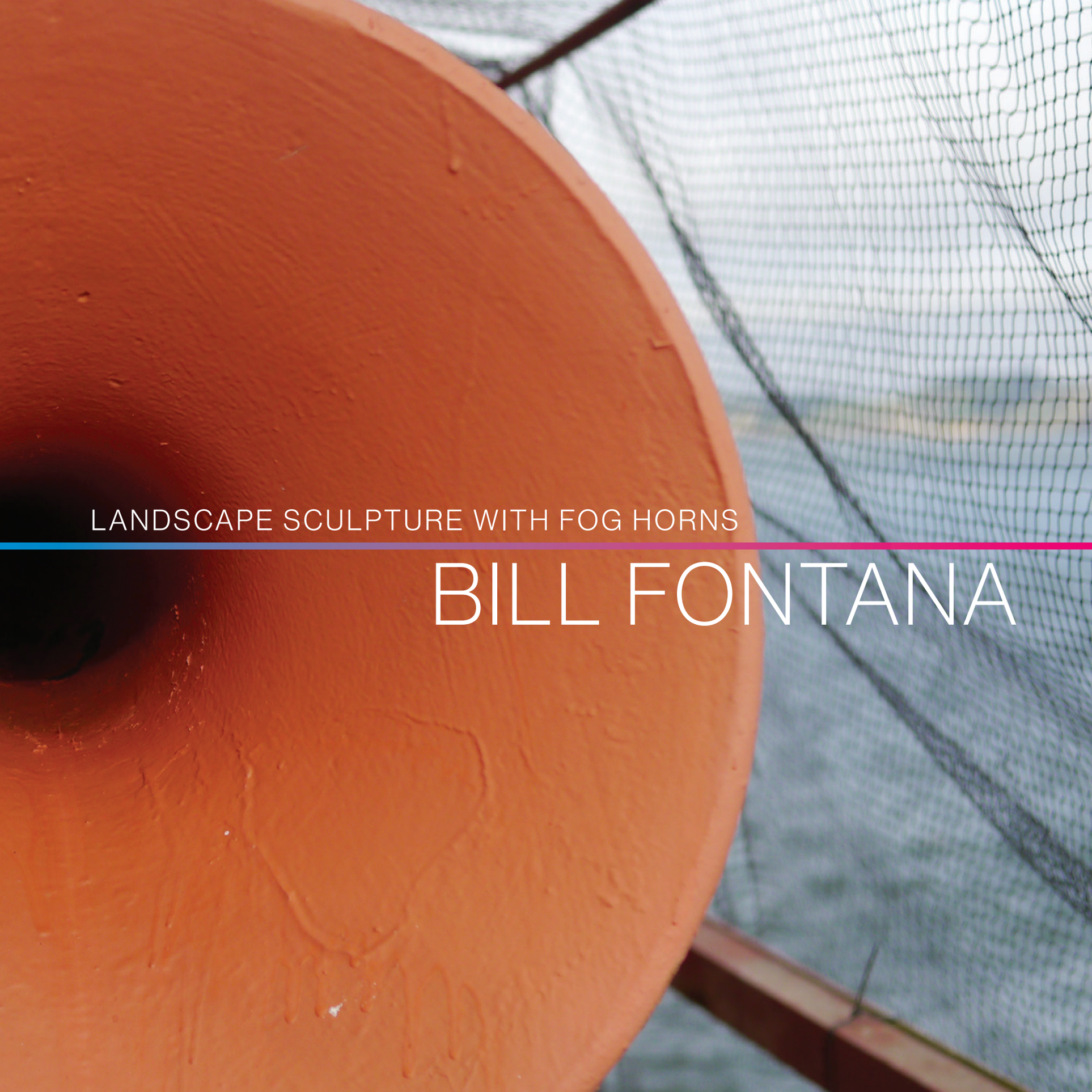


LANDSCAPE SCULPTURE WITH FOG HORNS

BILL FONTANA

NOTES

FROM THE 1982
VINYL RELEASE BY
BILL FONTANA

Background

As a composer, I have been concerned with the exploration of musical form in the everyday sounds that occur in a variety of environments. The central aesthetic issues are: 1) how is a given sound defined by a volume of space; and 2) how do the acoustic conditions of a given space define a sound? These concerns have led me to work with pure sound as a sculptural medium.

The sound processes that are the basis of my recent projects are environmental, natural and man-made. My method has been to infer a time structure created by the simultaneous comparison of the same sound process from many points in a landscape. The resulting structure is an imaginary landscape, created by reducing the real space between sounds in the landscape, while bringing together the real time between these sounds.

In 1976, while living and working in Australia, I began to make eight-channel field recordings of environmental sounds. This proved an ideal way to notate and present the unique sound forms generated by the landscape. In 1978, these eight-channel field recordings were presented as an exhibition, called *Sound Sculpture,* at the National Gallery of Victoria in Melbourne.

In 1980, I began working with outdoor sculpture sites to explore the real time acoustic relationships existing between a sculpture site and its surrounding landscape. These installations were realized with the technical assistance of the Bell System affiliates. Eight Microphones were installed within the landscape. Then, sounds of the landscape were recreated at the sculpture site.

In 1982, I created my first set of radio sound sculptures with the support of KQED-FM in San Francisco and National Public Radio's *The Sunday Show.* One of these works was a live radio version of *Landscape Sculpture With Fog Horns.*

Landscape Sculpture With Fog Horns
Installation Version, 1981 (19:50)

The sculpture site of this version was the East Wall of Pier 2, Fort Mason Center in San Francisco; and was created for the New Music America '81 Festival. At the sculpture site, listeners walked along the 600 foot pier, on a trajectory towards Angel Island (3 miles away). At the end of the pier, all of San Francisco Bay is visible. For 300 feet of this walk, listeners would pass under a sequence of eight loudspeakers. Each of these played a live broadcast of ambient sound from each of eight different and distant microphone locations around San Francisco Bay. They were:

Point Blunt, Angel Island
West Garrison, Angel Island
Treasure Island
San Francisco Yacht Harbor
Fort Point
Legion of Honor
Cliff House

Acoustically, all of these locations have one fact in common: they can all hear various combinations of the same fog horns. Since the speed of sound is 1,127 feet per second, and the average distance the sound of a fog horn can travel is about 5 miles, a complex configuration of echo patters and sound delays was created. At the sculpture site, these delays were acoustically mixed in real time, with the fog horn sounds that are part of the normal ambience of Pier 2.

The Coast Guard Light List

Caution: Fog signals depend upon the transmission of sound through air. As aids to navigation they have certain inherent defects that should be considered. Sound travels through the air in a variable and frequently unpredictable manner.

It has been clearly established that:

Fog signals are heard at greatly varying distances and that the distance at which fog signals can be heard may vary with the bearing of the signal and may be different on occasions.

Under certain atmospheric conditions, when a fog signal has a combination high and low tone, it is not unusual for for one of the tones to be inaudible.

The intensity of the sound emitted by a fog signal may be greater at a distance than in the immediate proximity.

Fog signals are distinguished by their characteristics as specified for each signal. The signal characteristic is the phase relationship of the recurring sound emissions. Fog signals on fixed stations produce a specific number of blasts and silent periods each minute, to provide positive identification. The following is a list of the characteristics specified for the main fog horns in San Francisco Bay.

Point Bonita Light, 1855 and 1877 – 2 blasts every 30 seconds: a 2-second blast, followed by a 2-second silence, followed by a 2-second blast, followed by 24 second silence.

Mile Rock Light, 1906 and 1966 – 1 blast every 15 seconds: a 2-second blast, followed by a 13-second silence.

Point Diablo Light, 1923 – 1 blast every 30 seconds: a 3-second blast rolled by a 27-second silence.

Golden Gate Bridge, Mid-Channel Fog Signal, 1937 – 2 blasts every 40 seconds: a 1-second blast, followed by a 2-second silence, followed by a 1-second blast, followed by a 36-second silence.

Golden Gate Bridge, South Pier Light, 1937 – 2 horns sound simultaneously with 2 blasts every 20 seconds: a 2-second blast followed by 18-second silence.

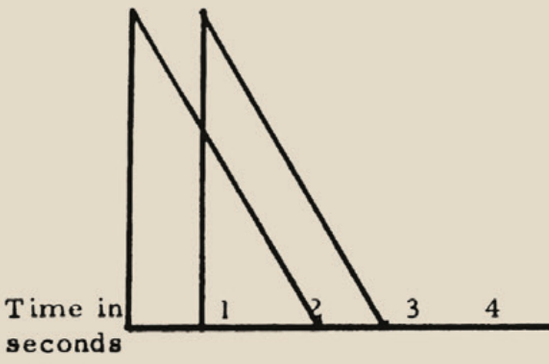
Alcatraz South Fog Signal, 1972 – 1 blast every 30 seconds: a 3-second blast followed by 27-second silence.

Alcatraz North Fog Signal, 1901 and 1913 – 2 blasts every 30 seconds: a 2-second blast followed by a 2-second silence, followed by a 2-second blast, followed by 2-second silence.

Point Blunt Light – 1 blast every 15 seconds: a 2-second blast followed by a 13-second silence.

LANDSCAPE SCULPTURE

At the sculpture site(East wa
end of the pier, all of San Fr
will play a continuous live b
these locations have one fact
per second, and the average
and sound delays will be cre
The following chart describe



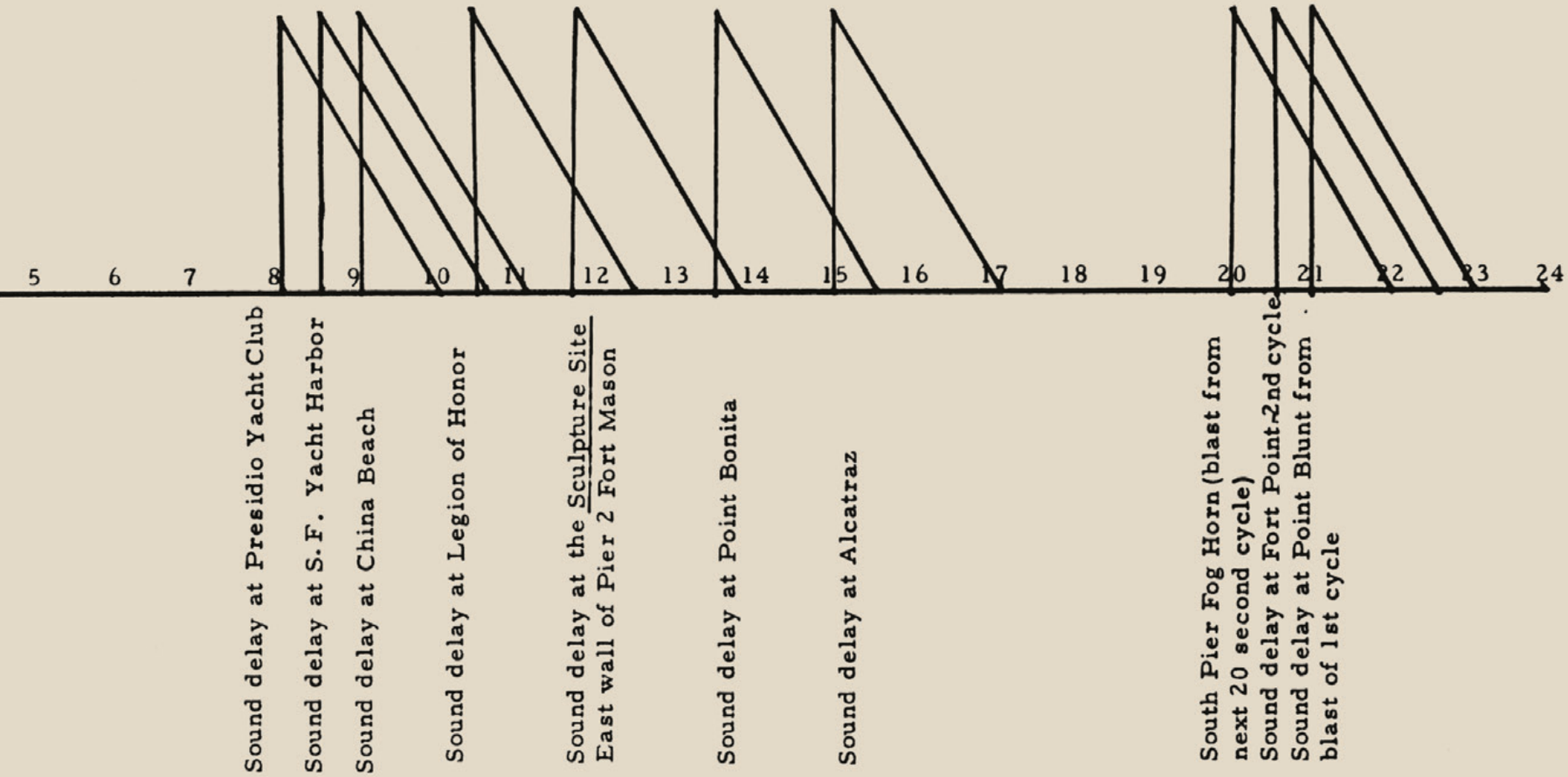
Golden Gate Bridge: South Pier Light Fog Horn

Sound delay at Fort Point

WITH FOG HORNS

Time Structure Of Sound Delays As Measured From One Blast Of Golden Gate Bridge Fog Horn(a 2 second blast every 20 seconds)

all of Pier 2 Fort Mason Center) you walk along the 600 foot long pier, on a trajectory towards Angel Island. At the rancisco Bay is visible. For 300 feet of this walk, you will pass under a sequence of 8 loudspeakers. Each of these roadcast of ambient sounds from 8 different(and distant) locations around San Francisco Bay. Acoustically, all of t in common: they can all hear various combinations of the same fog horns. Since the speed of sound is 1,127 feet distance a fog horns sound can travel may be up to 5 miles, a complex and beautiful configuration of echo patterns ated. This will acoustically mix with the sounds of fog horns one can normally hear at Pier 2 Fort Mason Center. s the time structure of sound delays from one very loud fog horn:



BILL FONTANA

LANDSCAPE SCULPTURE WITH FOG HORNS

JENNIFER LUCY ALLAN

The foghorn was invented, the story goes, in Canada in 1853, by a man named Robert Foulis. Foulis was a Scottish widower who moved to Saint John in the Bay of Fundy, where he remarried and had a daughter. One foggy evening, he went for a walk along the shore, and as he walked, he could hear the sound of his daughter's piano playing drifting across the shore. As he listened, he noticed that the lower notes sounded louder than the higher, and that they were carrying better through the fog. The piano's low notes guided him home, and from this, he was inspired him to build a foghorn.

Foulis's horn was installed on Partridge Island in 1859, but he failed to patent his invention, and died in poverty less than a decade later. It was others – including a particularly enterprising inventor called Celadon Leeds Daboll – who made patents on horns for sounding in fog. In the next 100 years the sound spread around the world, particularly around the Bay Area, where the ocean's

narrow breach of the mountain range produces dense fogs that move faster than a person can run.

By the second half of the 20th Century, there was cacophony of foghorns in the Bay Area, and these sounds had become as much a part of San Francisco's identity as the fog they sounded for – foghorns had become shorthand for the city. At one time there were as many as 91 sound signals around the Bay, including horns, sirens and bells. However, as navigational technology at sea advanced and boats no longer needed sound for orientation, these coastal sounds were also becoming obsolete. So when Bill Fontana came to record these sounds for his 1981 work *Landscape Sculpture with Foghorns,* he was taking a snapshot of not just a landscape, but a moment in history that was soon to be lost.

Fontana captured the way the sound of the horns were shaped by the topography of the Bay Area, by placing microphones at eight sites around San Francisco – Lincoln Park, China Beach, Point Lobos, Fort Point, the Yacht Harbor in San Francisco, Point Stuart and Point Blunt on Angel Island, and on Treasure Island – these picked up the sounds of the horns and played them at speakers on Pier 2 at The Fort Mason Centre. The distances between the sites meant that the sounds overlapped, were broadcast with varying delays created by the speed the sounds travelled. The intention was to "hear the whole landscape," and to do this he uses sound as material. The title of the work is quite literal – the sounds of the foghorns as they pass over the Bay Area have a form no physical sculpture can possess, taking on an aural image in and of the landscape. In these echoes and resonances are the shapes of the land itself, the horn's sounds like plaster poured into a topographic mould.

In the decade after Fontana's installation many horns were deactivated or removed, without much fanfare of consultation. However, in the 1990s, when people began to realise the sounds they associated with home were soon to

become extinct, a minor media storm blew up in the local newspapers. Wayne Wheeler, the founder and president of the US Lighthouse Society, said that when newspapers began reporting the loss of the Bay's foghorns, his phone rang off the hook with people wanting to save them. He was fond of referencing Dashiell Hammett's *Maltese Falcon* when interviewed, invoking Sam Spade chasing a crook down Kearny Street, and how it wouldn't be the same scene if it wasn't soundtracked by foghorns. Wheeler told the *San Francisco Examiner* at the time: "It's so much of San Francisco's background. You've heard of national historic landmarks. Well, this is a national historic soundmark."

There are now just a few small electric horns left around the bay, although the Golden Gate Bridge's iconic horns remain. So when we listen to *Landscape Sculpture With Fog Horns* what we are hearing, are ghosts. It captures a sound world largely from the past, but one that still resonates as part of the city's identity.

The blasts of foghorns heard on this record can orient us in the ways we relate to sound in the environment, and raises questions about what it means to remove, restore or protect these sounds.

Sound, historically and culturally speaking, is a multi-track happening, and sounds from one place can make it into another, through installations and reissues of work like Fontana's *Landscape Sculpture With Fog Horns* is not just a document of an installation, but a reflection on what it means for a sound to belong to a place. Listening doesn't just tell you about a history of sound, but also about the shape of a place, through capturing the Bay in the melancholic bellowing, beeps, and moos of the foghorns that have come to define it.

LANDSCAPE SCULPTURE WITH FOG HORNS

BILL FONTANA

A continuous acoustic simulcast from 8 different locations around San Francisco Bay, to 8 loudspeakers along the E wall of Pier 2 FORT MASON.

June 1 to 13, 1981

From FORT MASON, KPFA-FM will receive a continuous live feed, which it will broadcast live at various times during NEW MUSIC AMERICA - 81. Anyone receiving the KPFA broadcast of the sound sculpture at a location that normally hears the fog horns, will experience their own version of the sound sculpture.

Map Legend

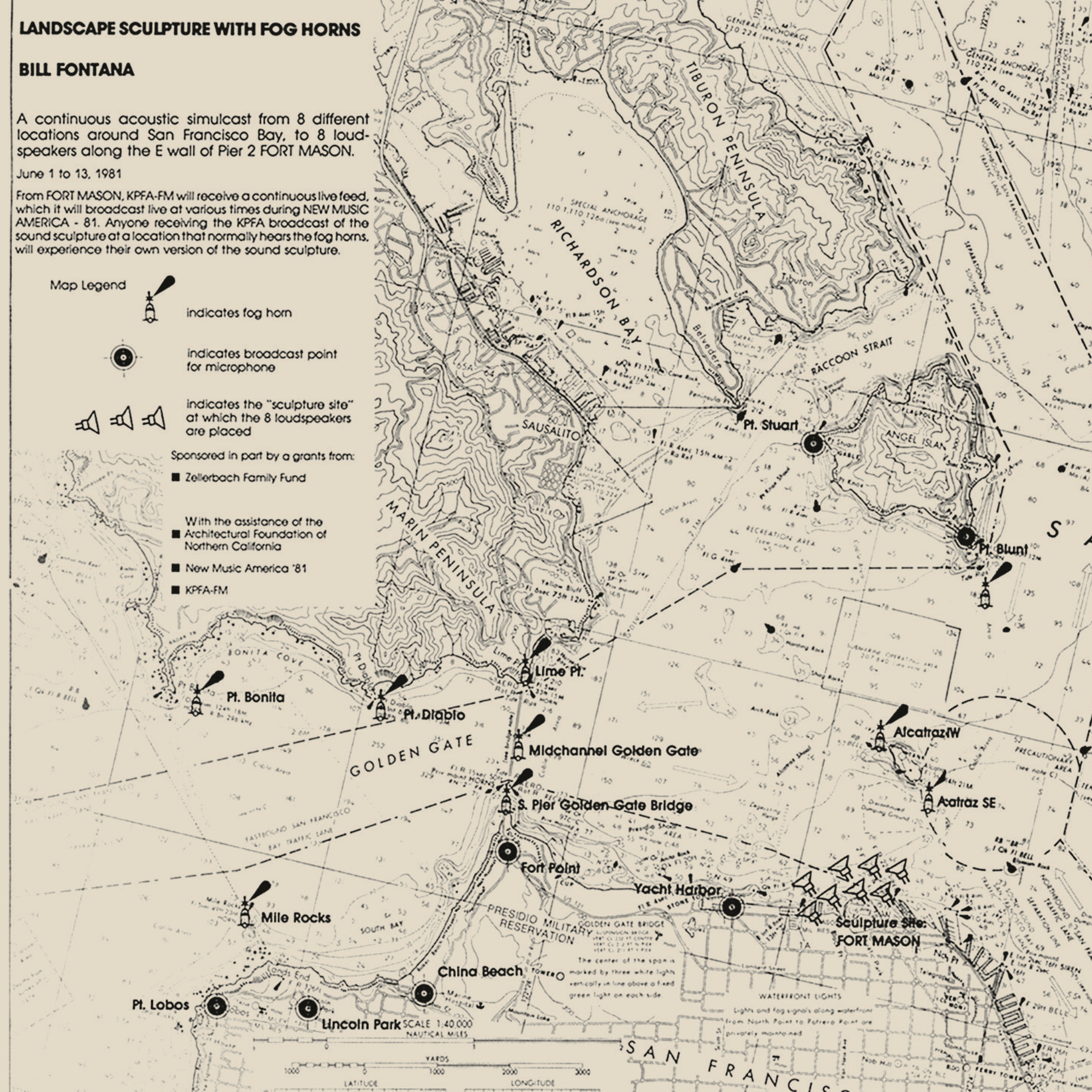
indicates fog horn

indicates broadcast point for microphone

indicates the "sculpture site" at which the 8 loudspeakers are placed

Sponsored in part by a grants from:

- Zellerbach Family Fund
- With the assistance of the Architectural Foundation of Northern California
- New Music America '81
- KPFA-FM




RICHMOND
Richmond Inner Harbor
SOUTHAMPTON SHOAL
GENERAL ANCHORAGE
N. Channel Buoy
SAN FRANCISCO BAY
Treasure Island
Treasure Island
Yerba Buena Island
OAKLAND OUTER HARBOR

CONVERSATION

BILL FONTANA
STUART DEMPSTER
CHARLES AMIRKHANIAN

Charles Amirkhanian (CA): Bill, could we go back in time to the genesis of *Landscape Sculpture with Fog Horns* and discuss how you actually approached that piece and why that piece?

Bill Fontana (BF): Well this was 1981, I had been living in Australia, and I moved to San Francisco in 1978. This period of work in Australia was a real turning point to me because I was doing a lot of work with ABC in Australia and had access to what seemed like really cool technology like outside broadcast trucks with 8 and 6 inch recorders. I was able to explore the idea of sound mapping by setting up arrays of microphones in an environment to map the environment and complexity of sounds and I became really interested in a philosophical idea that was asking myself a rhetorical question like "what is this sound that I'm hearing now?" and the answer, the rhetorical answer was "is this sound any sound, the composite of all the possible ways to hear it?"

When you apply the concept, if you think about that literally, all the possible ways there are to hear [a sound], and you take a sound that occupies a significant volume of space, that answer becomes really interesting. It starts to get into the concept of multidimensionality, and the idea that if you take a sound like foghorns at the Golden Gate Bridge and you listen to those sounds from many vantage points, some quite a distance away, the sound of the horn is arriving at a different time, and you bring that all together. I was just really obsessed with that way of thinking about the environment. So when I came to San Francisco, I was absolutely captivated with the sounds of the fog horns on the Golden Gate Bridge just imagining what this would be. Then this opportunity came along with New Music America and I had the idea of siting the work in Fort Mason so that you were a part of the environment that the work was being generated by. It was in some ways, the first work of its time that successfully explored this idea of real time mapping of the sculptural dimensions of sounds.

The way it was done was with analogue telephone lines that were supposed to be broadcast quality that were used for remote radio broadcasting at the time. I didn't get permission to put microphones in these places, the remote places. It was really kind of an amazing process.

CA: Was one of these microphones on the Farallon Islands way out to sea?

BF: That was much later, that was for SFMOMA in 1987 when I did a piece that was a live duet between the Golden Gate Bridge and the Farallon Islands. That wasn't one microphone, it was 6 microphones on the Farallons.

CA: What was the most difficult installation of a telephone line for this particular piece for the Golden Gate Bridge foghorns? Were they all on the bridge? The foghorns?

BF: No, there are two horns on the bridge: the Itban horn and the south

pier horn, the famous sound you really associate with the Golden Gate Bridge. The image on the cover of the CD is the south pier foghorn which is the one that really travels long distances, but you have other foghorns in the San Francisco bay. Near the bridge there are some on Alcatraz, there are some on Angel Island, there's the Point Bonita lighthouse, so there are other foghorns that enter into this sometimes.

CA: There must have been a process of setting up the microphones, listening and adjusting or did you just place them and get what you wanted right away?

BF: There was a lot of listening and tuning the position of the microphones and the microphones I was using. These were outdoor environments that had a lot of humidity and I didn't have the budget in 1981 to buy expensive condenser microphones to put out there. I ended up using eight Electro-Voice 635's [laughs] and there was a guy who built portable preamps for these that had a balanced output and a terminal that would connect to phone lines so we had a few of those built.

CA: [EV 635s] were sort of indestructible microphones that a rock musician could throw on the ground and pick up and still use.

BF: Well, they were okay. They were omnidirectional dynamic microphones and when you're listening to a sound like a foghorn, they're fine. When I did the piece in 1987 for SFMOMA with the Farallon Islands and the Golden Gate Bridge I exclusively used the same 635s. The funny thing was that when we went out to the Farallon Islands to install these microphones, the way that the signal got sent back to the city was a microwave antenna that was on top of the coast guard lighthouse and there was a multiplexor that would encode 6 channels of audio and video bandwidth. Working on the islands was a real adventure. Not only getting there but the fact that island was inhabited by

this vast population of seagulls, it was owned by the seagulls. And they were pretty aggressive, they didn't like the fact that I was walking around on this island looking for a place to put a microphone. They were pretty hostile, they would aim shit at me as I was walking around so it was necessary to wear a cheap raincoat and hat to keep the shit off my skin. It was pretty interesting.

CA: Did Cage teach any classes while you were studying at The New School?

BF: He'd come in every once and a while to give a lecture but I developed a pretty good relationship with him by just going to play chess with him and to just talk. I think what was important to me in New York at this time was just that these people took me seriously.

CA: A novel feeling. [both laugh]

BF: New York was really important to me and in the early 70's I moved to Toronto because I got a job as musical director of a small theater. I'd often drive to New York to connect [with] the network of people I had there. The first streaming sound sculptures I made were in New York at a place called the Experimental Intermedia Foundation. I was obsessed with the idea, I started thinking about the meaning of the word sculpture- a physical embodiment of an aspect of the human condition, and the human condition I was interested in embodying was listening. I got fascinated with the musical properties of the resonance of objects, and so the first live streaming installations I made were at the Experimental Intermedia Foundation where I took some resonant objects and put them on the roof wired with some lavalier microphones inside the objects. We'd just hear these resonant filters to the ambient sounds of the city.

CA: Is music really a universal language and is what you make music?

BF: I hope so, but it's not for me to decide that. There's a difference between one's intention and one's effects but within my bubble of the world, I think of the works

as being very musical. I think the general kind of aesthetic that I've developed, which relates to zen, has a desire to deconstruct someone's perception of linear time and to create a sense of internal presences that transcends the normal sense of time passing. That's something that I really love about the foghorn piece being on the side of Fort Mason [in 2020] because it is a recording from the past but it's somehow like it never stopped. It's really weird now because that building is completely surrounded by chainlink fence and you hear the 8 Meyer speakers along the wall of the building where they would have been originally. So you can hear this foghorn piece sounding out from behind this chainlink fence and it's almost like the building is kind of, calling out, it's weird.

CA: Do you have many pieces where someone like Stuart brings an instrument and interacts with the installation?

BF: Actually not. That was really special. The only other times I've incorporated performance into my work is an exhibition I did in 1988 at the Berkeley Art Museum that Constance Lewallen was the curator of. It was a piece in which I installed loudspeakers along the façade of the building into the garden area. I had microphones placed through the UC Berkeley campus and I had written these minimal compositions for the carillon that were intended to be these minimalist layers that if you heard them from distances at the same time they would form this composite sound image. And when the bells weren't ringing, you were just hearing all the ambient sounds of the campus.

CA: How did you work with Stuart on this piece? I remember being there and thinking it was a perfect marriage between an instrumental performance and installation. And Stuart gave it some shape because he started very quietly and intensified as the work went on.

BF: He did, we had some really interesting interactions behind that piece. It was

really exciting to get to work with him on that project.

CA: [The performance] was heard around the United States which was unusual because the NPR satellite was fairly new and the idea of doing New Music on the satellite was unprecedented. But since we had the New Music America festival that year in San Francisco, we had curators from all over the country who lobbied to have the funds to buy time on the satellite to do live broadcasts of every night of the seven nights of the festival. Stuart, let's talk a little bit more about your experience with Fontana. Did you encounter the installation and then decide that would be fun to improvise with it or how did that work out?

Stewart Dempster (SD): [Bill] invited me over. I'd never met him before. Many days before this event invited me over to [Fort Mason] to see what he thought I could do with it. And I was so taken. I mean the 10-second reverberation that was in there was a nicer reverberation in some ways than Grace Cathedral. It just felt good. I guess the idea that you could go around anywhere that was just cement floors was really raw. So he showed me different things and I went up into his room where he could phone in to the actual foghorns. They were the old dial phones then, and it was just beautiful to hear. Of course the day of the performance, it was a sunny day so the foghorns weren't running. We had to use a recording. It was still nice, but I hadn't met him before that and I was really taken with how he done and organized all this. And of course the invitation was really special.

CA: What instruments did you use?

SD: I used trombone and the big brass didgeridoo that I had set up to the foghorn pitches. I knew what they were, and it fit the didgeridoo perfectly, those overtones. Then the garden hose for the relatively extended thing with the Doppler effect from my twirling it around. I had a small conch that ended up on the segment that's going to be on the CD.

CA: When you did the performance, where were you standing and was there a live audience?

SD: Yes. It was about 70 people and they got into this kind of moving around like it's a big Tai Chi event. You'd feel this movement. It was absolutely gorgeous. Nothing I organized or anything.

CA: You're under estimating yourself- You were moving them around.

SD: Well, I was doing whatever I was doing and they just really got into it. It was such a wonderful exchange. There was a 'swoosh swoosh' sound of people's shoes scraping on the rough cement and that seemed to be kind of a lovely percussion. It was this gentle [sound], like somebody playing brushes, snare drum brushes, 70 people having their shoes sounding like little snare drum brushes. I don't know how much of that got on the recording necessarily because I'm pretty loud. So it may have been recorded at a low enough level that I don't remember hearing it.

CA: In retrospect, Bill, why was it that you didn't find other similar collaborations with musicians and your ambient sound installations?

BF: That's an interesting question Charles, I think especially when I was younger, when I have an idea, I become very obsessed with my idea. I think maybe an issue for me was that I was interested in this idea of a moment that doesn't stop and the problem with music performance was that at times it felt that there was a linear process that, especially in my younger years, didn't work so well in my aesthetic. What was so special about Dempster where he felt like a very sympathetic person there.

CA: Also, there are the limitations of a person where they can't be there at an installation for 24 straight hours, or at least most can't, and there's an element of control. I think you like to control, even though you have a lot of sounds coming in that you can't control, you

don't know what's going to be coming in when precisely, you still have more control over how the overall aesthetic will be of the installation throughout the duration, you don't have to deal with people who are getting creative on you. (laughs) Stuart, when you're doing an improvisation like that, there are points of tension and resolution that naturally emerge but you don't want to have a resolution too early, or your performance is over. So how does that work out?

SD: We organized it so that Bill would have large sections that were for him. I haven't listened to the two-hour thing for a long time but there were radio signals coming from somewhere. [Bill] thought it was from someplace other than his equipment, so that it shows up in the in the excerpt that's going to be on the CD. I didn't have any electronics that I used.

BF: It was a remarkable experience because it was something different and unusual, to combine a sound sculpture with a musical performance. I was so impressed, you were able to really make sense out of it. It was very memorable.

CA: Was that long duration something new for you?

SD: Well, I can't say for sure. I didn't have anything I had to think about except pacing and I wanted to leave a lot of space for Bill to have certain things that he was doing. I mean, I think we had a plan that way so that he'd have some space for the fog horns. I remember being so incredibly admiring of you, managing to work with all these governmental agencies that just that just blew me away, still blows me away.

BF: I remember going through my archive and one of the documents- because for every location that I installed a live microphone I had to sign a contract- one of the locations was in the Presidio, which at that time was the US Army. I had a signed contract with the Army Communications Command.

SD: And then the Coast Guard...

BF: And the Coast Guard right, and the city, National Park Service...

SD: Fort Mason probably two separate agencies at that time.

CA: That's amazing. A big part of public art is these logistical things that artists aren't normally called upon to execute and probably many of them wish to execute themselves after they get into it.

BF: Over the years. I've had a lot of projects that involve getting permissions for microphones in a wide variety of spaces. When communicating and working with people at these institutions; I try to come off not so much as an artist but more like a scientist. Talk about it more in scientific terms and point at it as an experiment. That was a useful language model.

CA: The only difference in this case is you're dealing with a communication tool which is supposed to alert ships. If you're experimenting with that couldn't you cause some difficulties?

BF: Well, the argument was that I'm not physically altering the signals; what I'm doing is mapping their ability to travel through the acoustic space of San Francisco Bay, a sound map of the bay, and my hope is that this as an interesting research article.

CA: So you're not altering the function of the signals.

BF: No, not at all. They're still audible to the right people.

SD: It was just so grand that all those dial phones were available.

BF: So that it was a great thrill of my life to be crawling around on the parts of the bridge that most people never get to see. I had a relationship with the electrical shop of the Golden Gate Bridge. I'd call them up and they would turn on the fog horns.

CA: That's pretty good.

BF: I don't think I ever in my life felt like I've had so much power as I did with that.

This interview has been edited for content, clarity and space.