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FORWARD: This guide is designed to help event planners make good decisions when choosing a venue and when working with Audio, Video, & Lighting (AVL) providers. The end of this guide is basically a Glossary of Terms to aid you through the “language” of your AVL company. The beginning of the document contains some guides to help with choosing a venue, as well as some presenter tips and tricks that you may want to pass along.

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HD Video Production
Website Development
Live Event Multi-Cam
Webinar and Live Streaming
Live Event Lighting, Sound & Projection
AV Sales & Installation
Multimedia Consulting



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Picking A Venue

When choosing a location for your event, many planners simply ask the venue for room options that will accommodate their intended audience size, and then look at the aesthetics of the room. If you plan to use AVL for your event, there are many other factors to consider. In addition, there may be additional costs associated that planners are not used to. Here is a list of some things to consider:

1. **Ambient Light** – How bright is the room? If it is too bright, then projection may not be an option, and using fancy lights may be lost due to not being brighter than the room. Can the shades be closed?
2. **Room Height** – In order to do lighting and projection, we need some height to the room. Considering a 16' screen is 9' tall and we want it at least 4' off the ground, we need to have at least 13.6'+ of height. If we are hanging lights, the truss and light may account for 3'-4'. If the lights are intended to be hung from the ceiling, the motor and chain can add another 2'. This is up to 6' from the bottom of the light to the top of the ceiling. Also, consider your stage height. If we have a 2' stage, and a 6' person, we are at 8'. Considering the lighting may take up an additional 6', then a room that is 14' high means the lights would be hitting the heads of our presenters! For a typical corporate event, we recommend a room no less than 16' high. 25'-30' is preferred. One last thing with height... The room will always show the height in their specs as the highest point in the room. **MAKE SURE TO ACCOUNT FOR SOFFITS AND CHANDELIERS!** We get into many 16' rooms that have a 1' soffit and then a 3' chandelier and even a small screen is obstructed by a chandelier.
3. **Room Depth** – The depth of the room is also a consideration. Is there enough space for a stage? For space behind the stage? Is there enough distance for Rear Projection? Is there a spot for camera operators and technicians in the back of the room? Make sure to talk to your AVL provider about how much room is necessary for these additional elements. We typically need a minimum of 4' of distance behind the stage, a minimum distance equal to the width of the screen to place a projector (for example, a 14' screen needs at least 14' of depth for a projector either in front or behind the screen), and we need at least 6' of space in the back of the room for tech tables. Cameras and operators typically take up approximately 4' wide and 6'-8' deep.
4. **Storage Space** – Once the AVL is set up, there will be a lot of empty cases. Event planners will either need to have enough back stage space (behind a curtain, behind screens), an area draped off, or another room close to the stage to hold all the "dead" cases. We refer to this as the "boneyard". Some are tempted to have all the cases go



back on the truck. Not only will this cost in labor, but it also makes it extremely difficult for techs to fix problems when all the cases with spare parts, etc. are out in a truck somewhere.

5. **Loading Dock** – Where will the AVL be loading in from? Depending on the size of the event, the AVL may come in a trailer, box truck, or semi. It will be important to know where the load in can happen, how the cases will be transported to the room, and if there are any docking fees. In relation to this, where will the truck(s) be parked during the event? If there are stairs or elevators involved, this will be important to know as many cases are very large and heavy. Also... make sure to coordinate load in with the facility so the load in / dock area is clear and accessible.
6. **Power** – Often, larger AVL is going to need some big power. A few wall outlets won't be enough, especially considering many venues have many of those wall outlets on the same circuit. AVL is often going to want a large 3-phase connection such as a 100A or 200A connection with Camlocks. Sometimes, this requires an electrician and additional fees associated with its use. Make sure this is discussed up front. In addition, be sure to account for ALL power needs. Too many times the AVL is set up and then catering comes in with warmers and circuits start to pop.
7. **ASSOCIATED FEES** – Many venues like to hide fees that you may not be aware of. Here is a list of some of those fees.
 - a. Docking Fees
 - b. Parking Fees
 - c. Electrical Fees
 - d. Scissor Lift Fees (and insurance wavers)
 - e. Rigging Fees
 - f. Security Fees (if haze is being used, or if you want the room monitored during non-use hours)
 - g. Fire Marshal Fees (for hazing the room)
 - h. Stage Fees (for rental of main stage, FOH stage and camera platforms)
 - i. Audio Hook-up Fees (if using house audio)
 - j. Additional Markups & Service Charges (we have seen up to 25% markup on all posted fees, make sure to ask about markups, as these can really add up!)

PERSONNEL:

Show Producer (FOH) - Calls the show from Front of House. Works thru the script and is responsible for everything happening when it should.



Stage Manager (Stage)- Located at the stage making sure people get on and off stage when they should, and that speakers are prepared

Engineer-In-Charge (EIC)- Responsible for up-keep and maintenance of equipment and troubleshooting issues when they arrive.

VIDEO

Technical Director (TD, Video World)- At the switcher communicating with cameras and take shots/transitions

Graphics Operator (Video World)- Collects and compiles all presentations and slides and makes any adjustments as needed to slide content. Connects with speakers to see what they need and get presentation notes and slides. Operates presentation from FOH.

Camera Operator (Cam Op)- One at each of the camera positions operating a camera. Listen to the TD for shots they should get. At end of show, strike their camera.

System Tech (FOH/stage)- Moves to whatever role needs to be added to or filled. Also solves any technical issues that arrive.

LIGHTING

Lighting Director (LD, FOH)- Designs the lighting for the show, including picking fixtures, and working between the show director and the lighting programmer.

Lighting Programmer (FOH) Programs and often runs the lighting for the event. Also in charge of the design process leading up to an event.

Lighting Tech (Stage)- Responsible for lighting setup on stage and light placement. Assists LD with channel, programming, or repair of lighting equipment.

AUDIO

Audio Engineer (A1, FOH)- Programs, designs, and runs the main audio console from FOH. Responsible for main speaker system setup.

Audio Technician (A2, Stage)- Is at the stage to moves mics around, mic up presenters, and troubleshoot issues that occur during the event. May also mix monitors.



Presenter Tips

1. Use the confidence monitor (private monitor that only the presenter sees). Do Not look at the large screens behind you
2. Do not repeat what is written on your slide
3. Do not over-clutter slides, or make text too small
4. Make eye contact with your audience
5. Try not to read from a script. Try to have your remarks memorized and know what is coming next
6. Time your presentation beforehand so you create enough time for everything and are not rushed or fishing for more material.
7. Try not to use bullet points on slides. It creates a sense of unpreparedness and shows the audience the notes for you, not necessarily the information you want to convey.
8. Have a back-up plan. If something in your show is not working or is not there, know how you can recover from that.
9. Project your voice. Even with a microphone, projecting will help you sound more confident and reduce feedback.
10. Please arrive early to allow any presentation materials to be setup or transferred correctly.
11. What are your Key Points? Make sure everything you presenter points your audience to these points.



Presenter Laptop Settings

1. Turn off any screen saver options
2. Set computer to **Never Sleep**
3. **Mute** all audio notifications
4. Turn off email notifications
5. Put in **airplane** mode if Internet is not needed
6. **Quit** all other applications other than presentation software
7. Presentation should be **stored locally** and not on a flash drive
8. **Power supply** is plugged in and charging
9. Slide advancer remote works **from on stage**
10. Check **every** slide in presentation (text, pictures, audio, video)
11. Do a quick walk thru if someone else is operating your slides
12. Please have whatever adaptors you will need to get your presentation to HDMI or VGA.



HOUSE AND STAGING

FRONT OF HOUSE (FOH):

This is typically the area where the sound and lighting operators will sit. The area is near the middle or back of the room, centered right to left. There are typically many cables coming to this space from the stage, and there will also need to be power and internet at this location. Often this area is elevated to nearly the same height as the stage, whenever possible. This elevation ensures that the tech operators can always see the stage, even if the audience should stand up. Having FOH centered in the room ensures that the lighting programmer has good symmetry and the audio engineer can hear both sides of the speakers.

BACKSTAGE:

This is the area behind the stage curtain. It may contain areas for talent to be mic'd up, or prepared to go on stage. This area is not seen by the audience.

UPSTAGE:

Upstage is the area at the back of the stage. This is a theatre term, as a character will walk forward (downstage) or backward (upstage). There is typically an upstage truss which will hold a curtain, possibly screens, and also upstage lighting which is necessary for backlighting, especially in video settings.

DOWNSTAGE:

Downstage is the front of the stage. There will usually be a downstage truss which will hold all your main lights for lighting the stage, and spotlighting the main talent. This stage may also hold projectors, speakers or other effects. It is usually best to hang this truss from the ceiling as to not ruin sight lines. When hanging moving lights, this truss will be different than the projector truss to minimize projector sway when the lights begin to move. In some cases, the downstage lighting truss may be near front of house, ground supported, or made up of vertical torm trusses (see "Truss" in the rigging section).

MIDSTAGE:

Midstage is basically the middle of the stage. The midstage truss hangs over the center of the stage and is often used for down lights on the actors. Having a midstage truss allows separation between the upstage and downstage portions of the stage. For example, let's say you have a main presenter on the front (downstage) portion of the stage and a choir behind. You could use the midstage truss to provide back lighting for your main presenter, and provide front lighting for the choir. Although not necessary, in a large stage, a midstage truss is very handy to have.



STAGE DIRECTIONS:

When calling directions, we always call based on the perspective of the actor on the stage. If an actor is in the center of the stage, facing forward, then walking forward would be called “Downstage”, walking backward would be “Upstage”, walking right would be “Stage Right” and walking left would be “Stage Left”. This can get confusing when you want lights to light the left side of the stage and you must call this as “Stage Right”. If this is confusing, there is a way to call “audience” side. For example, “Stage Right” is the same as “Audience Left” and vice versa.

In addition to these directions, some may ask for a piece to move off stage or on stage. This just basically means something is moving toward the center (on stage) or to the outside (off stage).

One last direction is whether items are flying “in” or “out”. If something is “Going Out” or “Flying Out”, this means the item is moving towards the ceiling, away from the stage. If a truss is “Coming In” or “Flying In” this means it is dropping toward the stage.

BONEYARD:

The “Boneyard” is the storage space for empty cases, often referred to as “Deads”. For any show, and especially larger productions, it is important to recognize that there will be many empty cases during the event. Most often, it is not affordable to have all these cases moved back on to a truck. It is important to designate backstage space, or a separate room for the boneyard. This may mean that there needs to be 10’ or more of space between the upstage drape and the wall, or possibly there is a draped off corner for all the cases. This is an important item that is necessary, yet often overlooked in smaller productions.

LOADING DOCK:

The loading dock is an important part for the production team. Having a loading dock, or having to load in at street level, may have financial consequences. In addition, the distance from the loading area to the performance space may require more labor. There are some ballrooms, etc. that are not on the same floor as the loading area and some equipment may not fit in the available passenger or freight elevator. All these factors may have financial impacts.

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RIGGING & ELECTRICAL

RIGGING:

Rigging is a term basically used for the technique of hanging trusses, etc.

TRUSS:

Truss is used for hanging lights. These are typically 12" x 12" box trusses, or heavier 20.5" x 20.5" truss and come in various lengths. The truss is specifically engineered for entertainment and has specific load ratings.

POWER:

All the lighting, audio, video, etc. is going to require power. Most production companies will provide power cables and power distributors, but will need a main place to connect. Typically we will ask for 100Amp 3Phase or 200Amp 3Phase power. It is important that the power is 3 phase as the distros are build for this type of power, and some items, such as chain motors and projectors will require 3 phase power. Nearly all power distros (PD's) will require a "camlock" connection. It is important that this location is identified, and measured out so the production company knows how much "feeder" cable is necessary to plug their PD's to the house power.

DEAD HANG:

This term may have two different meanings. The first is that an item is hung from the ceiling without the use of motors. The second is item is hung directly under a "hang point" in the room, and there is no need for bridles.

HANG POINTS:

Hang points are designated points for hanging from a ceiling. Any hang point will have a "load rating" which indicates how much weight can be hung from that point. It will be important to note any hang points in the room when a stage location is chosen.

PANEL POINT:

A panel point is a designate spot in the ceiling where the steel is stronger. In a typical roof structure, there is "high steel" and "low steel". In between these layers are support beams. Where these beams meet and attach to the steel is a "Panel Point" an often the venue may only let you hang from these points. It is important to get a drawing of where all these panel points are for making appropriate drawings for the rigging plan.



BRIDLES:

Whereas we won't go into too many rigging terms, a bridle is where two ceiling attachment points are used together to make one hang point somewhere between them. It is important to know different load rating when creating bridle points.

CHAIN MOTORS:

Chain motors are use to hang trusses, speakers, screens, projectors, etc. from the ceiling. The advantage of a chain motors is that everything can be assembled near the ground at a "working height" and then "flown out to trim". This phrase "flown out to trim" is the process of using the motors to lift the items into their final height in the air. Chain motors are very convenient, but do require the ceilings to be able to hold some significant weight.

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LIGHTING

MOVERS / INTELLIGENT LIGHTING:

These lights have become incredibly popular and really add a “wow” factor to your production. Sometimes called “Special FX” lights, “Wiggles”, or a host of other names, the moving fixture is invaluable not only in atmospheric effect lighting, but also in downstage lighting. Because these lights can be controlled to move, we can use fewer lights for more functions. Rather than having two downstage lights for every position on the stage, maybe we use half as many fixtures, and reposition as needed. In addition to being able to move, these fixtures provide different colors, patterns and animations. You will often see these fixtures providing atmospheric effects from the stage. For this effect, it is imperative that you can put haze in the room (see Haze below).

STATIC / CONVENTIONAL LIGHTING:

These are typically incandescent lights that do not move or change colors. They are generally used as a stage wash or stage spots. Whereas you cannot get these lights as LED’s, here we are referring to fixtures that require a lot of power and dimmer racks. These fixtures generate a lot of heat and are generally not used much anymore. One use for conventional fixtures may be projecting gobos on the walls or floors, etc.

GOBO:

A Gobo is a pattern made of steel or glass, which is placed inside a static or moving fixture. When the light shines through the Gobo, the image is projected. Most moving lights will have several stock Gobos in the fixture that can be used for “breakup” or texture on the stage or walls. To help brand an event, custom gobos can be made. Steel gobos are laser cut and act more like a stencil. For example, the letter “O” is going to have some lines on the top and the bottom to hold in the center of the letter. If you want a more perfect gobo, or want colors in your gobo, you must go to glass. These are costly, but they can be reused over and over. When ordering gobos, it is IMPORTANT that you know the exact fixture that will be holding the gobo so you get the correct size.

HAZE:

In order for the moving lights to have the “Fingers of Light” shooting out into the audience, we must have haze in the room. Haze is not the same as fog. Haze is a very small particle, either oil or water based that is meant to hang in the room for a long time. Haze is only seen when it is lit from behind, therefore it is not seen in a camera shot, for example, unless it has been lit from behind. For events, it is VERY IMPORTANT to talk to the venue and make sure haze can be used. Sometimes, haze can get trapped in air handlers and set off



smoke alarms. Please note, most venues immediately think we are using fog or smoke machines. This is very different. Often it causes no problems at all. We can come in advance and haze the room and make sure it will not set off alarms. If it does, often we can request a call for the smoke detectors to be silenced during the event. In any case, we want to know if haze can be used EARLY in the production because this will affect which lighting we can do in the room.

FOG:

Fog is a special effect like smoke. It is thick and may be pumped out quickly to make an effect, or there is also low lying fog that can just be down near the ground. Knowing the type of effect you want will help us determine what type of machine needs to be used. Depending on its placement, fog will set off smoke sensors which rely on line of site, density checking, etc.

PYRO:

Pyrotechnics can really add a lot of excitement to an event, from flames to sparkler fountains to a full indoor fireworks show. However, pyro takes a special crew of certified technicians, and special waivers from the Fire Marshall. Inspirmedia does have some “pyro effects” which are not technically flammable and we are certified to use them in a variety of venues where traditional pyro is not allowed. Whenever using these effects, it is important that we have conversations with the venue early in the process.

BALLYHOO:

The “Ballyhoo” is a phrase used when the light beams fly all over the room. This is usually used at exciting moments of an event. The fixtures are seemingly random, but add a lot of excitement or suspense. This is different than other light movements such as waterfalls, can-cans, waves, etc. in that there is usually no discernable pattern.

HOUSE LIGHTS:

The house lights are the lights already in the room and are often overlooked when picking a venue. One big question to ask is whether or not the house lights can be dimmed, and where are the dimmers located. Fluorescent lights often cannot be dimmed and if they are, the dimming is rather clunky. We will want to have access to the lighting panel and will want to make presets for “House Dark”, “House Entrance”, “House Exit” and “House Showtime” lighting.

HOUSE BLACK:

This term is used to see how dark we can get the room. Often planners do not realize that there are certain requirements by the fire marshall that the lights over doors, must be on

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at all times. This can cause a problem if there is supposed to be a projection screen directly underneath a light that is required to be on at all times. We will want to check House Black early on to make sure we know what fixtures must remain on, and if there is any way to make changes to these requirements.

DMX:

DMX is a communications protocol that is used to control lights. All lights are connected, one to another, and then back to the lighting controller. This is important to know because there may be sometimes we want a light in an obscure place, but there is no way to cable it, therefore no way to provide control. Inspirmedia does provide various forms of wireless control, and if requested, we will want to test to make sure it will run without interference in the room.

ARTNET:

Artnet is another lighting protocol that is used over an existing computer network. It is much like DMX, but Artnet allows us the possibility of connecting into a house network and putting remote “nodes” for lighting somewhere that direct cabling may not be possible.

PIXEL MAPPING:

Pixel mapping is a way to map video to lights. In these scenarios, we are treating each fixture as if it were one pixel on a TV screen. This allows for incredible effects, but also requires MANY channels of lighting and content creation. If pixel mapping is needed, this will require programming in advance.

LIGHTING PROGRAMMING:

To program a good show takes a lot of time and work. It is important that the client work with the lighting programmer to make sure everything that needs to be lit has a specific cue. To do this, the programmer will need significant time in a dark room. Often this can be done during the late evening, but it is important that this time is also scheduled. With proper pre-production, many lighting cues can be pre-programmed and just touched up on site. This level of programming will require detailed meetings and 3D modeling to make sure the lighting is programmed as well as possible.

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AUDIO

FEEDBACK:

Feedback is the loud screaming noise sometimes heard from speaker systems. This happens when the output of a speaker goes back into a microphone and creates a loop. To avoid this, each mic must be equalized for the room, and the speakers must be tuned for the room. A basic rule is to make sure your speakers are far away and are in front of any live microphones.

VOICE OF GOD (VOG):

The "Voice of God" mic refers to a microphone that is used to speak to the audience, but the performer is not seen. This may be for public address, or as a narrator, etc.

LAVALIER (LAV):

The lavalier is a small microphone that is pinned to a performers shirt or lapel. It allows a large range of motion and isn't noticeable, but is often very susceptible to feedback. Also, depending on placement, the lavalier mic does not move well with a presenters face, and may lead an active presenters voice to go from loud to quiet as their head turns closer and further away from the mic.

HANDHELD (HH):

The handheld mic is just like it sounds... held in your hand. This mic is wired or wireless and is often attached to a podium or mic stand. With hand held mics, it is important that the presenter speak with the audio engineer to know how to hold the mic, and how close to speak into the mic.

AMBIENT MIC:

The ambient mic picks up the general room noise. Although not amplified in the system, this mic is important to musicians who are using in-ear monitors, and in recordings. In broadcast situations, the ambient mic is imperative to pick up audience reactions, sports sounds, etc.

PODIUM / GOOSENECK:

The podium mic is attached to a podium and usually designed to pick up a presenter from a longer distance / wider range. It is important to meet with each presenter so they know how far to be away from the microphone.



HEADSET / "COUNTRYMAN" MIC:

Although Countryman is a name brand, it has become synonymous with head worn microphones. These microphone are attached to the ear and allow the mic to move with the head and stay at the same distance from the mouth. These mics are small and inconspicuous and provide the same range of motion as a Lav mic, while not having the same feedback issues. One note, these microphones can be very expensive, and it is important that presenters treat them well.

LINE ARRAY:

These speaker systems are what we commonly see at many concerts. A long line of speakers hanging from the ceiling. The basic principle behind these speakers is to provide the same volume from the front of the room to the back. Rather than just turning up all the speakers up very loud so they hit the people at the back of the room, arrays are engineered to provide a very narrow "beam" of sound. The majority of the top speakers are aimed at the back of the room and are turned up loud to reach the back, but these speakers are not heard in the front of the room. As the array curves downward, sound is directed to the audience closer to the stage, and the volume on these speakers is turned down. These systems provide great coverage for large and small rooms. However, they have to be hung in some fashion and may not always fit the budget of a smaller venue.

GROUND STACK:

Like its name, the ground stack system sits on the ground, or is on some smaller poles. These systems typically are not very directional and are not best suite for long rooms or rooms with balconies. These systems are generally affordable, and easy to setup.

STEERABLE ARRAY:

Inspirmedia prefers to use a Steerable Line Array for smaller venues. This system provides the best of the Ground Stack and the Line Array. The system sits on the ground, but has software which achieves the same results as a line array where higher volume is pointed the back of the room, and lower volume to the front of the room. This provides consistent coverage from front to back.

DIGITAL SOUNDBOARD:

In the past, processing audio required many racks of equipment. With the advent of Digital Soundboards, all that outboard equipment is included in the sound board. This means there is more processing power, and with Digital Snakes, we have less cabling to worry about. The Digital Soundboard is the greatest leap in live audio and is an imperative piece of the system, allowing an incredible amount of processing in a small footprint, at an affordable cost.



DIGITAL SNAKE:

With the advent of Digital Soundboards came Digital Snakes. Rather than an analog cable connecting all the microphones from the stage to the soundboard, the digital snake converts the audio to a single small cable such as CAT5, Fiber or COAX. This allows many channels to go long distances in one lightweight cable.

RING THE ROOM:

In order to combat feedback, it is important to “Ring The Room”. This process often involve playing “pink noise” through the system which sounds like static. Another technique is to induce feedback into the system and then use equalizers to eliminate the feedback. It is very important that the event planner carve out time for ringing the room, when there will be no other noise in the room such as people speaking, setting up or tables, etc. This is often a very loud process, but shouldn’t take longer than 15 minutes or so.

WEDGE MONITOR:

For presenters and especially for bands, it is important that they can hear themselves. To accomplish this, some type of monitoring is necessary. Wedge monitors sit on the floor and point toward the musicians. Many musicians like these monitors because they can “feel” the music. However, these monitors can contribute to audio feedback, and more importantly, they add to the stage volume. There are times when stage volume can make the sound in the room very muddy.

IN-EAR MONITORS:

To combat stage volume, in-ear monitors are used. This system requires providing each musician with their own earphones to hear the music. Not only does this help combat the overall stage volume, but it also helps protect the musicians hearing. Inspirmedia provides wired and wireless in-ear systems as well as personal mixers so each musician can create their own mix for their earphones.

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VIDEO

HIGH DEFINITION (HD):

HD is what we commonly watch these days and comes in two forms, based on the pixel count. 1280 pixels wide and 720 pixels tall is commonly referred to as 720, and 1920 wide by 1080 tall is referred to as 1080. The HD format is a “wide screen” 16:9 format as opposed to the more square standard definition format.

4K / UHD:

Ultra High-Definition or 4K is four times the resolution of HD. Whereas this format is a huge buzzword, in live events, the 4K format is expensive and really has no effect on how better the projected image looks in the room.

STANDARD DEFINITION (SD):

The standard definition format is a more square 4:3 format. This format is not commonly used anymore, and Inspirmedia doesn't actually have any 4:3 format screens or television.

4:3:

The 4:3 format is commonly used in a standard definition format. The numbers represent 4 units wide by 3 units tall. This format is often still used in Power Point presentations, but for the most part, has been retired.

16:9:

The 16:9 format is generally linked to HD displays. The numbers represent 16 units wide by 9 units tall. This number really has nothing to do with the size of the screen, but rather with the relation between the width and the height.

FRONT PROJECTION:

Simply put, front projection is when the projector must sit in front or “downstage” of the screen. When the projector is hanging from the ceiling this isn't a problem, but if the projector cannot be flown (hung), this method is not recommended as the projector may end up being in an area where tables, etc. should be placed.

REAR PROJECTION:

In a rear projection setup, the screen material is more translucent and the projector is placed behind, or “upstage” of the screen. This method hides the projector from the audience which makes it unobtrusive, and often allows the projector to be serviced during an event without interrupting the audience.



ENVIRONMENTAL PROJECTION:

This type of projection is typically not done on the screen, but on other surfaces in the building such as the walls, ceiling, floors, or even the outside façade. This type of an effect can really transform the space and even envelope the audience. Imagine a jungle theme, and the walls are covered with trees, swinging monkeys, etc. There are two types of methods for this projection. The simplest is a flat projection where the projectors shine on the wall and masking is used to cut out spots where there should be no projection, such as around doorways, etc. The other method is Projection Mapping. Whenever considering environmental projection, remember that this is another set of video content that must be created, another server, another block of programming time and, most likely, another operator.

PROJECTION MAPPING:

In projection mapping, or projection warping, many projectors are used, at different angles to completely wrap complex surfaces with video. In this scenario, the space is modeled in 3D software in advance, and a mesh texture is made that is then used for programming the video. The results are stunning, but the process may be expensive because of the many hours of labor needed for content creation.

IMAGE MAGNIFICATION (IMAG):

IMAG is the process of using cameras to magnify what's happening on the stage, onto the screens.

HIGH / WIDE:

This is a camera position which typically can capture the entire width of the stage. While used more as an establishing shot in broadcast, the wide shot is a great cut away shot for the director to use during transition times on the stage, when there is not other action on the stage worth putting on the screens.

SLASH CAM:

The slash cam is at an angle off the side of the stage. Although not often used, this camera can provide a unique angle for the audience.

STICKS / TRIPOD:

Cameras on "Sticks" is basically just a camera on a tripod. These cameras are often set up near the Front of House (FOH) position. We always recommend that at least 2 cameras are used on any projection. This allows one camera to be on a tight shot, and the other wider, or each camera to be on another person on stage. The director will then switch between the two different shots.



HANDHELD / ROAMING:

The handheld camera is a remote camera which is generally on the stage to get close up shots that the other stick cameras cannot get. This camera is portable and can also be used to get great crowd shots.

POINT OF VIEW (POV):

POV cameras are often attached to a performer, or an instrument, etc. which can provide a unique perspective for the audience.

JIB / CRANE:

The jib is a fantastic piece of equipment to have in a live production. The camera is remotely controlled on the end of a long crane. Although the jib takes up a large footprint on the stage, this camera provides the beautiful shots everyone appreciates when we see it used on television or in movies. Operating a jib is a special skill, and having a jib on a production will always require a dedicated and trained jib operator.

PAN:

Pan is a term used when the camera is turned side to side. A camera operator will “Pan Right” or “Pan Left”

TILT:

Tilting a camera is the operation of “tilting” the camera up or down. An operator will never “pan up”, the correct term would be to “Tilt Up”, or “Tilt Down”

ZOOM (Push / Pull):

Zooming is the method of manipulating the lens to get the shot closer or further away from the subject. A camera operator will “Zoom In / Push” or “Zoom Out / Pull”

TRUCK:

Trucking the camera requires that the camera be on wheels or a dolly. “Trucking” is when the camera physically moves closer or further away from the subject.

DOLLY:

Much like trucking, the dolly must be done with the camera on wheels. A camera operator will “Dolly Right” or “Dolly Left”. The dolly and trucking shots are often referred to as “Tracking” shots and can be difficult to obtain in a live environment without the use of a “SteadyCam”.



DUTCH / ROLL:

Dutch is the method of tilting the camera to the right or left. This shot is not used as much anymore, but can be used quite effectively to get some unique perspectives. Because of the mechanics behind the shot, the dutch is typically only done by handheld, jib or remotely controlled cameras.

SDI / HD-SDI:

SDI is an acronym which means "Serial Digital Interface". This is a coaxial cable which has a BNC locking connector. This cable is the preferred method for making professional video connections. The cable does have a basic length limit of just over 300'. After 300', the signal must be "re-clocked". Often for long runs, fiber optic cable is preferred.

HDMI:

HDMI is an acronym for "High-Definition Multimedia Interface" and is typically a consumer format. Because of length limits and the lack of a locking connector, the HDMI format is not preferred in professional environments and is often only used for connection computers or other playback devices to the system. In general, HDMI is only rated for about 25'. Boosters can increase the signal to 100', but to go longer distances, the signal must be converted and sent down another type of cable, such as CAT5e or CAT6, etc. Another complication with HDMI is copyright protection. The format was created as a way for playback devices to communicate with display devices and make sure appropriate licensing exists to play copyrighted material. This can cause complications in professional environments.

VGA / DVI:

Although very different formats, we will lump these together as cables which provide connectivity between computer sources.

FIBER OPTIC:

For long transmissions, a fiber optic cable is used. Fiber optic cable is relatively inexpensive, but it does require conversion on either end of the cable. Fiber optic cables can run for very long distances, even miles, and is often the only option in large productions.