicals when you are placing the light, this way it doesn't look forced and unnatural.

Manipulating lights in Hammer is trial and error because you have to compile the map between tests. I would suggest making a 'light kit', a set of lights you tweak and refine, then copying them into your map when you need them. I found the standard light to be the most useful (as opposed to light_spot or light_dynamic). For most situations I would just drop 1 or 2 lights for a specific camera, and have their radius extend not too much further than the character I was lighting. Note: you can scale the lights using the bounding box that pops up when you enter the 50% and 0% numbers. This gave me the most control over the light, and the shadows. In general putting more than 2 lights for a single character made the lighting too flat (and therefore boring).

Final Note: Don't be afraid to steal lights and cameras from the decompiled HL2 maps.