Alex Hills

Interviewed by Hilary Hilscher

August 23, 2000

ARTICLES DISCUSSED IN THIS INTERVIEW:

HILLS, A., "ALASKA'S GIANT SATELLITE NETWORK," *IEEE SPECTRUM*, VOL. 20, NO. 7, PP. 50-55, JULY 1983.

HILLS, A., "SUBZERO ENGINEERING," *IEEE SPECTRUM*, VOL. 23, NO. 12, PP. 52-56, DECEMBER 1986.

HILLS, A., "MELTING THE ICE CURTAIN BETWEEN RUSSIA AND ALASKA," *BUSINESS COMMUNICATIONS REVIEW*, VOL. 23, NO. 12, PP. 26-29, DECEMBER 1993.

Tape 1, Side A

(Brief conversation about tape recorder, clock, timing.)

Hilary: So, well, you've got notes. Do you want to just start with your notes?

Alex: Well, I'll tell you what. What I started off with for notes is -- even though you're primarily focused on hearing some stories -- just because of who I am I had to structure this…

Hilary: Sure.

Alex: …in terms of time, right?

Hilary: Terrific, okay.

Alex: So let me just show this to you.

Hilary: Okay.

Alex: And I'll give you this piece of paper if you want it.

Hilary: Okay, great.

Alex: But first of all, one of your questions was what were the really significant events?

Hilary: Absolutely.

Alex: Well, first of all, I think your history covers a longer time period than I'm involved in.

Hilary: 1900 to '96, yes.

Alex: So that takes in a lot.

Hilary: It was before your time.

Alex: Who did you interview about 1900?

Hilary: 1900, actually there was a guy who was a WAMCAT (Washington-Alaska Military Cable and Telegraph) in 1923.

Alex: Amazing.

Hilary: In Seward. And so I talked to him and Bob Gleason, who had been frozen in the ice.

Alex: Congratulations.

Hilary: They were great.

Alex: Anyway in my time period.

Hilary: Uh-huh, much more recent.

Alex: These are significant events, right.

Hilary: Okay.

Alex: In 1970 the AEBC was created. I think these are accurate dates.

Hilary: Uh-huh. That's an accurate date.

Alex: So that's significant to me because one of my threads here is about public broadcasting and what that meant out in the Bush.

Hilary: Absolutely.

Alex: So that kind of leads to one major thread that I have.

Hilary: Okay. Okay.

Alex: And then another significant event -- and sort of a real obvious one -- in 1971, is the sale of the ACS (Alaska Communication System), the original ACS.

Hilary: The first ACS.

Alex: To RCA, right.

Hilary: Yeah.

Alex: And part of that was in order to close the deal RCA had to make a commitment to serve 142 villages.

Hilary: Right.

Alex: And that was actually in the…

Hilary: The sale of…

Alex: You remember all that.

Hilary: Yeah.

Alex: But that commitment led directly to the launch of what RCA called the "Bush Telephone Program".

Hilary: Which was the VHF.

Alex: Which used VHF, before satellite.

Hilary: Right.

Alex: I think… that was a significant event and then the other really major event I have on my schedule here is the purchase by the State of the small earth stations, which you are already aware of.

Hilary: Uh-huh.

Alex: And so, you know, I think others were more involved in the policy level at that time than I was but, as you know, the State sort of forced the issue with Alascom by buying the earth stations. Then Alascom ultimately agreed to come in and install them and operate them. And that made a lot of services possible, and that actually relates to the block diagram that I have in my article that shows the earth station and it shows the telephone service, the TV service.

Hilary: Absolutely.

Alex: And all that.

Hilary: That's the other diagram I thought would be fabulous in there. That was so clear for me to see where that went.

Alex: Anyway, that purchase of the small earth stations then made these services possible -- medical communications, telephone, television -- as illustrated in the diagram. So those are my major events. And then what I have in my own experience is two major threads that flow from those events. One was the development of public radio stations in the Bush, and then the other is the development of the telecommunications network, meaning telephone, satellites, etc.

Hilary: Uh-huh. Uh-huh.

Alex: And then this is… I'm going to give all of this to you.

Hilary: You're wonderful. This is just great.

Alex: But then this lists out my personal involvement so this is my little resume of how I fit into all this, and the years in '70 and '71 (when) I worked on building the radio station in Nome.

Hilary: Which technically, of course, wasn't public but in a way it really was.

Alex: And still is actually part of the public radio network.

Hilary: Yeah.

Alex: '71 and '72. I didn't build KYUK, but I came in shortly after it was on the air as the chief engineer.

Hilary: Was Croll there then? Jim Croll?

Alex: No, he came later.

Hilary: Did he?

Alex: Yeah.

Hilary: Uh-huh.

Alex: Yeah, he was after me. And that was actually the first of the Bush public radio stations, KYUK was. Then I went to Kotzebue as general manager. Effectively the first general manager. A guy named Dave Moore had actually built that station.

Hilary: Right.

Alex: You don't have contact with him, do you?

Hilary: I don't, no.

Alex: But I came in, you know -- shortly after the station was on the air -- as the first general manager and chief engineer. I helped during that same time period with KBRW [Barrow] and KDLG [Dillingham].

Hilary: Great.

Alex: But, you know, that was just helping out -- sort of spending a little time there. And then in '78 and '79 (I served) as the founding general manager of KSKA here in Anchorage. So that's kind of my little summary of the public radio stuff. And then for the telecom stuff in '72 and '73 with Alascom as… I should say RCA Alascom, I guess.

Hilary: Right.

Alex: As field installation supervisor.

Hilary: This is when you had your own plane.

Alex: Right.

Hilary: And you were flying around all the time.

Alex: Right. And then in '75 to '77 as the first president of OTZ which was the company that we set up. So that was actually the first telephone co-op to go into the Bush behind the earth stations and put in full local exchange service.

Hilary: Now United Utilities was around that period too, weren't they?

Alex: But after us.

Hilary: But after you, okay. Uh-huh.

Alex: In fact when they started United Utilities, they used to say, well, these guys in Kotzebue did this and this and this, so, well, we can do it too.

Hilary: Yeah.

Alex: And then it gets in sort of more of the policy level with the APUC, in its chief of the communications carrier section, and then moving on to '81 to '83 as deputy commissioner for telecommunication. So but…

Hilary: You know, what was so wonderful by the time you hit this, you had so much experience and perspective.

Alex: But, you know, I mean, the real interesting stuff here happens in the 70s and so I think that probably the perspective that I bring -- that during the 70s when people like Bob

Walp and Marv Weatherly were operating at the policy level and, you know, helping some of these decisions, big decisions, get made -- that I was the guy who had a number of different hats on. I was actually out there doing it, you know. I was the guy who was on the ground and so I -- I don't know, I mean I -- may actually be unique in the sense of having been in the Bush in so many different roles and so many different of these projects that were all really significant. So even though I'm a professor of telecommunications policy, with respect to this particular story what happened in the 70s, that really wasn't my role. I mean you were working for Stevens' office.

Hilary: Right.

Alex: There was Marv and Bob and others kind of doing all that stuff back in the state capital and national capital but, you know, I was kind of taking care of the…

Hilary: You were on the ground.

Alex: End result of it all, yeah.

Hilary: Yeah.

Alex: So that's my introductory stuff.

Hilary: That was marvelous. When you look at that span from when you came up in 1970 to KNOM and then finished up at the Department of Administration, what… talk to me just about that span of technology that that covered in Alaska at that time.

Alex: Well, with respect to the Bush, the technology in 1970 was pretty simple to describe. It was pretty much nothing. Short-wave radios, as it says in the one article there. So most villages in 1970 had one or maybe two short-wave radios and that was it.

Hilary: Other than the school.

Alex: Right, school or health clinic. The health clinic usually had one, sometimes the Wien (Airlines) agent would have one. That was when, you know, Wien provided most of the air service for most of western Alaska. So sometimes the Wien agent would have a short-wave radio. The problem with short-wave radio was that the aurora disrupted it seriously a lot of the time.

Then with respect to broadcast service in 1970, there really weren't very many stations out there. I think most of the coverage was due to nighttime skip. o Signals from Anchorage and Fairbanks would skip in at night and so that was just catch-as-catch can. But there was no real regional broadcast service in most of the regions of the state. A few exceptions were… KICY was on the air in Nome and they were already on the air when I came in 1970. I'm not exactly sure what their sign-on date was.

Hilary: I've got some background on them, yeah.

Alex: But in general, you know, most of these regions: The Bethel region had no station. The Kotzebue region had no station. Barrow, Dillingham, and so on, that all came later on.

Oh, and then in 1983 at the other end, well, by then we'd used the technology of the day which was small satellite earth stations. That was kind of a big breakthrough. But then, and by virtue of that… most all the villages had telephone service and not only single telephone, but by 1983, many of the villages had full local exchange service and that's part of the OTZ story was -- you know, kind of pushing out on that front. So full telephone service and then radio and TV broadcast. So they didn't have Internet yet, of course. They still don't have Internet in many cases. So that was the jump there.

Hilary: Such an exciting span.

Alex: So I mean, it is an interesting point that in a fairly short period of time from -- in my own case --- from 1970 to '83, that's only 13 years, and that was a pretty big leap. And as far as the technology goes, it was the technology leap (that) was the use of satellite earth stations, as you well remember. That was the controversial technology at the time. But anyway, that's what it made it happen.

Hilary: So you have some other notes there.

Alex: Right, I have. So I have notes that sort of run along these two threads, the two threads being the public radio, the development of that whole public radio service; and then the telecommunications, meaning the telephone service.

Hilary: Right, okay.

Alex: So first of all, with respect to public radio -- and so I think that public radio is a pretty big chunk of this -- in a way, the timing was interesting because public radio was just invented as an idea in the US of A in 1968 when the Carnegie Commission came out with their report. And so… and the notion of that report was that public radio or public broadcasting was going to come in and fill a void that had been left by commercial broadcasters. The notion was that -- they were thinking primarily about mainstream populated areas that way -- because of the way the broadcast industry is supported through advertising that the natural tendency for stations would be to program to the majority audience and not to the minority audience and so even though you might have several stations in the market, you still might end up with nobody programming to the minority audience -- which might mean, in the case of a city, it might mean classical music or it might mean folk music or it might mean news all the time or something like that. So that was what the notion of public broadcasting was -- to come in and fill that void. In Alaska, of course, it came to mean something quite different.

As I said, after the AEBC was formed in 1970, then they very quickly set about getting some of these public radio stations in the Bush started. And I was of those (who) worked briefly for, well, worked with KNOM, which, as you said, wasn't technically a public radio station.

Hilary: But in terms of its…

Alex: But practically speaking was.

Hilary: Yeah.

Alex: (I) worked briefly with KYUK, but then the one that I had most of my involvement with was KOTZ, so that's a good one for me to talk about.

Hilary: Great.

Alex: I arrived there in June of '73 after Dave Moore had built the station and it was on the air, but it needed a general manager to kind of pick up the operation. And so -- like the other (Alaska) public radio stations and quite different from the mainstream public radio stations down south -- the programming that we were working with was not… we weren't worried about the minority audience within a region that already had lots of stations. We were looking at a region that didn't have any coverage at all. So we weren't able to get into such esoteric things as, you know, Brahms and Bach. It was more like just providing a basic service. Basic information and a little entertainment that would appeal to a wide audience. So, for us, that ended up to be something that sounded a lot more like a commercial radio station than a public station. It meant, as far as the music goes, Top 40 and country and western (which was really popular in the Bush) and then lots of news. The more local and regional news the better and then, of course, the ever popular message services.

Hilary: That's a big one, a major… major part of the story.

Alex: Because remember there was no telephone network in place.

Hilary: Exactly.

Alex: So the only way to -- well, not maybe the only way -- but one…

Hilary: One of the only (ways…)

Alex: An important way to get a message to go out would be using the broadcasting station and then…

Hilary: Which, of course, was totally illegal given the…

Alex: Right. Well, under the FCC…

Hilary: The conventional approach.

Alex: Right. Under the communications law and the regulations, the broadcast service (was) intended to be a broadcast service, which means from one to many.

Hilary: Right.

Alex: Not from point to point, but no one worried about that too much.

Hilary: Yeah.

Alex: And so at KOTZ we called that service Tundra Telegram. At KNOM it had been called Village Hotline. And it seems that…well, in fact, I think that KNOM still has my voice on the tape.

Hilary: No! Is that right?

Alex: At least the last I heard they did. I'm not sure.

Hilary: Oh, that's so great. Is Tom Busch still there?

Alex: Yeah, he's still there, yeah. Uh-huh.

Hilary: That's so great.

Alex: That's where a lot of the stories always seemed to come out is, you know, about those messages which were very often about private matters but there was no other way to communicate, so people would…well, so first of all, it was probably the most listened-to program of the day because it was like listening in on the party line.

Hilary: Yeah, yeah.

Alex: And secondly, the senders of the message would try to figure out secret little ways to say things that no one else would understand.

Hilary: I love it. And of course everybody was tuned in.

Alex: Everybody was tuned in trying to figure out what was going on.

Hilary: The Tundra Telegram was at KYUK or was that KOTZ?

Alex: That was KOTZ and Village Hotline was at KNOM.

Hilary: Yeah, yeah.

Alex: Right.

Hilary: Then there was a Mukluk Telegram and there was a Tundra Topics.

Alex: Yeah, different names in different places, yeah, but those were the two that I remember.

Hilary: Great, great.

Alex: It was the same service in all cases. We had regularly scheduled times. Like at KOTZ, I remember (that) 12:30, noon, and 6:30 p.m. were regular times when all the messages would get read, but then -- on urgent messages -- you would sort of break into the program for urgent messages.. That was just all in a day's work. Since it was just a one-way message service, the sender of the message always really still had a challenge to figure out a way to get the message to the radio station. In other words…

Hilary: Oh, of course.

Alex: In other words, if someone in Kiana is sending a message to someone in Noatak and the radio station is in Kotzebue…

Hilary: In Kotzebue.

Alex: Well, once the message gets to the station it can be read but…

Hilary: How do you get it to the station?

Alex: Exactly. So a lot of times, Bush pilots would bring in notes or maybe the message would be relayed by someone's short-wave radio to get it as far as the radio station.

Hilary: Sure.

Alex: Things like that.

Hilary: Oh that's great. Talk to me, Alex, about those messages.

Alex: About what?

Hilary: About the messages.

Alex: Well, I'm trying to remember. I remember someone left her false teeth on the dresser at home and was asking that they be sent in.

Hilary: That they be sent.

Alex: Right, so that was one that I remember. Then, so I went there in June of '73 and I had a very young and very enthusiastic staff and there were four people that were on the air. There were four air people, a secretary, and me -- and that was the whole radio station. And let's see, I can probably still remember the names. There was – well, so the one very well-known person who was on the original staff was Nellie Ward, who is now known as Nellie Moore.

Hilary: Sure.

Alex: And she has been making some headlines of her own recently up here.

Hilary: Yeah, what's been going on with her?

Alex: She got into a flap with Kohanic Broadcasting.

Hilary: That was it.

Alex: KNBA, yeah. She was pretty independent-minded back in those days too, so [I] had to kind of harness the energy there. And then Nellie's brother, Delbert, worked there, Delbert Ward. These people were all either high school students or barely out of high school. They were real young. Then there was a young guy named Joe Hill and the fourth one was Carolyn Fields, who was the daughter of Art Fields.

Hilary: One of the Fields from...

Alex: One of the, yeah, he was the air taxi out there and (had) a few other businesses.

Hilary: Right.

Alex: So it was the four of us … and then my secretary was Phyllis Harris.

Hilary: Phyllis Harris, yeah.

Alex: And that was the whole staff. But I was the morning person on the air. Of course, you may have the grand title of "general manager" but…

Hilary: You still have an air shift to do.

Alex: Well, you have an air shift. You have to make the coffee in the morning. You have to…

Hilary: Empty the trash?

Alex: Load the paper on the teletype, empty the trash, all that stuff, yeah. But anyway, this "Alex in the Morning" got to be a real big deal. Now one of the things about that situation, on one of the Bush radio stations is… first of all, in the morning everyone is listening to the radio, and secondly in these situations there is only one radio station to listen to.

Hilary: That's right.

Alex: So therefore everybody was listening to "Alex in the Morning".

Hilary: I love that.

Alex: And so that led to some… well, that meant that everybody knew me and they… I guess they felt that it was a real valuable service that was being rendered there -- and, you know, there was lots of appreciation that was expressed. But we used to do some things just for fun -- like we had the Early Bird Club, which would be [you could join] if you

could name the first song that came on the air at sign-on in the morning. Of course, somebody wrote in and said it was the Star Spangled Banner but that wasn't really quite what I had in mind.

Hilary: Yeah, but they were right.

Alex: And they got a prize. They got a prize for that. And then we used to have kids from the villages send in tapes -- or I guess, in a lot of cases, it was teachers and parents that would send in tapes of the kids.

Hilary: Oh, how great.

Alex: This wasn't high tech. This was [on] cassette tape.

Hilary: Oh, yeah.

Alex: These were cassette tapes and I remember that, you know, in the mainstream a radio station, any self-respecting radio station would never play one of those little cassette tapes, but out there we did because that was what people had in their villages, and so they could make a tape and send it in. So we would play those and that sounds like a real simple thing to do and it sounds like it might not even be all that interesting, but that turned out to be a real kind of a real community-builder you know. People hearing their own kids on the air and everybody sort of hearing what was going on in other villages.

Hilary: And would they be like a little report from the village or would they be…?

Alex: Sometimes it was that, but a lot of times it was them singing songs or they were reading their stories or…

Hilary: Oh, neat.

Alex: That kind of stuff, yeah. In fact, probably the most important thing about KOTZ was it turned out to be a real force in the community. It turned out to be a real… it helped the whole region out there to be a community because there was [now] communication. And they all felt really connected to the on-air people like me and the others that I mentioned. There is something about the medium of radio, which is different from television.

Hilary: So true.

Alex: Where the listener feels a real connection with that voice that's coming across. Of course, sometimes they're really disappointed when they see the person.

Hilary: I can remember having that on radio. When I was with the Alaska Radio Network Gordon Parker -- and I had that. And people would say oh, you don't look anything like you sound.

Alex: Uh-huh. Yeah. And did (you) say…

Hilary: "What does that mean?"

Alex: Yeah, right. Maybe you'd rather they didn't elaborate.

Hilary: So when you traveled in the area, would people know you from your voice or they would know you from your on-air time?

Alex: Yeah, and it was actually kind of uncomfortable sometimes because everyone knew me but I didn't know them. So you'd have to figure out ways to finesse that. Also, I got lots of fan mail. I mean, when we first put these radio stations on the air, it was really a big deal. I mean it was a huge service that had never been there before and people really appreciated it a lot. So there were lots of different ways of expressing appreciation: fan mail and sort of just comments on the street and people who send Eskimo food into the radio station and things like that. So it was really…

Hilary: Did you save any of the fan mail?

Alex: I was thinking about that and I may be able to dig through some boxes.

Hilary: Okay. What kinds of food would they send you?

Alex: Oh, you know what agutuk is, Eskimo ice cream, and stuff like that. I'll see if I can (find) that fan mail. I know where the slides are.

Hilary: Okay.

Alex: But the fan mail is… At one time I was actually getting 30 letters a day.

Hilary: Wow. Wow.

Alex: There was just a lot of appreciation about the service that we were doing. And then… I guess the people that would write, they'd get some feedback too because I used to read their stuff on the air. That kind of fanned the flames and then people would send more.

Hilary: Oh, that's so cool.

Alex: Fan mail. Oh, and then I, let's see, I brought a little artifact to show you.

Hilary: Oh, great.

Alex: Yeah, so.

Hilary: I wanted to ask you what about Eskimo language.

Alex: Yeah, with the Eskimo language we did in Kotzebue… From the very beginning, we did Eskimo language programming and it took two forms. One was that I [had] some

announcers who were bilingual and would sort of switch back and forth between English and Eskimo or Inupiaq.

Hilary: It's Inupiaq up there, wasn't it?

Alex: In the case of Kotzebue, yeah.

Hilary: Yeah.

Alex: Yupik in Bethel. But in Kotzebue, I had one young woman whose name is Ruthie Ramoth. You might have run into her. Her married name is Ruthie Sampson. She came from Selawik and she was quite fluent in the Native language. In fact, she was so good that she was able to, when she was on the air, just sort of seamlessly switch back and forth between English and Eskimo and she did it in a way that everyone was sort of understanding it, you know. It wasn't like if you were an English speaker, you didn't feel left out when she (spoke Inupiaq). And if you were not an English speaker, you didn't feel left out when she was speaking English.

Hilary: Wow.

Alex: So she really had… she was the best one. She had a good knack for that, but the others too -- to varying degrees. Some of the announcers spoke in the Native language.

The other thing that we did was we did [Eskimo] stories. And this was in 1973 when I started. It was in about the same time NANA (Regional) Corporation was starting oral histories out there (with) the elders and so we did our own oral histories. And the way we would do that is we just got the elders to come in and sit them down in front of a tape recorder and we would do it in half-hour blocks, just like you're doing here, because a half-hour was the time slot that we had allocated on the air. So we would sit them in front of a tape recorder and then, I remember, we paid $10 for a half-hour of stories. Right. Now this put me in an interesting position as the manager of the station because I couldn't understand what was going on. Makes you wonder whether I was really fulfilling my responsibility. As a matter of fact, though, most of these stories were sort of traditional stories. But one time somebody came up to me on the street and mentioned the name of one of the elders who had been on the air recently and said you know he's telling about his job with Alaska Airlines.

Hilary: Oh, no. Oh, no.

Alex: But generally that went well. And so we did that for a half-hour every night. Yeah. And then there was my Eskimo name. Then I got an Eskimo name up there too. There was a woman who -- even then -- was pretty old, named Mamie Beaver and Mamie Beaver was sort of my biggest fan, you know. She started writing me lots of letters and everything, and she only lived a few blocks from the radio station.

Hilary: I was just going to ask, where did she live?

Alex: Yeah, but she started with letters and then eventually she came over and but anyway she gave me my Eskimo name which was Oomiks, which means whiskers.

Hilary: Whiskers and how do you spell it?

Alex: Well, you could spell it like this.

Hilary: I love it. Oomiks. Oh, isn't that wonderful!

Alex: So then, this cup here this is kind of a souvenir because then one of my other fans… well, then we started using this on the air a lot.

Hilary: Oomiks.

Alex: Instead of -- in addition to -- Alex in the Morning. So it just got to be, you know, kind of a big deal. Everybody listened to the radio. Everybody sort of knew about this deal and then another fan commissioned somebody to create this little work of art, you know.

Hilary: That is fabulous.

Alex: See, the initials of the artist are on the bottom of it.

Hilary: Oh, I love it. When I come back the next time to look at your pictures, I'll get a photograph of you with your mug.

Alex: Okay.

Hilary: That's fabulous. Okay.

Alex: Just shows you I did have a dark beard at one time. Oh, you saw that.

Hilary: I remember the dark beard.

Alex: You saw that on the photograph.

Hilary: I did, yeah. Oh, that is wonderful.

Alex: I think that the radio station was just sort of a central focal point. I mean it really was that way because everyone was connected to the radio station so it was just the way for everyone to communicate with everyone else.

Hilary: Uh-huh. And with the villages from outside of Kotzebue too. I mean, you were a hub.

Alex: Primarily, that's really what I'm thinking of primarily, is connecting all those villages together. It just… it happened that our coverage pretty much coincided with the NANA Region, which was, you know… this was just a couple years after the Native corporations were formed.

Hilary: Right.

Alex: So that was good. I mean that helped the NANA Region to be more cohesive.

Hilary: Did you do anything with NANA? I mean, did the region itself have a program or did they have any news or anything?

Alex: Well, we were covering… when we covered news, we'd cover news of NANA as well as other kinds of news. I don't remember them sponsoring any particular programs or anything like that.

Hilary: Was news a big deal out there? I mean, all of a sudden having local news coverage would have been a huge change.

Alex: Yeah, yeah, it was a big deal and we did cover local news formally. Local and regional news in the formal kind of way like you were thinking about as a broadcaster. You know, where you announce national, international…

Hilary: Sure local, state and regional, yeah.

Alex: But then, you know, my observation is that a lot of news at the small end was covered…

End of Tape 1, Side A

Tape 1, Side B

Alex: (There were) announcers just talking informally about what's going on, and, you know, so and so came by and said this or that. One of the things that we soft-pedaled was the unflattering news -

Hilary: I was just going ask, because Eskimo society by and large would not… you wouldn't dig up dirt on your neighbor to put over the broadcast.

Alex: Right, right. So I don't… you'd have to get someone else to tell you, you know, if this ever became a problem in later years, but in the early years I really couldn't see much reason to get into that, even though it was… Remember this was not too long after Woodward and Bernstein had a big effect on how the journalistic world thought of themselves. But it didn't seem… it didn't seem in tune with the positive kinds of things that we were trying to do at the radio station at that time.

Hilary: And what would be an example of that? You wouldn't have, say, a police report but you would carry news of the basketball game…

Alex: Exactly, those are good examples.

Hilary: Yeah. I imagine that was real challenging in a small (town)…

Alex: As a matter of fact, speaking of the basketball games, we… well, it kind of goes down to the OTZ story a little bit but there was a situation where the… well, see, when I came, there actually was a telephone company in Kotzebue, but…

Hilary: North State.

Alex: North State, yeah. But they didn't have service in any of the surrounding villages, only in Kotzebue, and then a couple of other far away parts of the state like King Salmon and a couple of other places. But anyway, the owner of North State Telephone was a guy named John Gilbert, who, well, generally he wasn't real popular in Kotzebue because the service wasn't that good.

Hilary: Uh-huh.

Alex: But anyway, there were lots of different incidents that happened over the years that were oh, unhappy experiences with the telephone service. But the one that caused the greatest outcry and the greatest furor -- and actually became a topic at an APUC hearing -- was the following. As you know, basketball was the biggest subject of all out there and so what we would do is we would broadcast all of the high school basketball team's away games and I actually personally…

Hilary: They'd go to Selawik. They'd go to…

Alex: No, actually they'd go a lot farther than that.

Hilary: To Fairbanks?

Alex: They'd go to places like Nome. Well, a typical road trip would be Nome, Bethel, and Dillingham, something like that. And then we'd broadcast from those far-away places. We'd broadcast the games. But in order to broadcast the game, as you know, you have to have a leased circuit, you have to have an audio circuit. So, anyway, there was one time during the broadcast from Dillingham – I can still remember it pretty clearly. I was on the Dillingham end of this, but the broadcast was disrupted.

Hilary: Oh no. Like cutting off the circuit or something?

Alex: The broadcast was disrupted. That was the one that really caused an uproar and that was the one that sort of leads into another story here, which is how we started OTZ Telephone.

Hilary: Great segue, go ahead.

Alex: Well, yeah, it doesn't quite fit my chronology here… so why don't we come back to that one?

Hilary: We'll come back to that.

Alex: That's what I think of in terms of public radio. But I think of all the projects that I did, which were many, the one that clearly had the biggest impact on people was public radio. That was the one that connected everybody together and I think part of it is the equality of that medium, the Marshall McLuhan thing, you know, where people really connect to that particular medium. Oh, here's another thing we did at the radio station. This was sort at the other end of the spectrum from the local culture and Eskimo stories -- we broadcast old-time radio. And you might remember this was…

Hilary: Dramas.

Alex: Yeah. This was about the time when syndicates were reissuing programs like the Lone Ranger…

Hilary: Green Hornet.

Alex: The Shadow, the Green Hornet.

Hilary: Oh, oh, I love this.

Alex: In fact I think those were the three that we had on.

Hilary: Uh-huh.

Alex: And so for some of us, this is nostalgia. I remember it from when I was a kid. But for many of the listeners in KOTZ land, it was the first time they ever heard it and they thought it was great, you know. So that was really… that was a lot of fun.

Hilary: Oh, I bet, I bet they just loved it. I remember listening on public radio at KUAC when I was working on the pipeline up there. They were running all these shows. Great, yeah, yeah.

Alex: Okay, so we could switch to telecommunications right now.

Hilary: Let's go back to this first one for a moment. I have a couple things to ask you. One is, in terms you said of what created the biggest impact for you, the public radio and the way it connected people…

Alex: On the human level.

Hilary: On the human level, yeah. What was the most satisfying moment for you of that public radio career? Is there a moment or a couple of…

Alex: One moment?

Hilary: That just jump out when you go, "Yes! This is why I do this."

Alex: I'm not sure if I can pick on one particular one. I mean, every evening, you know, there was something going, on you know. There was some…

Hilary: That's good, sure. Yeah, being on the air then would have been one of the things.

Alex: Oh, yeah, being on the air was the big deal, yeah. That was what it's all about: being on the air.

Hilary: Uh-huh.

Alex: There were situations where we would relay messages that related to some emergency situation. I remember an airplane that flipped on landing on a lake and flipped -- and there was a hurry-up effort to get out there and rescue the airplane. We were involved in relaying some messages on that one

Hilary: Uh-huh.

Alex: I'm not sure that I can come up with one particular moment though.

Hilary: And the flip side of that question is what was the most challenging aspect of your work with public radio?

Alex: Well, you know, a lot of people who went out to the Bush from the mainstream of the country would have trouble with adapting to the lifestyle and the weather out there and all that sort of stuff. I didn't actually have any trouble with that, but a lot of people did. The only place where I got into that was when I was cutting back my involvement in KOTZ, we had to hire… we were hiring an engineer to come in and pick that up and it turned out to be very difficult to find someone who had both the technical skills and also the sort of personal qualities to be able to get along with that environment. We had some failures, you know. We had some people that we hired and came up and it didn't work out. So eventually, doing that recruiting, I got into a pattern where I would start off by interviewing people over the phone and in the interview -- unlike what you usually do when you are trying to recruit someone for a job -- I would tell him the worst stuff I could think of. I would just tell them the really bad things about and then if…

Hilary: They weren't dissuaded….

Alex: If they were still interested, then we might invite them up and there might be some possibility that it would work out.

Hilary: Yeah, and one more thing about this period. Who might have been names to you of the folks who made a difference in Alaska's…

Alex: In Kotzebue?

Hilary: Well, in Kotzebue and in the public broadcasting field?

Alex: Oh, okay.

Hilary: Who were the people who made… made a difference?

Alex: As I mentioned earlier -- we had our people back in the headquarters who were handling things and then I was very often the person that was out on the far end. And so in the case of public broadcasting, Bob Arnold was the executive director of AEBC. And let's see…when I was involved in the very beginning, the engineer at AEBC was Frank Butte. Remember him?

Hilary: Sure.

Alex: And then a little bit later on, I think that Marv became the engineer at AEBC, if I remember that right.

Hilary: You do.

Alex: But then out on the Kotzebue end, I had a really good board of directors. And June Nelson was the president of the board out there and there were some other really good people.

Hilary: Uh-huh. And what about at for KYUK or KNOM or your other stations?

Alex: For KYUK it was the same people in Anchorage.

Hilary: Right, the folks back here.

Alex: Yeah, it was Bob, Frank and then Marv. And in KYUK, let's see the general manager out there was local guy named George Charles. KYUK frankly had some real start-up problems you know. Do you remember that, yeah?

Hilary: I remember that it did.

Alex: I don't know if we want to go into all that.

Hilary: No, it would… we can talk about a rocky beginning.

Alex: Yeah and I really don't even (want to). I wasn't really involved in all the details of that because I was just in there for some period of months, just getting some of the technical stuff taken care of. At KNOM, I think that story is well-documented in that book (about how) Father Jim Poole had gotten an idea and so that turned out to be a real good public service among other things.

Hilary: That's amazing, yeah. And Tom Busch, of course, is still there.

Alex: Still there. There was a time when he was away but then he came back and picked it up and so that's all in the book.

Hilary: Okay. Okay, great. Shall we move on to telecommunications?

Alex: Oh, by the way, I might as well just give you my little chronology here. So the first (job) I had out there for telecommunications was the bush telephone project.

Hilary: Right.

Alex: And that was the one that was RCA Alascom making good on their promise to provide service to 142 villages and so there, once again, there was a headquarters group in Anchorage and then there were a few of us out in the field, and I was running the field operation. So there's kind of a common thread here, you know. Regardless of which of these projects you're talking about, I was the guy in the field, you know, and then there were other guys in town. So I had an airplane, a pilot, and a crew of technicians, and our job was to go install this equipment in the villages and on some mountaintops which were needed to make it all work. As you said, that was the VHF system. The equipment was actually called IMTS. Stands for Improved Mobile Telephone Service.

Hilary: Right.

Alex: And it was actually mobile… it was mobile telephone equipment before cellular. This was before cellular.

Hilary: Right.

Alex: Actually there was a guy in Alascom by the name of Jim Hayes, who dreamed up this idea, but the idea was to… to take the equipment which would normally be installed in a vehicle and mount it in a fixed cabinet in a village.

Hilary: Well, I think Bob Walp this morning called it "taxi telephones" meaning the mobile aspect.

Alex: Yeah, right, well it was mobile, you know. It was the equipment that would normally had been mounted in the trunk of your car and…

Hilary: It was really a (new) idea, wasn't it?

Alex: Yeah, it was Jim Hayes, I think.

Hilary: Yeah, yeah.

Alex: Jim Hayes had actually lived in Kotzebue at one time.

Hilary: Did he?

Alex: But he worked for Alascom. And so, anyway, Alascom sent me out there with -- like I said -- the plane and the pilot and the crew.

Hilary: And this was VHF?

Alex: VHF.

Hilary: VHF, yeah.

Alex: So we would have to… we would install in each village. Well, I was always the front man. So I would have to go into the village ahead of time and make arrangements with the mayor or whoever was in charge, find a place to install the equipment, and then…

Hilary: Tell me about those… the range of places that you installed this equipment.

Alex: Well, there was a big range. I mean, we did it in… they were all villages so they were not regional centers like Bethel and Kotzebue. They were the villages that had no service so we went down to some really tiny ones like, I guess, a really small one would be Kobuk. That was… remember, the rule was 25 citizens and a post office, right?

Hilary: Is that what was the determining factor?

Alex: That was sort of the… well, on this particular project there was a list of 142. That was Alascom's commitment, but the classic traditional definition of that, I remember, whether it's really a town and if it's really eligible for services…

Hilary: Twenty-five and a post office.

Alex: Twenty-five and a post office. I'm sure Ted Stevens could give you chapter and verse on all this where this all came from and…

Hilary: Well, when I'm back there in October finishing that list. I think I'm going to look this up, where that came from. Yeah, yeah.

Alex: So anyway I wasn't involved… this was all policy stuff. My job was to go out there and get the job done.

Hilary: Right.

Alex: So I had to go in ahead of time, meet with the people in charge and then - oh, you asked me about…

Hilary: The range of places.

Alex: Then, on the other end of the range would probably be a place like Alakanuk or Emmonak, which were up to several hundred or a thousand people and for a place that size to be sharing one telephone, you know…

Hilary: And where… what kind of buildings, what kind of facilities would they go in?

Alex: There was a range, you know, and it would always be left to the local folks to decide, but the possibilities, the likely places, were the store, the general store, and another likely place would be the medical clinic. They were places where… well, they were usually public places.

Hilary: (You'd) try to get public places.

Alex: Yeah, but in some cases the community would decide otherwise. They decided that they wanted it in someone's house, which I always tried to talk them out of that because I didn't… I thought that would get old pretty soon for the person that lived there.

Hilary: And what were the criteria for the location?

Alex: Well, of course, in some cases there was a technical criteria in terms of being able to get the radio path – that would be an issue in some cases. But other than that, it was just space and power. So we just needed space for the equipment which was just a little cabinet full of equipment and power. In other words, it would work off the power of whatever building it was located in. There was no money that changed hands to pay for power.

Hilary: Right.

Alex: So space and power was to be provided by the community.

Hilary: Okay.

Alex: That was probably another good reason not to put it in someone's house.

Hilary: Yeah.

Alex: Yeah. So anyway, once that was all worked out then the crew would come in and install the equipment and it usually took about two or three days to do that. There was an antenna that had to go on top and the actual electronics and stuff had to be installed.

Hilary: And there would be the two of you would come in and do that?

Alex: No, well, there were… I had a pilot and two technicians.

Hilary: So the two techs would then come in and would you be with them on each (job) or would you be ahead doing the next village?

Alex: Usually I would be with them but in some cases I would be ahead.

Hilary: Okay.

Alex: And of course, that was the first phone in each… you know, each village was receiving a phone for the first time. So here's kind of a little human interest story. In the real early

stages of this, there was a pretty big problem with all this that actually caused it not to work, but interestingly it wasn't a technical problem. It was more of a people problem and it went like this. The way this was arranged was every phone call from a village turned out to be a long-distance call.

Hilary: Of course.

Alex: There was no such thing as a local call.

Hilary: Right.

Alex: And that meant that there was a long distance bill, right? So the village'd get a bill for the long distance calls. In many cases, no one had sort of explained… before me, there was a supervisor that on this and this other supervisor was probably totally focused on getting the equipment to work and didn't really think too much about, you know, what the implications were. So we just installed the equipment and then go on to the next place. And whatever happens, happens. So you can probably see where I'm going with this. What happened was they'd get the bill and they wouldn't have any money to pay the bill. Why they wouldn't have the money was because they didn't know there was going to be any charge. And so then it ended up that a lot of these phones were disconnected for nonpayment of bill. Crazy, huh? After all the trouble that we'd gone through.

So, probably the most significant thing I did on that project didn't have anything to do with the technology or anything like that. What I did was I designed a little telephone log… well, first I had to go back and I convinced each village that they have to have an attendant. (Phone rings.) You have to answer that?

Hilary: No.

Alex: I convinced them that they would have to have an attendant, which would be sort of an operator on duty during certain days or hours when the telephone would be "open". Telephone is open for business. And then I gave them a procedure. And the procedure went like this: After the call was complete, then the telephone attendant had a procedure to call the Alascom operator and get time and charges on that call. Okay? And then usually they'd ring you back within a minute or two with time and charges, and then that amount was to be entered in the log and then the caller was supposed to pay those (charges) for the call on the spot and then from there on, things worked pretty well.

Hilary: Now, a lot of the villages didn't have banks. They didn't have a lot of cash. How did that business work in the village? Was that ever a situation you ran into?

Alex: Well, I mean the people certainly did have some cash and one thing I've never thought about too much is how they converted this box full of cash to something they could send.

Hilary: They could send, yeah.

Alex: I don't know they worked it out.

Hilary: I'll check on that, that's great. So they actually would just keep cash. People would pay on the spot or pay at some point.

Alex: Pay on the spot or I believe that in some cases people didn't pay on the spot, but at least there was a record.

Hilary: A note taken.

Alex: And they knew that they owed that money.

Hilary: Okay, great.

Alex: I mean this is one of these things where the guy from Alascom was probably better off not getting involved in… not trying to mediate disputes or anything.

Hilary: Absolutely.

Alex: But you know they worked it out, and they understood that they had to do this. In order to keep the phone working they had to actually pay the bill.

Hilary: Great. So you accomplished a huge thing.

Alex: What was interesting (was) that the smallest things can really cause so much trouble.

So anyway, with the Bush telephone project things worked really well with the communities that were within one radio hop of the regional center, like Bethel. In fact, most of these systems initially went in in the Bethel region.

Hilary: Okay.

Alex: There, there are lots of villages. And there are lots of villages that are within just one radio hop. It was really pretty successful. But the Achilles Heel of all this was the mountaintop repeaters. Those mountaintop repeaters were really tough to keep up and running. There were just all kinds of problems. And so in the meantime while we were out there and you know kind of sitting around at night you have a lot of time on your hands, no TV or anything, and so it was inevitable that we'd be -- now this is in 1972 -- it was inevitable that we'd be thinking about (how) there's got to be a better way to do things. I'd been through graduate school in engineering so I was the one that said, "Satellite communications sounds like a pretty good way to me." Not that I was the first one that thought of this, but thought of it in parallel with some other things that were going on. Things that I'm sure you will be writing about: the Comsat experiment, the ATS-1 project, and so on and so on. And those are all part of the story, but they're not parts that I was personally working on.

Hilary: Exactly.

Alex: But anyway, I sort of made a little prediction…

Hilary: But you saw the problem of what it was like to try and keep this system.

Alex: Yeah, the whole VHF approach was, in my view, doomed to failure as soon as you got beyond that first hop. As soon as you got into the mountaintop repeaters -- just from a practical point of view -- it was just too difficult to keep those mountaintop sites going. I mean, they were helicopter access. It was really terrible. So that was…

Hilary: The weather was always going to win.

Alex: Absolutely. Another interesting thing that happened was I also quickly discovered that -- just like I mentioned in Kotzebue -- most of the technical people really weren't that excited about being out in these places doing this work. So I was just really happy to be there, doing this stuff, flying around, but most of the technicians thought this was really the pits. I mean, they thought this was the worst possible assignment and when I first got there, their idea was that, although it might take two or three days to do the work in the village, that they'd fly back to Bethel every night and sleep in the hotel. Well, the trouble was that the weather, a lot of times, would close down on you and so, if you ran it that way, then you'd get back to the hotel and then you would just be sitting in the hotel the next day because you couldn't fly. So, one of my first official actions was to mandate that okay, from now on we're going to stay in the village until the work is done. That was not a popular decision, very unpopular.

Hilary: I can well imagine.

Alex: Because that meant sleeping-bag time. And in fact, eventually the union got a clause in the contract -- they called it the "Alex Hills' clause" -- which was that technicians would, from now on, receive an extra eight hours pay every time they had to sleep in a village, which we called that sleeping-bag time.

Hilary: I love it.

Alex: So, anyway, the other thing was that -- although I liked to be out there all the time -- most people didn't, so it was pretty clear that in order to keep any kind of morale going that we were going to have to send people back to Anchorage on a regular basis. So what I ended up doing was keeping two separate crews going and I would just rotate them back to Anchorage every few weeks. So people would work in town in the office whatever for a couple of weeks, and then they'd come back out and work in the field, and so that worked out pretty well.

Hilary: Again, it wasn't the technology that was the problem.

Alex: Interesting how that works out, huh?

Hilary: Yes.

Alex: It is almost never the technology. We did a few med-evacs (medical evacuations), you know. Expectant moms needed to be rushed to the hospital. So we would disrupt our normal work for that.

Hilary: Alex, do you remember the phrase radio babies?

Alex: Tell me.

Hilary: Well, it means one of two things and I think I'm going to have to catch up with somebody who was more familiar with it from maybe the 30's and 40's. But I think what it meant was that the moms, of course, would almost always be flown out of the villages to a center or hospital somewhere.

Alex: Right.

Hilary: And then when junior was born, they would send a message back via broadcast on Tundra Topics or Mukluk Telegraph or one of those.

Alex: Uh-huh.

Hilary: And so they called it… it was radio baby announcement.

Alex: Oh, I haven't heard that one, no.

Hilary: Haven't you? Well now, the other thing it could mean is that when there is a village health aide and there is a mom going to deliver, she (the health aide) talks to a doctor on the radio and then helps deliver the baby that way. But I've heard the phrase both ways.

Alex: Oh, by the way, you were asking who the important people were. And so, I guess you know… I think back on the broadcasting stuff and so I think Augie would probably be on everybody's list. Because Augie had, you know, he had those [same] experiences in Fairbanks and Anchorage. And so then, when people like me were out in the Bush doing these things, then he was lending lots of advice and moral support and things like that. He did that for the Nome operation and he was kind of supporting that KNOM thing in multiple ways he could tell you. And then I wouldn't be surprised if he was sending them money too. It wouldn't surprise me a bit. And then, but then when I was doing KYUK and KOTZ, Augie was on the board. He was on the AEBC board and so he was sort of…I could see the look in his eye. It was like, when he looked at me, he was thinking, "That was me 30 years ago" or something like that.

Hilary: Absolutely.

Alex: And I think… actually, I think he finally got mad and quit them, I think. It might have been some controversy about KAKM. I'm not sure.

Hilary: I'll have to ask him.

Alex: I'm not sure exactly, but anyway in those early days he was a member of the commission. And Augie was, I mean, Augie was a pretty interesting in the sense that he was a commercial broadcaster, but he was very supportive of public broadcasting in the beginning. But then there was some kind of a big fallout and I think it… this isn't part of the story you were talking about here.

Hilary: Right. No.

Alex: I think it had something to do with Channel 7 and competition here in the Anchorage market and stuff like that.

Hilary: I think it was, yeah.

Alex: But anyway, he was very supportive, you know, so he'd be real high on the list.

Hilary: He'd be one of them. And I think you're absolutely right that the connection (to public broadcasting) with him being a commercial broadcaster is such an interesting one.

Alex: Yeah. And then, I guess, also from that Bush telephone project, you've got the stories about Cape Romanzof and Little Diomede. You've got (those) in the thing (magazine), there you know so.

Hilary: Yeah, and I'll pull from those.

Alex: Yeah, you can pull from that, yeah. But those both of those are stories about wind, installing…

Hilary: Wind never stopped.

Alex: Installing the thing in the wind.

Hilary: It slowed down to 40 miles an hour and the whole village came out and helped.

Alex: Yeah that was it, yeah. But then another thing happened in Diomede that's in the "Melting the Ice Curtain" story. It was all part of the same trip. So there's two stories from Diomede. One is about… it was all part of the same experience, which was in April of 1973. And the first one was putting up the antenna in the wind.

Hilary: Right.

Alex: It was a real big antenna. It was pretty tough to get it up.

Hilary: Wow.

Alex: But then the other one was that this was the first contact that was established with the Big Diomeders (who had been on the other side of the Iron Curtain from Little Diomede for decades). Did you read that in the "Melting of the Ice Curtain"?

Hilary: I did read that…he called him by his Eskimo name.

Alex: Yeah, right, yeah.

Hilary: That must have been incredible.

Alex: And we just happened to be in the village when all that was going on.

Hilary: Must have been amazing.

Alex: Yeah.

Hilary: Did he come back and tell you about it, or were you there when it happened?

Alex: He told everybody about it, yeah. Yeah, and then over a period of about a week then the villagers from both sides were going out and meeting on the ice every day so we would… and they actually did some trading. So we would see Russian watches and Russian cigarettes coming back.

Hilary: But you didn't ever go on the ice?

Alex: No, because they were really worried about it. They were kind of really worried about getting in trouble and, you know, they were doing something (that) was illegal under International Law. What finally happened was there was a National Guard platoon of the Eskimo Scout Battalion out on Diomede and they finally worked up their nerve and they radioed the message in to Nome that this was all going on, you know. And so it was quickly relayed to the State Department back in Washington and the State Department's response was that they deputized Leo Rasmussen, who was the mayor of Nome, and they sent him out to Diomede to put a blessing on the whole thing. And that was it.

Hilary: No, is that right?

Alex: So then everybody felt better about it after that.

Hilary: Oh, that's marvelous.

Alex: And I, as you saw in the ice curtain story, what I did was connect that little incident to the project later on where we, you know, in the 90's… where we had worked on the satellite connection.

Hilary: With Lee (Wareham)?

Alex: With Lee, yeah. So actually, I don't think Lee had any contact with Russians that early.

Alex: It's hard to get one up on Lee, you know.

Hilary: That's true.

End Tape 1, Side B

Tape 2, Side A

Hilary: I remember seeing it (the first Sputnik satellite) in the sky go over here. My dad took me out in the backyard and said, "Now watch." And sure enough, there it was. It was very exciting.

Alex: So, anyway there are two stories from Little Diomede. The wind, and then the (contact with the) Big Diomeders. But you know, that was actually… I think it was 26 years after the Russians had been pulled off Big Diomede because they were pulled off in '47. It's in the article.

Hilary: Right.

Alex: They were pulled off in '47 and this was '73, 26 years later, and then it was another 15 years or so at least before, you know, the friendship flight and all that stuff. I guess that's what I have on the Bush telephone project. So I feel like there's enough stories in there, that there is no need to repeat those, right?

Hilary: Those are great, yeah. Alex, let me ask you, from the same two pieces… what of all those installations was, sort of, your most favorite one? Which one gave you the most real satisfaction or somehow stood out for you?

Alex: I don't know… Oh, we did some interesting landings.

Hilary: I'll bet.

Alex: You know, we had the plane on floats in the summertime, and skis… and wheels and skis in the winter.

Hilary: Right.

Alex: So those landings got pretty interesting.

Hilary: I'll bet.

Alex: We landed in some of those villages in moonlight, you know, and when the… well, because the days were short in the wintertime, we…

Hilary: Did they have the snowmachines out with the lights on the runway?

Alex: Well, they didn't. No, I mean, you know that's the classic story on the medical situations, on the emergencies.

Hilary: Right.

Alex: And you need to do that when it's dark. No, our version of this: I mean, I should feel guilty because nothing we had was an emergency.

Hilary: Right.

Alex: But no, the way we did it was… we actually did this when the moon was full. It's amazing how well you can see with clear skis and a full moon and snow everywhere. It's very easy to see. I guess one little story I like to tell -- which is only *kind* of kidding -- I used to say that, after we'd get the phone installed in each village, and we'd -- remember there's only one phone in the village, right? So this is the vital link -- and I'd say to the mayor or whoever was in charge just before I jumped on the plane, I'd say, "Well, if you have any problems with the phone, just give us a call."

Hilary: "Give us a call." Now how did you know…?

Alex: And by the time they figured that out…

Hilary: How did you know if there were problems?

Alex: Well, we would…we could actually monitor at the regional switching centers.

Hilary: Oh, could you?

Alex: Yeah, we could see what was going on.

Hilary: Yeah, yeah.

Alex: And then, if they had other complaints, there were actually other ways that they could send messages. Like there was still a short-wave radio. In fact, we… in a lot of cases we'd coordinate our operations by short-wave radio because when we were getting ready to install one of these things, obviously, there was no phone service yet.

Hilary: Yeah, right.

Alex: So we would have to have another way to communicate, which would normally be by the old short-wave radio.

Hilary: Short wave was VHF?

Alex: No, short wave is HF.

Hilary: HF, that's right. And that's the one that kept going out because of the aurora.

Alex: Right, that's right. And VHF is fairly… do you want… I can give you the Megahertz.

Hilary: For the end notes I think I want those, you know, for the glossary in back. I do want those things because then that way people who know that can look at that… people who are curious about it could do that.

Alex: Uh-huh. Okay. We used to say a kilocycles, remember? And they used to say cycles instead of Hertz and kilocycles are dangerous two-wheeled vehicles.

Hilary: Yeah, that's right.

Alex: Okay, so let's see. So, I guess in terms of history, the next big thing after the Bush telephone project was the RCA Alascom satellite. Well, it was really the State satellite project and I assume you're going to have a big section in here devoted to all this. I mean, that really was the big deal.

Hilary: It was big.

Alex: That was the big turning point in a lot of this because the VHF technology wasn't really working out all that well. And so while I wasn't really in Anchorage or Juneau much of the time, I was the guy that was sort of calling Marv (Weatherly) up on the phone and conspiring, and cheering him on, and stuff like that.

Hilary: Oh, absolutely, I know you were real important to Marv during that time because you had questions about what was going on out there, and a lot of times you had ideas and he would bounce his ideas off you. I can remember his doing that, yeah.

Alex: I guess the advantage of the satellite technology is pretty obvious, which is there weren't any mountaintop repeaters. That was the main point.

Hilary: No mountain top repeaters.

Alex: The repeater was up on the sky.

Hilary: Yeah.

Alex: And it didn't (need) too much maintenance. So that was what made it all such a good deal. Once again, I'd say, you know, (look at) that block diagram (in the magazine article) that shows the earth station and that really helps to explain, you know, both that one and also the double hop. So those are good ones that help. Then so, the services are shown on that block diagram are the… it shows the single telephone.

Hilary: Right, for health (aides).

Alex: Well there… so there was the public telephone, which was the one that replaced the one that I just described, right?

Hilary: Right.

Alex: Actually all these things were in a way just takeoffs of other things that already existed, but they were all put through the same system. So the first one was the public telephone. That's the same one that I just finished describing with the VHF, except now it worked through satellite. Then the second one was the medical circuit for the health aides.

Hilary: Oh, that's right.

Alex: And that was just (a) take-off on the old short-wave radio. In fact, I don't know if you've heard this story, but the way it was told to me was that the medical community… they were offered dial phone service but they preferred to have the push-to-talk circuit where they could all hear each other. At least in the early stages.

Hilary: It was an educational tool, yeah.

Alex: Now that's all history. Now they just do it by telephone, but that is what they said then. And then the TV channel… and the TV channels were just TV channels.

Hilary: Right.

Alex: And you can see that on the block diagram. You can see the educational RATNet (Rural Alaska Television Network) channel and the "Learn Alaska" channel. Of course, on the initial configuration, it was just the RATNet channel and then the "Learn Alaska" was added a couple years later.

Hilary: Right, right.

Alex: And then it was taken away a few years after that.

I was going to say, you know, I wasn't personally very involved in this but there was -- in the minds of at least some people -- the idea of introducing television into the villages was a bit controversial. I can remember a social scientist on the faculty in Fairbanks who was all up in arms about this. I can't quite remember her name, but it was really only the elite academics who were concerned. There was no doubt out in the Bush that this was a great thing, TV service.

Hilary: And there were some great studies done with controlled villages and all that...

Alex: Oh, that was the (culture) shock feeling.

Hilary: Absolutely. The Wales project. And then there was… there were four or five and I've got copies of all of those. I think they're interesting, yeah.

Alex: So, anyway, the satellite earth stations led, for me, directly into the OTZ telephone project. In other words, the situation now was that we had satellite earth stations in all of our villages in the Kotzebue region, or we knew we were going to be getting them. And so we could just let people have that single telephone for the whole village or we could

try to do something better than that. And so that was the primary inspiration for OTZ telephone, which we founded in 1975.

Hilary: Uh-huh.

Alex: And OTZ. the name of the co-op -- in case you didn't guess -- is just the airport identifier for Kotzebue.

Hilary: Right, right. Yeah.

Alex: Okay. So our goal was to provide phone service in the ten surrounding villages -- NANA Region was Kotzebue plus ten villages. So we were actually the first co-op to go in and put exchanges behind those earth stations.

Hilary: Is that right?

Alex: So the way you would then modify the block diagram (as shown in his article) would be instead of where that single telephone is, you'd then put in a telephone exchange. I think I drew it that way.

Hilary: You have it in.

Alex: Oh, all right, so then in the first story I told, you would have just the single telephone.

Hilary: Exactly, yes.

Alex: (That was) step one and then this one was step two.

Hilary: And then they… And that's where you came in with OTZ.

Alex: So that was kind of the whole inspiration of OTZ.

Hilary: Now, at that point though, you had to always connect through Alascom between the villages, among the villages?

Alex: Interesting point. Even though these were all exchanges within our service area, they had to be connected with each other through Alascom, and that meant once again that all these calls were long-distance calls, even though they were…

Hilary: You could call across the village but you couldn't call to the next village without long distance?

Alex: Right, right. Yep. So that was where I sort of got involved in a little bureaucratic crossfire. Since I was kind of leading the charge on this one from the real early times on, with OTZ. The problem was that we wanted, well, first of all, the reason we formed a co-op was because you could get two-percent money from REA (the federal Rural Electrification Administration), remember that?

Hilary: No, I'd forgotten all about that.

Alex: Okay. So you know we wanted to get that two-percent financing, and so we made contact with REA. We got it and they sent a team of engineers in. The way REA did business in those days was, although you were theoretically your own company, they pretty much liked to tell you how to do everything because they thought they knew better. So they sent in a team of engineers and guess what those engineers wanted to do? They wanted to design a microwave system.

Hilary: No, no, in the village? Between the villages?

Alex: To connect the villages, yeah.

Hilary: Oh, please.

Alex: Even though we were just getting the satellite system and the whole idea of microwave was pretty well discredited at that point.

Hilary: Oh, yes.

Alex: But, so that was what I had to deal with on the REA side and I tried to talk them out of it but they… I mean they're federal bureaucrats.

Hilary: These are a bunch of … AT&T guys?

Alex: No. REA. They're their own bureaucracy, you know, and they had built systems all across the country and this is how they did it. You know, they did it using microwaves.

Hilary: So these were guys from Outside?

Alex: Yeah, they were from Washington, DC, yeah, yeah. Surprised you never heard about this in Stevens' office. So, okay. They wanted to come in and design a microwave system. And in order to get their money, I was somehow going to have to keep them happy. That was one side.

Hilary: Absolutely.

Alex: The other side was the APUC, and Marv was sitting on the APUC by this time. So I can still remember we had a hearing on all this. The commission came up to Kotzebue and had a hearing.

Hilary: Now, Susan Knowles was on at this point.

Alex: Susan was on, yeah. It was Susan. As a matter of fact, I think I already told, you I picked them up at the airport -

Hilary: In the sled – the snowmachine and sled.

Alex: Snowmachine and sled, yeah. It was Gordon Zerbetz, Susan, Carolyn (Guess), and Marv and the fifth commissioner wasn't there for some reason, but so they all rode the sled, yeah. And Gordon wanted to ride runners. He thought he was going to be the big guy back there on the runners. So anyway, Marv had me testifying on all this and when we got to the part about interconnecting the villages, I kind of sort of softly mentioned this microwave stuff, and he said, "You're going to build a what?!" You know, so in other words, if I wanted to get the REA money I was going to have to keep them happy. If I wanted to get the APUC blessing I was going to have…

Hilary: You couldn't possibly do a microwave.

Alex: Yeah, so this was when I first started to master the art of bureaucratic double talk, you know.

Hilary: And?

Alex: So what we finally did was we got… well, I mean satellite was clearly the right way to do it so we didn't have any trouble with the commission really. The problem was with REA. And with REA what we did was (to not) make it an issue. We kind of got part-way through the process with them by not making it an issue, and then after, they were sort of… felt committed to our project and everything then we sort of broke the news to them that we're going to have to do this another way. And it really came out fine, but there were just a few tense moments there.

Hilary: I can imagine.

Alex: By the way, the engineer on that project, Bob Peters -- he went on to become the head of the REA and he was the head of the REA for quite a few years.

Hilary: Really? Interesting. Uh-huh.

Alex: So that was pretty cool. That was a real groundbreaking project. Probably the physical challenges on that one were setting the phone poles in permafrost and just putting up the buildings for the central offices.

Hilary: And so how did you set the phone poles in permafrost?

Alex: Very carefully.

Hilary: Yes.

Alex: Well, I mean, we just set them and we just did the best we could, but a lot of times… in some cases, they ended up like this. (Makes hand gesture to show pole leaning.) So then you just had to come in a few years later and do them again. There's permafrost there.

Hilary: Did you set them in cement, inside, you know you drill a hole and…?

Alex: Yeah. Uh-huh. We did different things in different places, just sort of depending. And hopefully, in a lot of cases, the permafrost wasn't real close to the surface, so you know so we could…

Hilary: So you could get by.

Alex: Could get away with it. So the OTZ project was real groundbreaking and it was real interesting. It set a precedent for other companies to follow in other parts of the state -- no question about that. I think the biggest one that came in behind us was United (Utilities). We only had ten villages. They had 55 villages down there. And that was a guy named Vinod Batra.

Hilary: Vinod Batra, yeah.

Alex: Who I saw a few months ago, by the way.

Hilary: Really. Where is he now?

Alex: He's in Madison, Wisconsin. He's in an engineering firm there.

Hilary: Steve Hamlin was with him at United, wasn't he?

Alex: Yes. Uh-huh. Yeah. But you know, I'd still say from… on the human level, you know, this didn't really have quite the connection with the people that the broadcasting did because in the broadcasting station you're talking to the people. The people are talking to you, you know, when they have an opportunity. With the telephone system, well, you set this whole thing up and the relays go clickety-clack and the people talk to each other.

Hilary: Exactly.

Alex: It's just more of a point-to-point.

Hilary: Yeah.

Alex: But it doesn't… it didn't really bring you back that same involvement that being a broadcaster did. So actually, I think a lot of my technical colleagues, you know, other engineers – well, I, you know, was involved in doing these things they never had quite the same experience that I did as a broadcaster.

Hilary: Yeah, yeah. Alex, on that level, did you have a board on the co-op that you worked with?

Alex: Yeah, yes, right. As a matter of fact, I sat on the board so my involvement with the co-op was as a board member -- president and board member.

Hilary: Okay, yeah.

Alex: (It was) a very hands-on board, I remember. And Nellie Ward was actually a member of that board as well in the early days.

Hilary: Okay.

Alex: Okay. Another thing you might be interested to know that we did, that I did in Kotzebue, was build… we built our house which was a geodesic dome. You ever heard of this?

Hilary: No.

Alex: Yeah. Yeah, well, a dome is a pretty interesting shape because it is the shape that maximizes the ratio of volume-to-surface area. This is a good thing for an engineer, right? And your heat loss depends on surface area. So actually from the heating point of view, it is the optimum shape.

Hilary: Fabulous, yeah.

Alex: Yeah, and so this was kind of like an igloo, I guess.

Hilary: In that way, traditional.

Alex: And it was actually the first geodesic dome in the Alaska Arctic (we built it in '75) if you don't count radomes. I've actually got some photos of that. So I'm not sure if that really connects to the communication story.

Hilary: But it's a fun sidelight.

Alex: It's a fun story, right. And then, let's see, I guess the other ones are the links to Russia, which you have in the "Melting the Ice Curtain" (story). By the way, did Lee's version of that kind of…

Hilary: We haven't even gotten to that.

Alex: Okay, so why don't I tell my version of that story?

Hilary: Why don't you tell me your version.

Alex: Yeah, let's see. Starting in about 1990, after (Gov. Steve) Cowper had done the flight to Providenia (Siberia) and all that -- by this time I was executive director of the University of Alaska Computer Network and so I was one of the early people over there into Magadan and then also into some of the other cities, Vladivostok, Khabarovsk, Petropavlovsk. And we were…what we were doing on behalf of the University was that we were establishing ties to academic institutions on that side. On this project, I worked real closely with Vic Fischer and Vic was the overall coordinator of the University's Russian activities. You might know Vic's story -- that he grew up in Moscow and St. Petersburg.

Hilary: Yeah, yeah.

Alex: So anyway, after a number of trips we were putting these working relationships together and it was pretty clear that communications… I mean, communications was a real big problem. Here are a couple of examples. If you mailed a letter from Fairbanks to Magadan, a rough estimate on how long it would take would be six-to-nine months.

Hilary: Months?

Alex: Months, yeah, if it *ever* got delivered, you know. So that was kind of a problem. Also similarly if you placed a phone call, I mean, it was at least theoretically possible to place a phone call from Fairbanks or Anchorage to Magadan, but this is what would happen if you tried to place a call. First of all, you'd get… well, first of all, you wouldn't be able to direct-dial the call. So the first thing you do is you'd get an Alascom operator in Anchorage and you'd tell her your story and then she would connect you with the AT&T center in Pittsburgh. (Just a coincidence in that my desk happens to be in Pittsburgh. That's where my university is. Just a coincidence.) Okay, then the Pittsburgh operator would…

Hilary: Pittsburgh meaning overseas (operations)?

Alex: No, Pittsburgh…yeah, AT&T has a major switching center in Pittsburgh – right -- that just happens to be the next point along the way and then from there she'd get a Moscow operator.

Hilary: So you're going all the way around.

Alex: Exactly. You're going all the way around the world. Now as soon as we get into Russia in this year in 1990, even in 1990, we were into the old manual plug boards, right.

Hilary: Cord boards.

Alex: In fact, yeah, as we say, the switching is fully "digital".

Hilary: Yeah, exactly, yeah.

Alex: So then the Moscow operator would… now this is where things start to get pretty dicey, you know, as far as: are you really going to be able to hear the next step? Is there going to be a circuit available? From there they would connect you to a place called Novosibirsk.

Hilary: Right.

Alex: Which is in Siberia. And Novosibirsk would connect to Khabarovsk, and Khabarovsk connect to Magadan. And needless to say, most of the time you would never make it. But if you'd finally get a Magadan operator, then you'd give her the local number and then she would dial and then it would ring through.

Hilary: And she was actually manual at that point or was it all the way (in Russia)?

Alex: It was manual until you got to Magadan and then in Magadan she could actually dial it and connect you through. Crazy, huh? So that was what we wanted to…

Hilary: And this was ’90.

Alex: Yeah, that was what we wanted to get rid of. And in fact, it was sort of the obvious thing -- to make a direct link so you didn’t have to go all the way around. I mean it was only a few thousand miles away.

Hilary: Sure. And practically line-of-sight.

Alex: Yeah, that’s right. So it was observed that the Alascom satellite actually had a footprint into -- sort of not too far -- almost all the way to Magadan. But I was the guy that sort of inspired Alascom to get going on this because I was running things for the university and we had a definite need. We had, I mean, we had a need and we had money, you know. We needed to have circuits into these institutions in Magadan that we were working with. So we lit a little bonfire under Lee and we got this project going that we worked on together. It ended up that they retrofitted an earth station near Magadan -- not actually in Magadan, in a place called Kapron -- which is on the map in the article there.

Hilary: Right.

Alex: And then they got that earth station to work through the Alascom satellite and ultimately the connection was made back into Fairbanks and we got it to work. And so we actually had phones in Magadan that were -- the terminology is “off-premises extensions”, which meant if they picked up the phone in Magadan, they’d get a dial tone from my PBX (Private Branch eXchange) in Fairbanks. So they could make a call to the Fairbanks campus by dialing four digits. And then here’s another thing: we also ran Internet traffic over this. So this was the first Internet link. Yeah this was the first Internet link into Eastern Russia.

Hilary: That’s amazing.

Alex: We call it the “backdoor into Russia”. You’ve probably heard that.

Hilary: I would say. Was there any State Department problem that the…

Alex: Well, the regulatory problem… there was a regulatory problem with the satellite and that’s discussed in the article. The problem is that domestic -- I’m sure you remember this -- domestic satellite communications is regulated differently from international.

Hilary: Absolutely.

Alex: So as soon as you’re international, now you’re into the whole world of the ITU (International Telecommunications Union) and all that stuff, right?

Hilary: Yeah.

Alex: So… oh, and furthermore the Alascom satellite was a domestic satellite and it was being used in this case for international service.

Hilary: Exactly.

Alex: Not too kosher.

Hilary: Right, right.

Alex: So that was Alascom's problem. That was Lee's problem or somebody's. I don't think Lee actually handled this stuff. He just passed it off to the legal department.

Hilary: Right.

Alex: So it took them well over a year to get that resolved. In the meantime, during that one-year period when the circuit was working but it wasn't legal, Alascom was not allowed to charge me for the service. So I got free service for a year. We said it was a test. We were just testing.

Hilary: I love it.

Alex: So that's a pretty cool story.

Hilary: That's a great story. That's great. And that period, Alex, is there any particular phone call or moment that sort of jumps out at you, that you went "Wow, this is why I do this or this is cool"?

Alex: Well, when we made the first phone call to (Alaska) -- I also went over to Magadan with a technician and we personally installed the equipment. So that was pretty…

Hilary: Back to your roots.

Alex: Yeah, well, I've always been kind of that way, always been hands-on, you know. So, yeah, when we placed the first phone call from Magadan back to Alaska that was pretty cool.

Hilary: Who'd you call?

Alex: I think I called my secretary in Fairbanks because I figured she would probably be there to answer the phone.

Hilary: Installing? Being over there with the tech?

Alex: Oh, oh, yeah. I befriended, in the course of all this stuff, the top guy in the Far Eastern Russian Academy of Sciences. The Russian Academy of Sciences is really a big deal.

There's no real exact counterpart in this country, but there are only 400 members of the academy and you can't… they can't get a new member unless somebody dies. That's how it works. And this guy, he was the top guy of all of the scientists in the Far East. He was located in Vladivostok and he was actually a marine scientist. So we used to have need to communicate with him… and this is kind of a communication story because we'd have the need to communicate with him from time to time, and the phone service was so bad in Vladivostok. I mean, all the same problems that I was just discussing with you. We couldn't figure out how to get a message to him. Finally we figured it out. His name is Yuriy Lalhekov (sp?) and he, among other things, presided over a fleet of research vessels, which were berthed in Vladivostok harbor. Vladivostok is the home of the Pacific fleet of Russia. But they also have all these research vessels there. So this would be like the "Alpha Helix" times 30 you know, and they have a whole fleet of them. And so here's how we finally got the message through. They had an Inmarsat terminal on the ship. You know what an Inmarsat terminal is?

Hilary: International Maritime Satellite?

Alex: Right. Yeah. And so that's telephone and other traffic. That's quite reliable, you know. That's a good reliable system. So we sent a fax to the ship and so for a while we were communicating this way. We faxed to the ship, you know. They would carry the message to his office in the city, right? Then he would compose a response. They'd take it back to the ship and they would fax it back to us.

Hilary: Oh, that's wonderful. You had that human link in between of trotting it up the street to the guy.

Alex: Yeah.

Hilary: Oh, that's great.

Alex: Yeah, there were a lot of good experiences with the Russians. I mean, just a whole lot of Alaskans had this experience of finally connecting with those mysterious people on the other side. And, you know, they gave us lots of gifts. Oh, I even I took my daughter Becky along on one of those trips. She was only 16 at the time so that was a big experience for her.

Hilary: That is so great.

Alex: We were giving and receiving lots of gifts, as is the custom over there. I've got a whole collection of stuff at home. But one of the things was that the Russian customs officials weren't very understanding about this.

Hilary: They wanted some…?

Alex: Well, maybe they did, but this was the way it went when… Have you ever been to Russia?

Hilary: Yeah.

Alex: So I think the customs treatment was real variable depending on where you were going in and coming out. But the experience that I had, especially in Magadan, was that when you arrived, you'd have to declare all the cash you were carrying, rubles, dollars, whatever you were carrying. And then when you came back out again you'd also have to declare your cash as well as you'd have to present any receipts for any currency conversions, receipts for anything you purchased. Okay, well, everything sort of had to match. Everything had to balance out. But the only problem was there was no allowance in here for gifts. How do gifts fit into this? In other words, so you're carrying all this stuff and you don't have receipts for it.

Hilary: Right.

Alex: Think about that. So they confiscated stuff.

Hilary: So they would take your gifts.

Alex: Yeah. So one time I was carrying… well, they would take the gifts but then I'd just give them to my Russian friend who was standing there and he'd try to send them through with the next guy. There was always a way to beat the system. So my daughter… this trip that my daughter was with me… they confiscated a set of gold spoons, these little souvenir spoons, right?

Hilary: Yes.

Alex: And there was also a hatchet on the same (trip). It was kind of a souvenir hatchet that was engraved and everything and they didn't take that. *[Hills addition: My daughter couldn't quite understand why they left me with a dangerous weapon but took a set of spoons! My Russian friends brought the spoons on their next trip to Alaska.]*

End of Tape 2, Side A