

Notes for Skev.

Thanks very much for taking this lecture in my place.

I usually make these notes available to the students as either; a download from my web-site, or as handouts from the office, on the day following the lecture.

Consequently they are written in a fairly relaxed structure, with heaps of personal anecdotes. As you will no doubt see - they aren't exactly notes. It's more of a free-flowing-mind-dump on the subject. Designed to be read, rather than read-out.

I don't really know how to make my notes in any other way.

So I guess what I'm trying to say is...

Feel free to **add, remove, modify, discard**, any of the information I've written and include your own.

All I can hope is that the students get an appreciation for the importance of "**Locations**", in Location Sound Recording.

The text-book is, unfortunately, of almost **no** help in regards to location sound recording for picture. There's a bunch of stuff on studio design and acoustics that would apply, but it's pretty dry and hard to digest.

I was going to spend around 40 mins per lecture, examining production audio from my DVD collection, but hadn't picked which movies to use.

If you can think of another way to keep the littl'uns from getting restless, then by all means do it.

As you already know; they're a good bunch, and fairly responsive to un-orthodox teaching techniques.

Thanks again, and good luck

Ian

4 - Setting up the location for sound

Firstly, I apologise for not being able to attend this weeks' lecture. As you all know; I *am* a freelance Boom Operator. Normally I wouldn't accept a job, knowing there was a lecture; but this time, the job was too good to refuse. International feature, main boom... you get the picture. I'll be around for my last lecture, and will still be marking the assignments that you have all handed in for today's due date. Thanks for your understanding; I hope my replacement will be able to present the following content in a fun and engaging way.

Best of luck. Ian.

The single most important factor in determining how the dialog of a movie can be recorded is it's **LOCATION**; even microphone choice and placement, pale in comparison to the selection of **WHERE** it's going to happen.

What's coming up in this lecture

1. What the problems are - time and time again
2. How to scout a potential location for audio
3. How to tell if it's really a problem
4. When is a location NOT a location?
5. Locations that ARE noisy - what to do?

Overall Locations recording "Points of interest"

In general - any coloration of the sound is permanent; you can't remove room-echo from recordings. Not always bad though, if it looks like a big concrete chamber, let it sound a little like a concrete chamber. The problem occurs when you try to use a big concrete chamber as something else (see warehouses as sound stages).

A cameras lens can exclude external factors (what's outside of the frame, is **OUTSIDE** the frame). A microphone can't do that. If you can frame out the traffic, great! - you can't however, "frame-out" the **SOUND** of the traffic.

Watch out for changing levels of back-ground noise. If it's noisy, but consistent from shot to shot, then you may be able to cut it together. If it's noisy and different from shot to shot, cutting becomes more problematic. *Get* room tone/atmos at the **noisiest** background level.

Room tone - if it changes throughout the time it takes to shoot a scene? = bad. *Get* multiple ones; at least $\frac{1}{2}$ as long as the finished scene will be. Remember we're talking about **SCENES** here, so it most likely won't need to be more than a few minutes.

A few things before we get started.

For this weeks lecture, we're pretty much going to ignore doco/ENG/EFP/news production and focus on sound for dramatic narrative (short/tv/feature).

Reasons - doco/news/lifestyle shows are much more forgiving of location affecting the sound, the audience will accept it, and also - you rarely have a choice over the location; *where* you record these programs is what the story is all about.

Having said that; the principles outlined in the rest of this lecture *will* help the sound in docos/news/lifestyle.

Basically in every situation, just listen and think, that's all I ask.

Most of the stuff included here is plucked from my own experiences and opinions. Some of the terms are just stuff I've made-up to convey the difference between things. Don't take it too seriously. You never can when recording sound for picture.

Additional materials required for this lecture - to avoid students getting as bored as they have in the past, I was going to dedicate a fair amount of the lecture to attempting to detect what parts of a soundtrack are actually location recordings, using DVD's from home. Screen and discuss, pick the ADR, was it really location sound? Engage the class - have fun. They seem up for it.

1 - What the problems are - time and time again

I think the most obvious problem with shooting in a location, instead of the quiet sanctuary of a sound-stage, is that it's noisy. Really, really, noisy. You have little to no control over the sounds that will assault your microphones and destroy the most beautiful of takes.

But you can't shoot in a sound stage forever; audiences have come to expect highly realistic and large locations for the stories we tell to take place in. you've got to shoot in the real world.

The beauty of locations is that they look and feel authentic; it translates well to the screen. There is minimal construction required (though a heavy amount of set-dressing). Downsides are that they cannot be modified as easily (no drilling holes in walls to run cables), and they rarely sound quiet enough to film in.

Remember that you can't remove specific noises from an audio recording, but you *can* add them. Therefore it's better to start at absolute quiet and work your way up to a full sound-track.

Locations can be practical, and working, or can substitute for another place entirely.

PRACTICAL/WORKING

These locations are actually used for what they are set as. In other words, the heavy machinery in the BG is "**real**" heavy machinery, and will sound like heavy machinery. The problem becomes one of containment, where you try to capture the nuanced performance of an actor, while the MASSIVE noises occur in the space. If able to be contained well, you get a natural amount of

realistic background noise that will help convince the audience that the actors were actually “there” the suspension of disbelief is maintained, and the audience stop looking for faults, continuing to be swept up in the story. Usually though you’re just getting a guide track for ADR. It’s an acoustic impossibility to record pleasant sounding dialog within a short distance of oil-rigs/race-cars/heavy machinery/etc - of course there are exceptions... read on.

SUBSTITUTES

You’re shooting at a commercial chicken-farm, on the side of a highway, that’s got a shed dressed up to look like a quiet country-homestead, in the middle of nowhere. The problems here, would include avoiding/minimising the thousands of chickens in the background of every scene, and avoiding the urban noises *(freeway traffic).

It sucks, but most of the location shooting that I’ve been involved in throughout my career is of the SUBSTITUTE nature. *Where* you shoot - looks great - but sounds completely different. The quality of your recording comes down to your microphone choice/placement, and how many external noises you can stop.

2 - How to scout a potential location for audio

Often, sound isn’t even considered when picking a location. Sometimes that’s the way it’s got to be (the noisy choice may be the only west-facing-building-with-a-mountain-range-in-the-background that’s within driving distance of the production area).

Let’s just pretend for a second that there is a chance for sound to affect which location is picked. Hopefully the scout will stand where the characters will be on the day, and LISTEN (with their eyes closed). Anything that they can hear, the microphones will hear. It’s really that simple. You could go to the extra trouble and do test recordings before the final decision is made, but more often than not, they’ll pick a noisy location anyway, and you’ll just have to make-do during the shoot with a quick atmos, and perhaps some re-takes for audio.

Scout at the same time of day as you plan to shoot - areas can be quiet on a weekday/daytime, but be shockingly noisy on the weekends/evenings.

Check for any special events that may be happening nearby on the shoot-day, a festival that is a few blocks away can still ruin audio.

Make sure you can get control of any potential noise-makers - fridges, air-conditioning units, whatever makes noise. REMEMBER, while you are shooting, it’s got to be deathly quiet, so even the smallest noises will impact on the sound recording. A working bar may look great, but if you can’t turn-off the fridge because the product will be spoiled, then you’re going to have sound issues.

Speaking of fridges - if it’s ok with the location owner to turn them off, put someone’s car-keys in there (so they can’t leave without turning it back on), and keep it shut. Excessive turning on and off can cause the compressor motor to burn-out, which is expensive to fix. It’s much better to just leave it shut trapping the cool air inside for as long as possible.

Can you close the doors/windows in an urban setting? cars driving in the background look good, but open doors will make it very-difficult to manage a separation of dialog/noise, and editing will be problematic if the car is over the dialog in only one angle.

Is the shape of the location going to make things a problem? This one's fairly important but low on the list of most people. If it's a small space with parallel walls, then standing waves may become problematic - that is; a particular frequency gets trapped by reflecting off the parallel walls and intensifies instead of falling away - it is directly related to the distance between walls. This is why you'll see sound recording spaces that are built with funky angles, it helps to break-up the reflections (echo). Luckily it's treatable if you have fore-warning, and can build some sound baffles or absorbent panels.

A quick flick through *pages 94 - 106 of your text book* will give more detail (perhaps a little too much) about standing waves, reflections, absorption, materials, and design used in a sound recording studio - many of those same principles are handy when considering location sound

Aside from what the physical space sounds like, all the usual things apply.

- Is there enough room for crew/equipment?
- Are there sufficient toilets?
- Will the set be accessible without having to open doors onto the main road?
- Are there holding areas for extras and crew away from set? (So they can make a little noise, and not get snarky when the soundo asks them to be quiet).
- Can the set be lit without having to have the HMI ballasts on-set? (*the square-wave electronic flicker-free ones HUMMMMMMMMMMMMM)
- Will everyone pass out due to having the set closed for extended periods of time?

This leads me to an anecdote, involving a set built in a room of an urban building with little noise-proofing (QPIX). We closed the windows/doors, hung-up sound dampening materials to make it sort-of-quiet, and then lit it. A few hours later, people were getting agitated, cranky, and sick. We spent more time trying to ventilate the set in-between shots, than we did shooting. The film made its budget, but at the expense of a "hot" crew. Film-making is meant to be glamorous right?

3 - How to tell if it's really a problem

You're shooting in the city, on the foot-path (sidewalk for those of you inclined to talk like yanks). It would sound ridiculous to *not* hear cars/people/etc.

If it's not interfering with the dialog too much, and stays fairly consistent, then should you worry about it? If they're going to add busses, and honking car horns to the sound track later-on then how much should you allow to occur naturally? Unfortunately there's no "correct" answer. But if it's going to be covered by added background noises, and you can't get it ultra-quiet, then save yourself some stress, and focus on getting a good separation between the wanted noise (dialog) and the unwanted noise (background). The same goes for scenes that will have music and effects playing over the scene (if it's a big old orchestral score in a war movie, with lots 'o' 'splotions then even more background noises will be covered).

Why try and get everything un-naturally quiet? The simple answer is so they can control all the elements that they want to. Discussion is required between Director, Post production and the Location sound mixer. Perhaps you could all go out for a drink and claim it as a work-lunch.

Film-making is a compromise (as it's often quoted by DP's and producers when discussing a noisy location). So don't lose your hair over something that's going to be adequately masked later on.

Only experience and knowledge of the final product will allow you to make the judgment call as to whether the background noises are passable.

4 - When is a location NOT a location?

Hah! - I tricked you, see you got here and thought I'd try and confuse you all with some scientific mumbo-jumbo, and instead we're talking about SETS and NON-SOUND-STUDIOS.

(Still technically a LOCATION, as every scene takes place in a location, even if the location happens to be a SET built on a sound stage. Hee hee hee)

Thought I'd take a little time to mention some of the things that can go wrong, and how to solve them when you're not shooting on a "real" location.

Film sets are generally made up of floating walls called **flats**. They may LOOK like solid stone, but it's all just ply-wood and foam. This will obviously cause a problem for the sound department, because in the final finished film, it looks like stone, yet sounds like wood... hmmm, suspension of disbelief is broken and you start looking for camera reflections and thinking about what you're going to make for dinner. Of particular interest to the location sound team, are **false floors** (raised off the solid concrete ground) and sets built in **warehouses**.

FALSE FLOORS

These may be built into sets for many reasons, if you need to maintain the illusion that a particular set is on the 2nd floor, you need working steps to visually link the sets together. To make things easier on everyone, they rarely build a twin storey set. Instead; they will raise the "upper-floor" set a little and build practical steps heading down (off screen). So the entire set of this "upper-floor" is raised on a series of wooden scaffolding. The problem for us sound people is that there's nothing underneath, and anyone walking on the set will sound as if they are walking on a hollow floor (which it is).

Possible solutions - Carpet the set (as it will dampen the foot hitting the hollow floor). Get construction to "fill-in" the under-floor area with foam, or insulation etc (this should be done DURING construction, to avoid the extra hassle). Obviously these solutions require the co-operation of the construction crew, and the production office's OK to do so. If the production cares about their sound, they will most likely have taken care of this already, but look out for those who try to cut corners. If you're shooting in a warehouse instead of a Sound-stage, then the problem will be amplified.

WAREHOUSES - VS - SOUND STAGES “The Ultimate battle.”

Stages are expensive, but provide a large, **quiet** space that can be locked-off from the rest of the world. (Its funny when you enter a stage in the morning, shoot a night scene, then go outside into the sun for lunch - very disorientating)

Warehouses are cheaper. That’s about it. No other pluses that I can think of. It’s all about the money. They have plenty of negatives though - they **aren’t** sound proof being the major one. They generally don’t have lighting-grids and heaps ‘o’ power, but those can be easily overcome. Most producers will try and get a warehouse over a soundstage for a TV series because they can build sets and keep them standing for a LONG time (if they’ve BOUGHT the warehouse, then the rental is REALLY cheap). If it’s a long term thing, then there’s always the chance that they’ve tried to sound-proof the warehouse a little, put in some lighting-grid, and sorted out the power - so it’s like a film-studio, but cheaper than long-term rentals in a real one.

If they haven’t tried to fix any of those things, then you’re pretty well boned. The space will sound like it looks (ie: a huge echo-chamber), rain falling on the naked roof (no insulated ceiling) will basically halt production, and any external noises (freeway, local businesses etc) will negatively affect the shoot.

Ok... so don’t shoot in the rain, and schedule filming for out-of business hours - yeah right! The whole point of “standing sets” is to provide for shooting when it’s raining, and film crews hate shooting interior daytime scenes, at night.

As usual every job is different, and you’ll find that allot of the stages in Hollywood are dedicated to the multiple standing sets that a TV show requires. FRIENDS would have been shot in the same soundstage for most of its 10 year run.

5 - Locations that ARE noisy - what to do?

Ok so you’re screwed. The film can’t afford to build sets, and you need to shoot at an actual location. It’s set in the 1800’s and you’re shooting right alongside multiple oil-refineries and under the flight-path of the airport which is only a km or so away.

Don’t laugh, this is exactly what I was presented with when joining the film CONVICTIONS in November 2004 as its location sound recordist. 90% of the feature was scheduled to be shot in a disused historical fort at the mouth of the Brisbane River at Ft Lytton, alongside the Caltex refinery, across the river from both the BP refinery, and the BNE international/domestic airports.

Luckily for me the director was open to any suggestions for improving his audio, as there was little money for Post Audio work. <There ended up being a little ADR, but most of that was to cover an effects fire that was required for one scene, and we knew about it in advance, as it was so loud you could barely hear directions being yelled around the set - such is the nature of effects.>

After looking at the script and accepting the fate of our location (I’d come on board JUST prior to shooting, so everything was locked in and there was NO room for alternate locations), we started to think about how to improve the audio.

Most of it came down to:

- copious numbers of atmosphere tracks
- re-taking the audio where needed (as WILD LINES)
- a high percentage of the film being V/O anyway
- judicious microphone placement
- a healthy amount of help from the cast/crew.

The “world premiere” is on October 19th so I’ll get to hear how it all worked out then, but for the moment; I’ve only heard good things from the director and editor.

Here’s where I’d usually go off on a tangent and regale my audience with long-lost memories of the shoot, bringing up specific instances where my massive amount of knowledge and forward-thinking *still wasn’t enough* to overcome the harsh-realities of shooting an 85min film in less than 2 weeks.

All I can say is that 2 min scenes involving 270 deg camera moves, lit by a single 100 watt light bulb, taking place in a 6m cubed concrete bunker, are not fun. That’s why I got the other sound recordist (technically my boomie) to do those. I thought it would all end up being ADR, but apparently they were able to salvage enough from our recordings, and the camera mic to make it work - we’ll see.

I had to record all the V/O throughout the shoot, as the main actor wasn’t available after the film wrapped. We’d usually wait ‘till the crew had gone home for the evening, so we didn’t have to ask them to be quiet. By setting-up a small bunch of office-dividers in the production office, we’d managed to make a sort-of-recording booth; it did the job well enough. The Voice Overs were re-recorded at a later date, for performance and accent - but it was worth the trouble to record them during the shoot, as it provided the editor with a guide to cut to.

To use the example of CONVICTIONS a little more, here are the details of my kit.

2 mics - a hypercardioid for interiors and a shotgun for the outdoors stuff
2 channel mixer, on loan from a shop I used to work at.
Long boom pole and short boom pole
My “Nomad” hard-disk recorder.

No radios. No IFB for the director, no feeding a video split.

On the (numerous) set-ups involving a steady-cam type of rig - I’d record to the hard-disk, and we’d use a home-made clapper board to provide sync. Otherwise, I’d plug into the Video camera.

Officially I had a boomie. Due to the nature of the equipment (no additional headphones), his lack of experience as a boomie, and the scheduling; I decided it would be better for us to tag-team on the recording duties. He started on some of the easier set-ups (close-ups etc) and we’d discuss possible mic-positioning before each set-up. By the end of the shoot I had no hesitation in allowing him to record entire scenes.

One of the many things that we did to help combat the high levels of industrial noise that surrounded us (particularly at night), was to grab as many natural effects as possible during the shoot. Wind blowing through tall grass, the tide coming in, all helped to mask the background noise. That, and the music that's been planned for the finished film.

Back to the lecture...

#1 for locations work is to try and shut down any noise makers.

First stop is getting control of the air-conditioning units, electrical generators, computers, fridges, open windows. If it's not being seen in shot, shut it down. If it *is* in shot, try and make it quiet.

You can't find what's making the noise!

Grab RETAKES of the dialog, without the camera - mic it really close - even though it's non-sync, if you do these straight after the shot has been completed, the actors will most likely be *very* close to the correct timings. Make sure you get substantial recordings of the noisemakers (post may be able to use these to "bridge" edits)

If windows need to be open during a take, try to absorb the noises coming in with off-screen sound-blankets, reconsider your microphone placement, discuss having the window closed (you never know)

Computers and other noisy props - Film makers actually have empty boxes on set instead of working computers, and route cables to the monitor from off-set so they can control what appears on screen. Or they just use an apple laptop which has no internal fan.

Drinks Fridges might require lights to be on inside to sell the illusion that they still work, and have glycerin sprayed on the glass doors to make it look like it's cold - but that's a set-dressing thing - just make sure it don't make noise eh.

Prop noise reduction is something that needs to happen on sets as well as locations, but deserves another mention. Fake Ice is good, cause the real stuff tends to go clink at the worst times.

Controlling reflections (Echo)

Pre-build some panels with absorbent material and place them at varying angles to the locations' walls. In a pinch, grab extra blacks from the grips and hang them on c-stands around the room (with the D.P.'s permission). It's not as effective as the flats, but it's better than nothing. I've even heard of people using hundreds of helium filled balloons to "break-up" the heavy reflections of a large space (just watch out when they heat up from all the lights).

Microphone selection

We pretty much covered this in my 2nd lecture, but I suppose it can't hurt to re-iterate some of the bullet points

Don't use interference-tube mics in reflective spaces (shotguns in bathrooms = bad)

The close-proximity of a body mic can overpower background noises (and the body can also block them too)

Planes, Trains and...well other random, but fairly regular, loud noises.

Perhaps the director needs to think about breaking the scene up into smaller parts. This will increase the chance of getting a good take, as it's shorter. They're going to edit it together later anyway (this also helps when working with sportspeople, kids, and actors who can't get their lines out right). Try to roll-up (start recording) when the noise is dying down rather than waiting

for it to completely vanish, as the precious second between noises should be reserved for the acting, not pre-take rolling up and futzing - good 1st A.D.s will be well aware of this little trick, it requires good timing to pull-off though, and you may have a huge increase in your recording times, so make sure you've got enough media (tapes/DVD's/whatever).

I'm tired of typing... Let's wrap this puppy up!

When it comes down to it, sometimes there's nothing you can do to make a location work, and you'll have to just do your best with what you've got. Like the time I recorded a Pilates-type fitness video... apologies if I've already told you guys this story.

The location was booked by the producers from Sydney without scouting; they were assured that it would suit very well, and as it was owned by one of the participants, then all was good. Except it wasn't. The location was a bathroom supplies display business, built into a multi-level warehouse with brick walls, a massive open area and a very solid concrete floor. The windows wouldn't seal properly, and it was situated in a busy part of town.

With hard reflective surfaces everywhere you looked, it sounded like an aircraft hanger. We shot it to look like an office, a kitchen, and an atrium (thankfully a big one)

There was literally ***nothing*** I could do to improve the sound. We'd previously ruled out radio-mics for budgetary reasons, and there was no way to break-up the reflections of the space. It wasn't a dramatic narrative, so no chance for audio-only re-takes. In the end we just shot it as best we could, and hopefully it doesn't sound as bad as I originally thought it was. The only alternative was to cancel the shoot and find another location. At the end of the day, I got paid, and did my job to the best of my abilities - and that's the way we play the game, right?

Coming up next time on Ian's wacky adventures through the sound-trade...

High-level Equipment and techniques

Aka - a chance to play around with the big-toys of the professional location sound department.

Timecode, DAT recorders, portable mixing consoles worth more than most students cars, and a sound trolley that blows it's competition away.

Oh, and a review of the location sound recording assignment, should be fun.

Ian