Listening with a Third Ear
CASE: Eric Powell

Eric: I'd like to start by thanking CASE for inviting me to come up here and talk to you guys. This is quite the honour. I would like to start what I'm going to talk about today, by introducing something that I've been thinking about for the past couple of months. I've noticed that in a lot of soundscape study, much of what we do as acoustic ecologists has become extremely polarized. I've found that there's always a very strict divide between the *good* sounds that we *should* be listening for and should be trying to nurture and include, and then there are these other sounds that are the *noises*, the *bad* sounds. The sounds you have to put up with because you're human, and so you do, but as an acoustic ecologist you say, 'OK, let's identify those,' and if you look at Schafer's ideas of acoustic design, which has been set up in this way. He's saying: 'these are the good sounds, the ones that we should be looking for. We want to live in this natural flowing landscape of sonic elements. The only problem is there are these other, bad sounds that we may be able to change later on, if we can get it together as good acoustic ecologists. We ask children what sounds they think we should replace airplanes with.' My suggestion is that we don't need to replace airplanes with anything. We have airplanes and if we listen, airplanes are actually really magnificent.

So, in an attempt to open our ears to listening to these *good* and *bad* sounds existing in dialogue, not opposition, I have conditionally titled this talk Listening with a Third Ear. I use this to reference the idea that we have one ear in the park, listening for all these good, pastoral sounds; and one ear out in the street, listening to all the loud and dirty urban sounds. Now, the ear in the street is always fighting with the ear in the park, so I'm suggesting that we could kind of develop a third ear somewhere else in-between, examining the spaces and sounds that exist between the park: the naturalist sounds and the street: the industrialist sounds.

If we as attentive listeners develop a new listening practice that allows us to indiscriminately hear the aesthetic potential of all sounds in our eventscape (I'm borrowing the term 'eventscape' from Barry Blesser, and I'll talk about that a bit more later). So what I'm suggesting is that we as acoustic ecologists can work towards a non-descriptive approach to listening, as opposed to beginning this open-eared life with questions of whether a certain sound is bad or not. We can think instead of having clean and open ears, we can then use that to listen deeper, to go farther into exactly what it is that we're hearing, how we're hearing, and why we're hearing what's causing that sound to exist. There is a way we can have these clean and open ears, without having to divide sounds into categories like good and bad, musical and noise, wanted and unwanted. Granted, these divisions will exist for some time, and will always be flexible depending on usage and the intended context. For example if I'm out in a rail yard trying to record shunting sounds and a siren comes from across the parking lot, it'll come as a bit of a surprise to me, but the important thing is not that the siren is intruding on the rail yard, but instead how the rail yard and the siren exist together, and how one affects or effects the other and vice versa. So we're talking now about accepting all sounds as existing within dialogue at this time.

I always return to my understanding of acoustic ecology, which I define as treating all the elements that compose the sounding environments, and those elements that affect those elements. So architecture, geography etc. as existing within an evolving ecological construct. Similar to a biological ecological construct, like an ecosystem. We all learned to understand those in grade seven science class – I did at least, maybe you didn't have to learn science when you were in grade seven. As these differ from region to region, so will the sonic construction. As we understand the introduction of a new or invasive species into an ecosystem, we can also understand how we might have new sounds being introduced into the

eventscape, the sounding world. We can think about the variety of changes which I've begun to introduce today, starting with the slow kind of ecological changes on a near-evolutionary scale, and (with reference to acoustic ecology, and thanks to the World Soundscape Project) we can see (or hear) today where and how these environments have been changing – very slowly, very subtly. We can also look at a more invasive and abrupt change: the re-zoning of the Toronto City Airport for example. This is a project that a lot of people fought for a long time, but now Porter is really cheap, and there are a lot more planes flying overhead. But I'm talking about the eventscape, as opposed to a soundscape, or an aural environment, or, well, any number of countless other words we can use. I think eventscape allows us the opportunity to think of everything existing as part of this, this ecological whole.

When I use the term soundscape I often tend to use it to refer to compositional forms, like an extremely aestheticized version of these ideas around the quality of sound, and approaches to the sounding world. Although, as I am here saying this now, as have others, soundscape is becoming a contested or politicized word. I like to use the term aural environment, to describe what we're hearing and how we fit within the world around us. Unfortunately, this term doesn't allow for the same openness of interpretation and encouragement of analysis as eventscape does. However, aural environments (and I still use that term primarily), allow for dimensionality: you can have multiple aural environments acting upon each other. You can't necessarily have more than one eventscape, because eventscape is saying that this experience is everything. This is all of the factors that result from that bird's wings flapping, and that energy bouncing off the trees, and putting their own energy into this experience, and eventually we pick up that energy with our ears. Whereas aural environment is something you can actually control, you can manipulate your aural environment. For example, right now we're manipulating our aural environment by having this electroacoustic transduction system so you can hear my voice a little bit louder, and I don't have to speak as loudly as I would otherwise. The best example I can think of to talk about aural environments, is actually with iPods, or other forms of personal portable audio. In that case, you're actually individuating your aural environment, you're saying, 'I'm going to make this my sounding space, the largest space that I can kind of imagine myself existing in is going to be controlled by these direct transducers right in front of my ears.'

Now, within this individuated aural environment, we have now a bunch of iPod users. They are all occupying the same aural environment, which is this individuated, personal space. However, the content of all their aural environments is completely different,. They are all at the same time exactly the same and completely different, which is great. And you can take those many individual aural environments and put them into another aural environment. For example, a mass transit device: a bus, or metro or anything like that. You have all these people now existing in one place, and hearing that place, and these listeners now hear that as mediated through their more individuated aural environment. Now there exists a multi-dimensionality of aural environments, all in flux and movement. We can then go one step further up and hear, the aural environment of the mass transit device moving along, now an aural environment filled with smaller aural environments, affecting the aural environment of the street or tunnel outside.

I don't want to keep talking about that a lot, I just wanted to introduce my understanding of that term and where I'm situating how I think about the sounding environment, as not specifically ‘soundscape.’ I think soundscape is one function of what we can do with electroacoustic technology and an acoustic ecology bend: we can qualitatively examine soundscapes and we can also talk about the eventscape: all the sounding things that happen. Additionally, we can also manipulate aural environments – and people do everyday. So, we have these multiple ways of thinking about, and talking about sound, and I wanted to encourage you all to understand individual sounds as existing within the eventscape because they simply are what they are. There is not a better sound or a worse sound.

But there is still a clash between this theory of the third ear and even my own practice. So how can this approach towards the third ear, this balanced, open-to-whatever-happens-happens ear, how can that be manifested in artistic practice, or for me personally, how does that affect my work?

To begin with, I use soundwalks and field recordings as a starting point for most of my creative work. I generally have a very phenomenological approach to recording which means I simply go places, you know with some kind of device to capture sounds, and simply allow what happens to happen. My only intervention in space, not always, but generally speaking is being the one deciding when to record. There's a nice example of that here.

[Plays excerpt]

It's a windy recording, don't worry. So in this example, I even catch myself by surprise. I don't know if you could hear it that well, but I just remarked on tape as I was trying to capture the Bowen Island ferry horn, the horn sounded and I wasn't ready with the recorder. So, now I have a great recording of the end of the ferry horn and me saying, “well, there's no warning from the ship's horn.” I also end up with particularly interesting things, or sounds I may not have intended to capture. When I was working on a bus piece and trying to collect transit sounds, I got some really good conversations of West Van girls, as they talk about how terrible their lives are.

[Plays excerpt]

So that would be the phenomenological approach to recording. To say to oneself, 'OK I'm just going to be places and be receptive. I'm going to accept the fact that I'm always listening.' I find it difficult to simply adopt a more passive trend, but I'm always trying to figure out exactly what that sound is, how it fits, how it works. The correlation between that sound that I'm hearing in one place or moment in time, and this other sound that I'm hearing in another. When we were on the soundwalk today there were all these really nice rhythms that kept coming back as we moved up away from the beach, the regular rhythm of the waves was kind of taken over by the shuffle of footsteps – everyone was treading very cautiously because we couldn't see. And we had this back and forth rhythm, moving as two people together. For those of you who weren't here: we were in pairs, with one person blindfolded or with their eyes closed, and the other leading. So there was a very strong connection to this other person and the rhythm of their walking.

As a result of engaging with this phenomenological approach, I tend to integrate noisier elements into my compositions. Well, we'll call them nosier, but they are actually just broadband sounds: traffic in particular comes up a lot. It is a sound that is extremely prevalent in most urban centres. I think that it's important to catalogue those sounds as much as it is to catalogue the more pastoral sounds. One of my previous compositions was written for eight channels of airplane sounds and trombone, exploring how you can take the non-musical sounds of airplanes and integrate them into more musical concert programming. The piece we'll hear tonight was written for ferry horns and trumpet. It's nice to have the two, the musical sound and the non-musical sound. In this trumpet piece, *We should do this again on a cool, crisp day*, the trumpet actually mimics seagulls. So we have these kind of shipyard sounds coming out of the trumpet and then we have these actually very melodic musical sounds coming out of the soundscape component.

As I mentioned, there are a lot of paradoxes in kind of assuming this non-biased approach to sound. What it does allow me to do is have a more objective approach to the collection of sound that can then

lend itself well to mapping projects – as I say I'm just putting myself someplace and making a recording. Granted, I am being subjective in my choice of where I record, and in how I treat the material. But, it's less about whether or not something should or shouldn't be there, it's about simply the fact that it is, and therefore it is representative of that particular area, and it is sounding in such a way as would be characteristic if you were to revisit that place later on. For example here if you walk down past the parking lot you'll always hear that fan from the kitchen, and there's the whine from the pool pump. And, you'll always know these sounds. If I were to record that and play it back, you could say "well yes I recall that there was in fact the pool over here and the restaurant over here." You could use those noisy cues to localize yourself in an otherwise extremely pastoral environment.

On a more practical note: as a result of this approach I tend not to use a lot of processing in my composition. Usually it's based on either looping, as in the Ferry piece, or as we heard yesterday with the Metro piece, it's just very transparent, simply cross-fading and a small amount of equalization and of course, editing – trying to figure out where exactly I want put things in the space and time of the piece.

I can talk a bit more about the difference between space and place and how that is actually affected by sound. As we heard this morning, there's a very strong association with the sound of a place and especially a sense of being home. If you have your home village, you will know exactly what it sounds like when you get there and then if you hear it represented you'll probably will be able to latch on to certain cues.

So I think that the two terms space and place need to be defined by their usage. If the plan is to talk about just an area that is defined by walls or not, but simply an area in the kind of cosmological sense. Space is just something that is usually bound by some parameters, be it as far as you can walk in a day, or how much of a field two oxen can plough in twelve hours. You know that would be an element of space. Just an arbitrary section of the world that we experience. Whereas place is always affected by the user, the person who is actually in it. So when you start to develop a relationship with a particular space, a particular area, it starts to actually have some meaning, and therefore would become place.

Each place has a particular resonance with an individual, a relationship is formed as they begin to understand what certain sound events mean, how they're formed, and how they react with that particular space. Already many of the participants in this conference have developed a relationship with this particular place. Noting that the centre of the room is not the best acoustically speaking. You get this very interesting slap-back echo. So we've already turned this room from just a space – a random selection of walls, into a an actual place that we have a relationship with and we understand sonically and we understand physically, and I'm sure many of the visitors here understand it on a particular emotional basis. So all these things can exist within place.

So, now would you like me to continue rambling? I have many other great things I can play for you. I can also talk in more detail about my compositional process. I've been working with mapping as well: using sound as a vehicle for interactive map making. I'm not really sure what your interests are. I can talk for hours and hours about all kinds of things, but I'd rather talk about something that you people are interested in.

Response: I'd love to hear some more examples, and I do really want to hear about the mapping.

Eric: OK we'll start there then. This is a favourite of mine that I also got in Mexico, but it didn't fit into the piece, but this would be I think a fine example of both the integration of noisy elements and the

phenomenological approach to recording. It's one of the barrel organs that were everywhere in public squares. Harmonipan barrel organs. He was playing on the median of an extremely busy street, and he just kept going and going and going. It was just fantastic, the relationship between the vehicles, and this worn out musical instrument. How he's put himself there, he's creating that particular sound intentionally, and yet here he is in the middle of an extremely busy street.

[Plays excerpt]

So he's got remarkable perseverance I think. But there is a certain moment, as though he intended to stop, because there was traffic going one way in front of him, and traffic going the other behind him. So he was standing in between lanes of traffic, and he would play more vigorously when these cars in front of him were stopped at a red light, and then would kind of take a little break and wring out his arm while they were driving back and forth. So there is a call and response between those two elements inside that particular eventscape.

Question: Is this Mexico City?

Eric: Yes. Right around the corner from Princess Cassosoa.

Comment: I am interested and could add something more about those little organs. I know about them in Mexico. They're very popular to see there. So what is interesting about them is they're kept by the government and there are people who actually make their living by playing these on the streets, and whatever people want to give them, that's their income.

Eric: That's why their wearing uniforms. They also look like they're police officers, but no insignia of any sort, just playing.

Comment: The problem is, with these little organs, they're now very old and they're starting to break apart, and the government doesn't give any money to fix them. Because it's their way of surviving, they themselves try to fix them, keep them alive. Some of them, they are completely atonal. They are just playing. It's a kind of sad image, because you look at a person who is kind of desperate to make some money, and he's just got to keep playing. And the tune is just completely atonal, like a Shoenberg piece or something.

Eric: Well maybe that's it, it's a new government initiative, they're having Shoenberg pipe organs. Trying to get with the 20th century. Well that's great. I was completely fascinated by those instruments. Largely because of that quality they have, they're just kind of jury-rigged together and don't play in tune and don't play a tune. It's great.

Comment: You had a close-up part of that last night in your piece.

Eric: Yeah, that was actually two other recordings.

Comment: Right, of the same sort of thing right?

Eric: Yeah of the same instrument, but different examples. The favourite experience I had with them was in a large square there were two, one on either end. I think they had kind of sussed out where they could stand, where they wouldn't be able to hear the other guy. They figured that playing on opposing

sides of the square was far enough away, and as you walked from one to the other, there was a wonderful overlap between the two, because their acoustic horizons were much larger than they assumed, so in a way these two were just playing a duet with each other each other, but the only way to hear it was to walk back and froth across the square. As you walked from one end to the other, you'd get this really weird combination in the middle. You were hearing both at a similar amplitude, but one was coming from the left and the other on the right, so you had this stereo field combining these two random melodies. So that's a particularly good anecdote with regard to how place and sound fit together. So we have these people who are creating the sound in the environment, and their perspective of it, but then there's the understanding of mobile perspective. So I can move between these two and adjust my experience according to my likes or dislikes in that particular regard.

I have some other interesting ones. This is from a film shoot that I worked on for a colleague of mine at Simon Fraser, and it's up in the mountains, the coastal mountains. He needed a guy to shoot a gun for some reason. I think he just liked guns so he worked it out, but the reverberation was fantastic - you're introducing a really strong broadband impulses into a large, open environment surrounded by mountain walls. And because of the amplitude of the impulse, you actually get a really strong reverberation from it. Even though the reflecting elements are many kilometres away, you can actually hear the effect that the mountain has on this sound.

[Plays excerpt]

It's really the tail of the last shot that is the most interesting because you get into the rhythm of his firing pattern responding with the echoes from the mountains. It would eve become possible to ‘play the mountain range itself, if the person firing was using an instrumentalized approach to the rhythm of firing this gun, you could build very interesting rhythmic and dynamic changes.

OK I've got about fifteen minutes, so I'll start talking about mapping a little bit. The project that I have been working on and presenting recently is called *sound.garden.scape: Gastown*, which is the second and third iterations of a series of *sound.garden.scape* pieces. The first of which was presented in Montreal on 5 short-range FM transmitters, and I'll explain that piece, because it explains the title which is no longer as relevant as it once was. We were trying to create an artificial garden space for an activist conference that was all about interventions. So we had a corner of a very industrial-looking loft space that we, using sound recordings, were able to transport into a sonic oasis. We decided to create a community park using soundscape elements broadcast across these five transmitters. There were a mixture of interactive and static stations, one where you could jump rope and you'd hear a song that would speed up or slow down based on the rate of your skipping. Another was a little nook off in the corner with a tree where there was a recording of some old French men playing boules. So you could immerse yourself into this alternate sonic garden. As for the name, Soundgarden was already taken by some band, so I was reading lots about soundscapes, and I thought, 'let’s just call this a garden-scape. Throw the word sound in there … and, problem solved.' For my grad project at Simon Fraser, I took a similar idea of using multiple short-range FM transmitters to represent one sounding space into an alternate one. But in this case, the goal was not just to create an alternate aural environment, but to re-present a mapping of Vancouver’s Gastown area, broadcasting it in an art gallery on Main St.

In develop the mapping system for the Gastown piece, I decided to use a fairly of arbitrary system of overlapping circles that I could impose upon a map, because otherwise I would have ended up walking around all day long saying, 'is this good? Is this what I want to be capturing? Is this what's going to tell me what Gastown is?' So I had this series of circles each representing a unique are or sounding space within Gastown that that I imposed on the map and would shift around depending on that day’s

exploratory soundwalks. I had been spending a lot of time walking around the Gastown area so I knew well enough what each section of the area was like. So I was able to work out this imposed series of circles within just the shape of Gastown itself, which is quite handily almost this exact shape [draws on whiteboard], like that roughly. Here's the water, these are all the waves and boats. And this was a waterfront station, the Skytrain station. So below that I was able to put the steam clock. Let's see, this was Crab Park, I don't' know how well I can draw a crab, and this was Blood Alley, supposed to be a little alleyway tucked away from the main street. Next there was the Mexican restaurant. Then there was Gassy Jack, the statue here, at a five way intersection, and then the bar, Cambie's – so we've got a little beer glass. And, Barry do you remember the last one?

Barry: It was the bus stop?

Eric: Oh that's right. Barry was my supervisor on this project, so he's the person I can go to for reminders. OK so we have our lovely pictographic representation. So all of these areas were derived by imposing this system of overlapping circles onto the map, then exploring each of the areas within these circles. After extensive soundwalking and many attempts at various different types of recordings, I eventually worked it down to the specific locations within each area, and making binaural recordings. I used a head-mounted microphones, and repeatedly visited these eight locations, each of which all had enough of a unique sonic characteristic that they could be discernible to a specialized listener such as myself. In fact, I can still go to those tracks and tell you which seemingly random street sound is which, just because I spent a lot of time listening to each area.

So, each location had certain unique characteristics: the waterfront station started with just a recording of the inside of the station and I wanted to make this a more dynamic experience. Kind of like a sound walk where you actually have some ability to intervene or interact with the sounding environment. Like today, you could choose how you want to walk, if you want to scuff your feet or walk really quietly, that's your choice as a soundwalker. You have this ability to have some interaction with the sounding environment around you. Each of these eight locations had an interactive component, like a button you could push or a dial. As you moved through the installation space, you would be able to go from radio station to radio station to access each particular soundscape, but also to have some kind of interaction with it, some way of affecting it.

I can describeeach of the eight locations quickly. Waterfront station had the interior ambience playing continuously, and when you pushed the button the Skytrain would arrive. The next time you pushed the button the Skytrain would depart. So to fully experience this you would really have to listen, and you would have to try more than once to hear all the sounds in the piece. For the steam clock there was a digital clock where the numbers would count up, so it would display one through twelve, and cycle through each time you pushed the button. And you could cue the steam clock itself, it would sound the hour, the quarter hour, the half and three-quarter hour in rotation each time the button was pushed. The background track was just the traffic – it's an all brick road there, so there's this really great slapping traffic sound. Blood Alley was recorded in a nook just off of the two main streets. It is a very quiet back alley with a man pushing a shopping cart, and a lady walking by in heels as the triggered sounds. This was similar to the Montreal version with the men playing boules, this slight respite from all the traffic everywhere else. Crab Park was recorded on the other side of the train tracks. I don't know how well you all know Gastown. I have maps I can show you later. But it was a very ambient soundscape. There were some waves, and an air plane would go by every now and again. And there you had this triangle that you could pull, because I thought that was nautical, and you could cue the various key sounds of that area like the SeaBus, or a helicopter. For the bar, the Cambie, there were four recordings of conversations on the patio. One was placed in front of the binural listener, the second to the left, the

third to the right, and the fourth behind. And you had a switch button interface. So you could turn on the conversation in front of you, and turn it off. You could turn on these ones and you could play all four at the same time and have a really rowdy bar, or you could just eavesdrop in on these guys and find out what they're talking about. For the Mexican restaurant, the interface was a door. So as you opened the door you would cross-fade from the interior sound of the restaurant to the exterior sound of the street. In the installation in Vancouver B.C. it was a full size door so you could actually walk through and go from one space to the next. I recently presented this in Mexico City and was confined by the space of my luggage, so I built a much smaller door, about 18 inches or so.

With Gassy Jack there was a potentiometer built on a box that had a graphic representation of that five cornered intersection, and I made a recording of each of the five corners, and so you could spin the knob and travel around these five corners without actually having to move. The bus stop, was Abbot and Hastings. The listener was positioned on the corners of Abbot and Hastings and when you push the button which was mounted on a pole similar to the call buttons, or stop-request buttons on transit buses, you could actually summon the bus, which would take you off for 30 seconds or so, so you could get away from the traffic noise of Abbot and Hastings.

Now through all this I always made sure that when I was recording for the project I maintained a North as North alignment, so in the installation, both iterations actually, the audience will always walk in and be able to face North in Gastown. So all of my recordings were made with me facing North basically, which is handy to do in Gastown, because there are big mountains, so its easy to maintain this positioning.

The goal of this project was to create a user-friendly installation that they could move through, the same way they would a real sounding environment, with the focus on the act of soundwalking, which is the embodied, dedicated act of listening. Quite simply being there and listening, and being aware of all the sounds that occur within the space. So in that respect I think that this was a particularly useful vehicle for mapping, especially the soundwalk construction, because you're able to move and to have the relationship between two sounding places, yet you're still focusing on the act of listening, with your Third Ear no less.

There are other mapping options, I considered. You can use time as your variable. Speaking of time, I think I'm running out. So I think it's important to understand, as much as I'm talking about this Third Ear, this other way of listening that's not quite what we have now, we need to start using this way of listening: incorporating it into performance, into composition, and into acoustic design. As we were talking about at the end of the Show & Tell last night. As you start to engage with these sounds, and not immediately judge them, or if you do judge them and say these are bad sounds, but you might find if you actually listen to them and develop some kind of knowledge of their potential intricacy or just being open to the aesthetic possibility of those sounds, you will find that there is always a little bit more, or something to them might catch your ear. So I mean here we are, we're all here together thinking about these things, so that's what I think, and here's how I've kind of taken that into various different directions, and thank you for your time and listening.

Darren: Did anybody have any questions for Eric before he disappears?

Question: Well one thing was the transmitting, where does that come in?

Eric: I wanted the users experience in the installation itself to be as free as possible. I wanted you to be able to just go with a little headset and walk around the installation space, and you'd be able to move

from place to place. When I presented this in Mexico, I didn't think that they'd be happy with me bringing a lot of random electronics on the plane, so it was all presented on headphones. So you had to go to each of the eight stations and put on headphones. You could put them on and be at the Cambie. Take them off, and you'd be back in Mexico, and then you'd be in the Harbourfront Station, and then you'd be back in Mexico, and then somewhere else. So the reason I went for transmitters is because it meant that I could just hang a transmitter for each of these eight locations from the ceiling on eight different frequencies. So people could just show up, put on headphones and a little radio, and they were off and running. They were able to move through Gastown as they moved across the radio dial. They stayed engaged in the installation the whole time. I feel this created a more heightened sense of being able actually to move through the represented location itself, as opposed to always shifting from being immersed in a representation of this place, and then removing yourself. You didn't have to go back in and out all the time. So that was my choice towards using short range FM radio.

Question: Do you keep the headphones on as you move through it? I missed the opportunity to check it out when I was there.

Eric: Yes. Oh, the one in Mexico actually you had to take the headphones off. They were installed, so there would be a cluster of headphones at each particular interactive device. So it was ungainly in my aesthetic opinion, to have that as the delivery method.

Question: Were you able to overlap the sound fields as you moved through the space? Or were they distinct sound fields?

Eric: Like with the radio broadcast?

Response: Yep.

Eric: They were each broadcast on separate frequencies, but some would overlap because they were on adjacent frequency bands, and I had analogue tuners. So you would have to slide the dial, and as you slid across you'd sometimes get a flash Led Zeppelin, then the Cambie, and you'd go “Oh that's kind of interesting,” and then you could kind of edge your way into the steam clock, and then back to Led Zeppelin and have a little dance party for awhile. Actually I found some of them, especially with the neighbouring frequency bands the key sounds, which were particularly distinct, would actually override – the proximity effect. They would come from one transmitter and be picked up on most neighbouring frequency bands. This has happened with all of the FM installations that I've done. You'll find that some signals are particularly well suited for broadcast on FM.

Question: So you didn't actually have to push a button anywhere to engage the sound, as long as you were tuned to it?

Eric: Right. So the sound was running constantly, and you would be able to queue these key sounds or to change your relationship to what you're hearing like with the example of the five intersections, where you could turn the dial to move, but it was always playing.

Barry: There was one other variation on that experience, where if you had a digital radio, where you could tune and pre-set it you could skip the static and the commercial stations, and actually stay. But interesting enough, when you have that ability to just zero in on this location by pushing the button associated with the FM frequency, it was interesting that in fact you could be anywhere in the gallery space and have chosen you know the Harbourfront Station, but because you have the visual thing, how

you've mapped the vista onto this physical space in the gallery, that when you were over at the Waterfront Station, you tended to want to hear that even though theoretically you could have heard it anywhere in the gallery. But then of course the interaction was there, there was a little graphic, a picture, it heightened the sense of it being a sound walk. In that sense of course it did lead across, you were choosing waterfront then Crab Park. I guess theoretically in a really large space, you could have the transmitters... we debated that, because then you could just move without having to reach in the space, but in the gallery space, it wasn't large enough to do that.

Eric: And that was also a technological reality of the power of the transmitter that I had. If you have really small ones then you could probably do it. The piece that I presented in Montreal used particularly low wattage transmitters, the small car ones. For that piece all the sound was broadcast on the same frequency, but they were just low wattage enough that they didn't actually interfere with each other, but you'd end up with a bit more overlap, and a few dead zones. The broadcast area was a medium sized room, and it worked really well in that respect, but my piece in Vancouver was presented a nice sized gallery, and I wanted people to actually be able to move, and sit down on couches and eat popsicles, or do whatever they wanted to do: have dance parties, etc., so I needed to broadcast on unique frequencies for each location. Anything else? Thanks a lot.