Tom Jensen

Interviewed by Hilary Hilscher

July 25, 2001

Tape 1, Side A

Hilary: We're in his office at ACS on the 25th of July 2001. So Tom, after (your work in) broadcasting, how did you come to Alascom? How did that whole switch happen?

Tom: I think that's an interesting question in this regard. At the time I was in broadcasting, this was 1976, (Alaska's) bicentennial year, a company called RCA Alascom was in business. They were the only long distance company in the state and they were just going through growing pains and one of the areas they provided service very poorly was in the broadcast arena.

As a broadcaster -- as the operations manager for the radio and TV station -- I had need on a regular basis to call on Alascom and order a product. In other words, I need to set up a live feed of, for example, the Kentucky Derby. We would then go out and sell that to our customers in the Alaska radio audience, and then on Saturday Derby Day at eight o'clock you'd turn the switch on the board and there would be the live Kentucky Derby. Well, in this particular case we turned the knob and there wasn't anything but static. Now we had sold this product. Now where is the Kentucky Derby? Well it's not there, gee, so you throw a record on and you pick up the phone and call RCA. And, oh well, we never got your order. Gee, I'm sorry but I don't have time to talk to somebody on Monday, I need the Derby now, it's live. Well, we can't do anything for you, too bad, and they hung up. So we made a long distance call to a Seattle sister station, plugged in a phone patch and got it.

At that point, I said somebody better straighten these people out at Alascom. So I called and talked who was then their president. He and I got together for a breakfast meeting and I explained to him in great detail that you can't annoy broadcasters because…

Hilary: And who was this at this point?

Tom: Stephen Heller. And you can't ignore broadcasters because they do the news every hour on the hour and if they don't like you, bad things can happen to your company and we rely on you for long distance, so what are you going to do to fix it? And he was very apologetic and said, "We're just learning, we just came up here, we just took over, you know. We've only been here since 1971." I figured that in five years they should have figured it out. And before he left he asked me, "Would you write a job description for what someone would do in our Marketing Department as a liaison, if you will, to handle the broadcast community, radio and television throughout Alaska? What they should know, what their function should be." So I did that. Sent it to him in the mail because we didn't have email then. And about a month and a half later I got a call from his office

saying let's go to lunch. Went to lunch and he said, "I got your letter, I appreciate it. I'd like to hire you to do that," and he laid that job description down on the table and he offered me twice what I was being paid in broadcast at the time. I mean I actually would probably be able to eat three meals a day at least once a week working for him as opposed to which half of the bean are you going to eat if you work for Augie Hiebert in Northern Television. So I thought about it for a day and a half or so and we negotiated a little bit and I took the job. So I went to work and created the marketing function at RCA Alascom to address broadcast. And "broadcast" concerns live radio, live television, as well as the services they provided which then included the teletype, all of your teletype and wire copy and so forth.

Hilary: Were they doing marketing at that time other than advertising or were they doing anything?

Tom: They who?

Hilary: Alascom, RCA.

Tom: Well, they had a Marketing Department, but it was more of an order-taker department. Yeah, they didn't actually go out and market. They just waited until the phone rang and the story I just told you -- we got caught in a trap, you know, if the phone rang and they were busy, too bad, they aren't going to take care of you. So I had that job and I set up the function and that leads into the next question you haven't asked me but maybe you will: What was the conversion factor of coming from Broadcast Alaska into an international corporation?

I didn't fit at all. Now I was working with broadcast. This was the mid-1970s so the first day that I showed up on the job at RCA Alascom I was wearing my yellow leisure suit. Well, when I think about it now it was hysterical because I was the only guy there that even knew what a leisure suit was. Everybody else had on a three-piece suit and a striped tie and short hair. I had long hair. And they all had meetings and went to lunch meetings and breakfast meetings and seminars and I just sat at my desk and worked, you know. So I got in trouble: first was my dress code. I was counseled about a week after I got there about why I was dressed that way. And I said, "Because the people I'm working with dress that way and if I walk in dressed the way you are they aren't going to pay any attention to me." "Oh well, I guess we can put up with that." Well, that was the first problem that we surmounted.

Then I found they had a corporate structure where if you were an executive -- and I was sort of a junior executive, I was hired as the senior marketing specialist -- you didn't do any of your own paperwork. You just scribbled a note or two and you handed it to the word processing ladies, all ladies, and then they converted it to a rough draft that came back to you maybe a day or two later and then you made corrections and then you submitted it back to them…

Hilary: To the typing pool.

Tom: And they did the final. It was a typing pool, absolutely. I mean there was no email. There were no computers or anything else. Well, after about two or three times around that tree where I had a memo to get out or a letter to get out and I had to wait four days before it was finally ready…Well, I thought, that was stupid. So I brought my own typewriter from home. War was declared. The typing pool, the steno pool -- they called it the "word processing unit" -- threatened to go on strike because they had this management guy who was doing his own typing. So I got counseled again. "You can't do that." Well, I said, this is silly you know. Why should it take four days to get a one-page memo out? Because that's the way it is. So that is the way it was.

Hilary: Did you take your typewriter home?

Tom: I had to take my typewriter back home. Yes, I wasn't allowed it. Well, they wouldn't give me one there so I had to bring my own. I had an old -- I still have it. It's an old Royal manual typewriter. They all had electric typewriters.

There was another complaint. I know it sounds silly but the bell on my typewriter was loud and it distracted them. It wasn't a low electronic hum like on the IBM Selectrics. And I'm not picking on the steno pool, but it is just that everyone was -- I guess that's the point I make: Everyone was conscious of their turf and their image. It had nothing with getting the work done. It had to do with their turf and their image.

No, I was on the job about a month and a half and they called a company meeting, management meeting, downtown at the Fourth Avenue Theater and they doubled all our salaries. They had been doing a salary analysis and they found that the Alaska cost of living was so much higher than what they had been paying us, based on what they did in the Lower 48. So I had been on board a month, six weeks and they doubled my salary. I figured that I'll stick around 'cause it damn near got doubled when I went to work for them to begin with, out of broadcast, and it doubled again. Hey, I figured in another year I'll be making a kajillion dollars. It didn't work out that way.

One of the other problems they had in the corporate environment at RCA Alascom is they were run by the east-coast RCA corporation who had no idea what Alaska was like. When RCA bought the company, they thought they were buying the existing network and they would just make it work and make money. The first thing that happened is the state started applying pressure, saying, "No, you got to expand this network. You got to go into rural Alaska and provide communications where it doesn't exist."

Hilary: Well, that was part of their charge in purchasing the system.

Tom: That was part of the negotiation to buy.

Hilary: Right.

Tom: But they were dragging their feet even when I got there. They didn't want to do all of this, and what they did they got pushed into. And the problem was on the east coast. (At) RCA headquarters they would look at the companies they owned and they owned NBC television. They owned Random House Publishing. They owned Hertz Rent-A-Car. And, back then, RCA also made all sorts of electronic appliances -- radios, television, video machines and so forth. And they would sit down each year and say, "All right, how much capital do we have to invest in these companies, what's going to be the return?" And then they'd get to RCA Alascom and they'd say, " How much do we have to invest?" "Well," we'd say, "We have a plan that requires $60 million." "And what are you going to return?" "Oh, about one percent." And they'd say, "Well, you go stand at the end of the line 'cause we're getting 14% from Hertz and we're getting 22% from Random House." So by the time it was RCA's turn to really get money and get their plan approved, there wasn't much left.

Hilary: Wasn't there some sense at that point that if they had Alascom that they could get into the domestic market of radio, not radio, telephone?

Tom: You mean local telephone?

Hilary: No, interstate.

Tom: Oh, yeah, but they were doing that because that is what they were interconnecting with.

Hilary: Right.

Tom: The Bell System in the Lower 48. And I think they looked at that -- and I wasn't privy to those high level meetings -- but I think you're right. And that they looked at that saying, "This will be where we get our nose under the tent in the long distance business and then we move slowly to the Lower 48. I believe what they found after they owned Alascom and operated it, then they found it was extremely capital intensive. The return -- even if it was a guaranteed rate of return -- it was minimum return on your investment and they decided that we don't want to go any farther in this phone business. I mean, you know, we're not interested. Now they bought the company in '69, took over operation in January '71. By the time I got on board, they had figured out it was going to continue to cost them tens of millions of dollars of year in investment to make it work.

Hilary: For not a lot of return.

Tom: And not a lot of return on that investment. And I went to meetings once a month in New York. They were called "business reviews" where you would fly out at midnight on a Northwest plane. You'd get there about five a.m. New York time, check into a hotel, shave, shower, shine your shoes, and then go up to their board room at 30 Rockefeller Plaza looking like you'd been on a three-week binge because you're dead tired and your eyes are bloodshot and the week before you left you had been putting this report together 'cause it was an all-day review of the entire company operation. And what it always

amounted to, at the end of the day, is: "Well, where can you cut expense? Where can you increase profits?" It had nothing to do with needing an extra $10 million here to make television work better, or we need an extra $4 million here to make a long distance (improvement). No. It was where can you cut expenses? How can you increase profit?

So about '76, '77 I believe, they had already decided they were going to sell that property and they were looking for a new president who could profile the company -- raise its profile -- because under Steven Heller and Fred Chiei RCA Alascom was very low-profile. It was your typical boring telephone company. They wanted somebody a little bit more flamboyant who would high-profile the company, make it look…at least be in the headlines. Well, they found a fellow who worked for the Bell System out of Minnesota named Ben Agee and they made him an offer he couldn't refuse.

So Ben came to Alaska in about '76 also, the year I hired on and he took over as president and it became a real 24-hour-a-day carnival at that point. He traveled the entire state, raised the profile of the company both in Alaska and made trips to the Lower 48 to telephone association meetings. Anytime we did anything for the first time he got us international press if at all possible.

I was in the Marketing Department and watching what they were doing PR-wise and I had some public relations experience working broadcast, radio and TV, for 20 years at least in Alaska. I was familiar with the market and what worked and what didn't. And since I was never modest and shy, and didn't know that in corporations you were supposed to observe the chain of command, I'd say to the vice president of the Marketing Department, "Well, that's the dumbest thing we've ever done. Why are we running those kinds of ads?" You know, we ought to do this and we ought to do that and eventually some of my ideas got back to Ben Agee.

Well, one Monday morning he called a staff meeting and I was called to attend. I had never even met the man, but all of a sudden I was called to attend this meeting. So we went to this meeting and walked into this room and he looked around and he said, "Who are you?" And I said my name is… and he said, "Well, you're the wrong Tom Jensen, I meant the other guy but shut up and sit down." So I sat in the corner. And the meeting he was in charge of was the fundraising committee for the YMCA which, I think, was getting ready to expand and he was looking for some ideas for fundraising activities. So we went around the room and all these corporate suits would say, "Well, you know we could have this wine-tasting party and bring some good cheese in and maybe we'd make $500 or $1,000." And then someone else would say, "Well, that would be fine but, you know, maybe if we had…" And they were headed, I thought, in the wrong direction. I mean, he was talking thousands of dollars and these people were talking about very socially elite activity.

And like a dummy I raised my hand and he said, "What do you want?" I said, "Well, you know, RCA owns us and RCA owns the Elvis Presley contract and we are now providing live television through our satellite system to some places in the state. Why don't we

bring Elvis up to Anchorage and put on a concert on the Park Strip, give he and his entourage a week's free rein in Alaska to hunt and fish and a vacation. We'll televise that thing through our satellite system so rural Alaska -- those people that watch can see it and all money goes you know to the…" "Well," he said, "That's not a very good idea. Shut up and sit down." So I shut up and sat down and when the meeting was over, he called me back and he said, "Here's a phone number in New York I want you to call, and see if you can get that thing to work."

Well, Ben's style was such that he didn't want anybody to know what he was up to and so in the meeting he said, "No, we're not interested." But afterwards he wanted something and if it would have worked he would have taken a 150 percent credit for it. As it turned out, we got a commitment from the Presley management group that it would work in the month of August. About mid-August he was coming back from some place and he had five days and we would talk about it. Now pressure was applied by RCA which owned his contract that they wanted him to do this so that this company would look good. And they were looking at, "Hey, once we put it on the satellite we can find select locations in the Lower 48 (to broadcast) 'Live from Alaska: Elvis Presley'." I mean… stupid as it sounds. As it turned out, just about the time they were ready to finalize dates and the commitment had been made that they would try to make it work, Elvis came down with a bad case of ,I don't know whether it was the flu or a cold or laryngitis and missed a week's worth, a week-and-a-half's worth of contract dates. So everything got bumped and he had to make up the schedules he had missed 'cause he was a multi million-dollar phenomenon -- and Alaska was dropped.

But that put me in front of a guy named Ben Agee who saw there was another weird guy out there that has strange ideas. So when Ben fired his PR director Luke Canselmi (sp?), he hired me. And the way he hired me is he called me in the Marketing Department and said, "I want you to be in a staff meeting." So I came down to the staff meeting and thought, Here we go again: I get to sit in the corner. And as he opened the staff meeting, he said, "By the way, this guy Tom Jensen we hired out there in marketing -- I'm going to have him -- he's going to be the acting PR guy until we find somebody who is good at it." And that's the way I was hired.

And so I met with him, and he said, "Here's what I want you to do and here are the priorities and if you have any questions don't call me because I'm busy, but don't screw it up. And by the way, I'll be sending you resumes to rate and prorate so we can hire somebody that is good at this." That's the worse place in the world to be – the acting anything. I mean, I would call around the company trying to get some things started, to get some things done, and I'd say, "I'm the acting…" And they'd say, "What do we want to talk to you for? Somebody else will be there really after a while." About three months I was the Acting Director of Public Relations, and we did a lot of stuff and some of the ideas were mine and Ben liked them. One night he called and said, "Bring your wife down to the Top of the World (I guess it was) and Kathy and I will buy you a glass of wine." And when Ben called that's what you did. There was no, "Well, I'm sorry, I'm having a family barbecue."

Hilary: No "Let me check my schedule."

Tom: Yeah, I mean, just the whole world stopped. He was God. So Cyndi and I went down there and Ben and Kathy came in a few minutes late because he always was late -- always fashionably late -- and we had a glass of wine and we talked about this, that, and the other. And finally he said, "By the way," he said, "You know, kid, I guess you can have the job because I'm just tired of looking at all those resumes." So I mean, from the get-go working with him, it was never that I did anything right. It was that I happened to be in the right place so I got to fill in. So I then became the director of Public Relations for RCA Alascom.

Hilary: When was this, '77?

Tom: That would have been '77, yeah, but I had been on the company payroll about nine months in the marketing slot when that happened. And then it was a learning experience, and I learned a whole heck of a lot. I learned about corporate structure, how to use the chain of command to your benefit, how to solve a lot of problems. I also learned about RCA. And about that time they became serious, in '78, about selling the company.

Hilary: Before we go on to selling the company, what were the main issues that the company was dealing with at that point, the concerns? Obviously there was broadcast wanting more -- wanting cheaper rates for more live broadcasts. You basically were the only telephone game in the state for long distance.

Tom: The biggest problem I think the company faced -- and the public wouldn't have been aware of it because the company was very close-to-the-vest -- was determining what the real priority was for the state of Alaska. I'm talking about the state government because we were totally regulated by what was then the APUC (Alaska Public Utilities Commission). And we wanted to get along with them and we knew it wouldn't be long before we were in front of them for a rate case because we were losing money. And so trying to figure out, you know… they'd talk about, "Well, we want earth stations everywhere so these people can have live television. And we want phones everywhere. We don't want party lines. We want everybody to have a telephone in their house." I mean, we're talking about a state where 290 villages didn't even have a single phone in the village in 1976 and the state was telling us we want a pink princess phone on everybody's coffee table in every village everywhere in the state. And so the state had all these demands that we'd get through the legislature, through legislation or resolutions being passed, and you add up the numbers and it was tens of millions of dollars of investment and you didn't know if there was any return. And we knew when you go back to New York and say, "Yeah, we'd like a $15 million capital plan," they'd laugh, giggle, and throw you out of the 87th story window.

So the politics internally was trying to determine and trying to prioritize what the state really wanted and then try to do that for reasons that were very self-serving. We wanted to make a profit and be popular. We didn't want to be the negative headline. That was the

toughest challenge internally. Externally as you alluded to providing service. And what we learned is once you turn something on, it was impossible to turn it off. And just as in today's telecommunications, once a customer has a product -- they want more of it, they want it faster, and they want it cheaper. And in Alaska in the mid-70s to the early 80s. politics ran… political pleasure dictated the business plan for the most part to Alascom because the political leaders and the pressure they could put on the company made it almost impossible to say no. We had, and we'll cover some of these, I suppose… but I mean, we had occasion to go in for a rate increase. We could prove beyond any doubt that we could justify, based on what our investment was, that we needed to increase in-state rates by 137 percent.

Hilary: I remember a 40 percent rate increase.

Tom: But 137 percent is what we justified in the filing in 1978, I think it was, '77, '78. And the reason for that was because until RCA took over, it was a government run entity and it didn't have to make any money anyway. RCA took over, and kept plowing millions of dollars into it, expanding the network, putting earth stations out in the Bush, and then building and building -- and had never adjusted the rates up. So we got to the point where, for every dollar that Alascom billed, they lost ten cents. (It was) interesting in the hearing – a sidebar here: AKPIRG (Alaska Public Interest Research Group), wonderful organization looking out for the interests of the public -- was an intervener. And they had a young man named Jamie Love who has since gone on to fame and fortune working with Ralph Nader, but Jamie was the leader of AKPIRG and was the intervener who was questioning witnesses and again we had our finance (chief) going on the stand and he had already provided testimony (that stated) for every dollar we took in the cash register, we were losing ten cents. And so Jamie asked the question… he says, "Is it true that for every dollar that you take in you lose a dime?" "Yes, it is." "Well, have you ever thought about discounting your service by 50% and making it up on volume?"

So that was part of the problem we had in the regulatory arena. This was a piece of political pressure even though Jamie wasn't an elected official. He had a constituency that paid attention, that got headlines -- and we had a large company that wanted to get by. We weren't looking to be the negative headline. Ultimately the commission turned us down flat. They didn't give us anything, zip, zero. No rate increase at all, even though we had documented a need for 137 percent. Oh, I should add that we asked for… we documented the need for 137 but we settled for 84 percent because we recognized 137 percent increase -- more than doubling your rates -- would probably be too much.

We appealed their decision to the Superior Court, State of Alaska, and the Superior Court said about three or four months later, "No, you can't have it." So we had no place else to go 'cause we were losing money by the millions of dollars. We appealed it to the state Supreme Court, that's the way the process works. And it drug on. They didn't issue an order and it drug on. They didn't issue an order and it drug on. They didn't issue an order and we are getting pressure from our parent company in New York saying, "Why do you continue to lose all this money?" And we kept saying, "Well, you know, we want to get

this rate increase but it would really help if you would give us several million dollars to expand our plan." They said, "Are you nuts? You're losing money. Why would we want to give you more money?"

So finally Ben Agee, who was never a modest quiet man, called a press conference. And the media always showed up when Ben called a press conference because he was very colorful. And what he basically said is… he said, "I just would like to inform the Governor and everyone else in the state that if this Supreme Court of the state doesn't rule pretty quick in our favor, I'm going to start laying off people and shutting down services because we're running out of money." Now the media had a heyday with that because you can't threaten the state, you can't threaten the customers, and he did. They asked him, "Why are you threatening?" He said, "I'm not threatening. I'm just telling you I'm running a business, we're losing money, so we're going to quit investing it and that's just the way it is."

Coincidentally, within probably a week or ten days -- and the governor, by the way stated that he couldn't tell the Supreme Court what to do, I mean there's a division in government, there's the judicial, there's the executive; I mean, nothing he could do; Jay Hammond was very good at ducking that bullet -- and about a week, ten days later, the Supreme Court ruled in Alascom's favor and we were granted an 87.5 percent rate increase. In the media we were **so** popular. I mean, I still have in my scrapbook someplace a headline from a publication, a cartoon from a publication called "The Alaska Advocate." And if you can picture in your mind an 8 x 10 piece of paper and on that paper is a standard old rotary dial telephone. Only the handset of the phone, the top of it, is in the shape of a snake's head striking and it is labeled "RCA Alascom" and then here are all the public quivering at this snake. It was just a real fun time to be working for the phone company. It truly was, but we got through that.

And again the challenge was how to meet the political priorities whether they were admitted political or not, and continue to expand and build a network. As I mentioned, we also found out that the more you provided, the more people wanted it. Some of the PR challenges of that time were, as I mentioned earlier, we took an area that had 280 villages that had never seen a telephone and we provided telephone service over about a five-year period of time. How do you do that? I mean… and the answer to that question was really quite creative and it wasn't because we were so smart and brilliant. It was just you had to do this to get the job done.

One of the first things we did is we scheduled a tour into each village before we turned up the phone service and the phones. I won't bore you with the details but you know they were often earth stations. But before the phones got there, before the earth stations got there or anything else, we came in the village: "Hi, we are Alascom." And we opened our box and we took out a rotary dial telephone and started out by saying, "This is a telephone." Many people in the village had been to Fairbanks or Juneau or Kotzebue or some place that had phones so they had seen them, but about half the people had never seen one, never seen a phone, and they didn't have any television so they weren't

watching phones on television. So you started out with "This is a telephone and we're the company that will bring these to your village." And then we actually put together for the school systems in the villages coloring books. What was the other thing? I think we had trading cards but (definitely) coloring books, and we had a puppet show. The puppet show basically for kids explained how communications work. The coloring books explained how to use the phone. You just don't get on it and talk forever because it costs money and so forth and so on, because what we are talking about here is long-distance phones. These weren't local phones. These were long-distance phones and we had one run of those comic books that was done in Yupik, on that was done in Athabascan… in the Native languages because a lot of the kids didn't speak fluent English or understand it that well. So that's where we started.

Then we moved into each village slowly but surely. We had a schedule and we built a satellite earth station, you know, an antenna and put it up, and you plugged "a" phone into it, singular phone, one. Now RCA Corporation, which owned us, wanted to make money. They were insistent on making money so they suggested and we followed through. The first thing we did was put pay phones in the village. Now anyone who has spent any time in the state of Alaska knows that rural Alaskans don't travel around with tens of dollars worth of quarters in their pockets. I mean, if you live a rural lifestyle, cash is not something you always worry about having in your hands. So the first thing we discovered is we weren't making a lot of money and one of the ways… I'll give you an example. And the people were not dishonest, but they had to figure out how to use the phone. And they'd get to this one pay phone in the village in maybe the Council chambers or the meeting hall or whatever, and they don't have any cash. I mean, what do you need cash for in the village?

So there was one quarter in this particular village which will remain anonymous that was left on top of the phone and the coin box was pried open and everyone that used the phone would just take that quarter and put it in, it would drop through and take it and put it and drop through. So, you know, you had about $4,000 worth of revenue recorded off that phone at the end of the month and you had one quarter in your cash bag.

Now this really upset the RCA Corporation in New York. They didn't understand how you could have spent all this money building a satellite earth station, putting it in the village, putting in a pay phone and then these terrible people would rob you. They weren't robbing us. They were just trying to figure out how to use the system.

So a wise and wonderful brilliant person made the decision: "Well, what we'll do is we'll have someone sitting at the pay phone with a bag full of quarters and they can make change." Well, that was stupid. Nobody walks around with a sack full of quarters. Nobody walks around with ten-dollar bills in their pocket in the Bush either. People just don't deal that much with cash, or didn't back then. So, I mean, you've got this person there with a sack full of quarters and the local guy comes up: "Well, I don't have any cash." "Well, here, that's all right, how many quarters do you need?" And so pretty soon you end up (with us) providing the quarters. Then you end up with an accounting

nightmare. "Well, how many quarters did you give out for using the phone? How many quarters did you get back? Well, where are the rest of the quarters?" Well, you know, it sounded like people were stealing from us again. No, they weren't stealing from us. They were just trying to figure out how to make it work. Oh, by the way, when you did that, you had to hire someone to sit there with a sack of quarters and they had to sit there 24 hours a day and one person can't do that. So in the bigger villages, you had a shift of three who sat there with a bag of quarters to make change. I'm not making this up, Hilary. This is true stuff.

Hilary: This was a step I hadn't heard. I knew about the quarter box, I mean the quarter being recycled.

Tom: So you know that didn't work well. So finally, in all our brilliant… and of course, every time you go back to New York for these monthly reviews, and they wanted to know how it was going? Well, it was investment in the Bush, you know. "Well, we made three quarters at Shishmaref, four in Noatak." (It) wasn't that bad, but I mean, ah, man, they just didn't understand. You're talking about people who live on Wall Street, you know, and they're dealing in tens of millions, and hundreds of millions, of dollars and they are worrying about the quarters we're making out there in rural Alaska. "What happened in Minto?" "Well, it rained and the phone broke." "What?!" I mean, we had unique things happen.

Now, again going back to the single phones in the village: if you've ever been in rural Alaska, in a village lifestyle you will find that everybody knows everything about everybody else. There are no secrets. And occasionally there are sort of Hatfield-and-McCoy-type of relationships where one segment or one family doesn't particularly care for -- for whatever reason -- another segment or family. When we installed the phone in the village, we had to have three things. We had to have reliable power so the phone would work. We had to have a heated location because it gets 50 below and phones don't work real well when it gets super cold. And we also wanted a location that had some adult supervision nearby. You just didn't hang it on a tree out in the back forty.

Well, in one village -- and again will remain anonymous -- it was determined where we could have power, where we could have heat, and where we could have supervision was in the arctic entryway of a couple's home. This was like a long hallway that brings you in out of the cold weather. It is heated in there, and then you go up and knock on their door to get in and that's where the phone went. These people had a sort of Hatfield-and-McCoy thing going on with another family in the village, and I swear this is true. I got a letter in the mail and the reason I got a letter is no one could call me and the reason they couldn't call me is cause the letter said, "We have stolen your phone and we're holding it for ransom and until you take it out of so-and-so's arctic entryway 'cause they are not nice people and" -- I'm really cleaning this up a lot – "and we don't like them and until you do that, we won't tell you where your phone is and you won't get it back." Our phone was kidnapped.

Hilary: Take that to New York.

Tom: And I have the letter from the kidnapper, you know. So, in that case, we went back to that location with another phone – and, by the way, you don't get in a truck and drive there. I mean, you know you got to get a phone, you got to get an installer, you got to get in an airplane and charter it into the village, and then you got to get somebody to meet you at the airstrip. I mean, you don't just go out there and drive your truck and hang a phone on the wall. But anyway, we go back into the village and we put this in the Village Council Center that met the criteria, and strangely enough, our phone materialized about a week later on the floor right in front of the other one that we replaced it with. So the people were not crooks. They were honest kidnappers. They returned the victim.

Hilary: What happened after…

End Tape 1, Side A

Tape 1, Side B

Hilary: …the person with the bag of quarters.

Tom: Well, that obviously didn't work out as well as we had hoped. What we then did is someone came up with a brilliant idea and it worked. Why don't we give all of these people calling cards? And that way all the calls they make will be on their calling cards and we'll bill them and they'll pay us. Why don't we do this? Why don't we give them calling calls? And if they don't have a good enough credit rating to get a calling card, then why don't we just make the phones 'collect only'. So the only way you can call out of there is to call collect. And that's what we did. And we found, by and large, most people were honest and paid their calling card bills and made their collect calls.

Now, they were paying a premium because long distance rates were high to begin with back then and, in addition, any time you use your credit card there was an extra -- I think it was 15 cents per call -- surcharge for setting up the card and they had to pay that on top of what the toll was. A collect call, I think, was 50 cents or a dollar that you had to pay extra. So they had communications, but they were paying an exorbitant price for it. But again the revenue started coming in and things were wonderful.

There were occasional glitches however. In the village of Shishmaref… no, it wasn't Shishmaref. It was another village up north off the coast, but a village. They got in arrears on their village telephone 'cause in this case the phone was installed at the request of the village council and so it was billed to them. Now they made a lot of calls out of there, collect calls, and that was fine. They had a credit card but they also had their own account for the calls that they made out of there, and they got in arrears -- I think it was somewhere in several thousand dollars -- and the law is very explicit. The rules we had to operate by said if you don't pay your phone bill, we have to unplug your phone because if

you don't pay it then everybody else who is paying theirs is subsidizing you. So we wrote to this village and said, "Hey guys, you got to pay your phone bill." And what we found, by the way, is the reason they weren't paying was very similar to the quarters-situation where people come to use the phone didn't have the… "Oh, go ahead and use it and charge it to us or pay it later." And then these people travel all over in the northwest and maybe they weren't there for a month and a half to pay what they owed the council for the phones.

So anyway, we wrote them a letter and said, "If you don't pay that, we're going to have to turn off your phone." "Okay, turn it off." That didn't excite them too much. They didn't care if the phone was turned off. Then we pointed out: "But if we turn it off, we turn off the earth station and that's where you're getting your one channel of television." "Oh, gosh, TV might go away. Now we're in trouble." So they had -- true story -- they had a bingo party in that village and they raised $1,500-$2,000, whatever it was, to pay off the bill. So again, honest people. At my desk, I received a brown manila envelope, opened it up, dumped it out on the desk, and it was full of money. It was the money for the phone bill. Now, I mean, there were $10 bills and $20 bills and so forth in there, various coins maybe a buck-and-a-half in coins but there it was in there. That was just so unique and so typical of Bush Alaska. There was a Sears & Roebuck refund check where someone had ordered from the catalog and they had ordered, you know, merchandise and paid for it and when Sears shipped they were short some items. So Sears sent them a refund check for that. That check had been in the village; it was a two-year-old check. It had been in the village for two years and it must have had fifty signatures on it. It had been used as money. And somebody would sign it, and then they'd give it to George, and George would give it to somebody else, and somebody else… I mean… so at the bingo, that was submitted: "Oh, okay that's legal tender." And so I got it and there's no way in hell you would ever cash that thing. So we had it framed. There was a story ran in the National RCA magazine about how nice we were that we would forgive this $12 debt that we had. Then for a while I had it and I loaned it to somebody and I don't recall whether it ever came back, but I had that framed check over my desk for a while. It showed the honesty of the people with the uniqueness of doing business in rural Alaska. It was great.

Hilary: You mentioned television.

Tom: Oh, yes.

Hilary: And this was one of the huge changes that came to rural Alaska, after the phones, which made a huge difference.

Tom: RCA really didn't want to be in the television business, really didn't want to be in the television business at all, but the only way you could get live television into Alaska was via satellite. The first time it ever came up was in 1969 -- man landing on the moon -- and that was done with some local broadcasters making some arrangements. And I'm sure

talking to Augie (Hiebert) you got all of that. And that was actually man landing on the moon. That was done through the military and local broadcasters making it happen.

The first commercial broadcast was actually (when) dollars were spent to rent satellite space. (It) was 1971 when Con Murray, who owned an advertising agency, and several other executives got together, pooled the money, and my recollection was that it was about $2,500 an hour for live television. And they got enough money together for one of the National Football League's playoff games. It was a first. And, as you can imagine -- and it only played in, I believe, Anchorage and Fairbanks, maybe Juneau, but Anchorage for sure -- once people had seen it, (they said,) "Oh, we have to have more of that." So then the race was on.

And RCA was the company that they would come to, to order this satellite. And, man, was it a nightmare to figure out! You'd order the time, you'd have to get an uplink from wherever the event was happening in the Lower 48, and satellite earth stations weren't that popular then and weren't that common. You had to coordinate with the network and get their approval to carry the signal into Alaska. Then it went to the satellite, you had to downlink it either Talkeetna or Lena Point (near Juneau), or Eagle River in Anchorage.

Hilary: And those were our only choices.

Tom: Those were the only three gateway stations that were big enough to downlink it. You had to clear a circuit so that you could do that, which meant long distance calls couldn't come in and out. You had to choke your network to clear the bandwidth so you could bring the TV. Then you had to have microwave to bring it into town from the earth stations. Microwave was not permanently installed so you had to run what we called an STL, which was a satellite link, a temporary satellite microwave. Guys had to be out there hanging from trees, hanging a dish, tuning radios. I mean, the logistics were a nightmare every time you wanted to do one of these live feeds. The costs were tremendous, both to the people buying it and to RCA Alascom who was providing the service. They never made any money out of it at all, but they sort of looked at it as you kind of got to do it. And what it led to was the more TV was provided, the more people want it.

And some fool -- and if I ever find him I personally will kick him in the ankle -- decided that, you know, rural Alaska ought to have television too. Why just the big cities? You know. They're Alaskans. They're entitled to it -- and the technology had advanced to where small aperture antennas, meaning ten-feet in diameter instead of thirty feet -- could receive television… would actually downlink the signal. RCA didn't want a thing to do with it. We just saw trouble written all over that. So the state, in their wise and wonderful wisdom, got into it and they funded a program, an experimental program to put live television receivers in 23 rural villages as a test. Boy, what a lie that was. And the concept was that they would put these in, and RCA would provide the facilities through the satellite, and the state would pay for it to uplink and downlink and bring the programs in.

Then someone asked the question, "Well, what programs?" And the gunfight started, you know. Everybody wanted their own program. "I want to watch Walter Cronkite." "Well, no, I'd rather watch Charlie's Angels." "Well, no, I think the Roadrunner-Bugs Bunny Hour is much more important." "Well, what about educational TV?" "Oh, yeah, that's good too." So the state formed a committee. I wasn't a part of this but I was on the outside observing, and the end result -- and I'm sure you've got a lot of this from the broadcasters -- but they had a committee that was allowed to sit down and pick and choose programs from all four networks, the three commercial at the time and public broadcasting. And all the networks had granted the approval: "Yeah, pick and choose." And they would put their own program schedule together out of those four networks, and that is what would go through the satellite into the 23 villages. And it was hysterical. You would see literally Charlie's Angels followed by Starsky and Hutch, followed by the Bugs Bunny-Roadrunner Hour, followed by Walter Cronkite, followed by Nova. I mean, it would drive a network-programmer nuts as to how they chose what they wanted, but this committee represented rural Alaska. It was called RATNet, Rural Alaska Television Network. And they represented the villages in areas, and they'd pick what they wanted. One social issue proved some things: Johnny Carson was put on RATNet. He didn't make it. They watched him for a month and said, "Nah, that ain't our kind of program," and they killed him. Now, he had been on TV for 20 years in the Lower 48 knocking them dead. He didn't make it in Shishmaref. Fort Yukon didn't care for him.

At that same time -- this might be interesting -- once they turned television on into these 23 locations, the network had an interest in what it was going to be like, and what people would think about it, and what changes (it would make) to the lifestyle. Well, Terry Drinkwater was a reporter who worked for CBS Television off the West Coast, and he was assigned to do the story. He came up to Alaska and I accompanied him on the trip only because I was with RCA at the time, and another broadcaster from CBS went with him. But we went into Fort Yukon, and we made arrangements where he could talk to… or he made arrangements where he could talk to the village chief. And I remember that they were standing on the banks of the Yukon River with the Yukon River in the background. It was rolling by and the chief standing there, you know, in his Carhartt suit and Terry saying, you know, "What do you think now that you have live television?" And the chief's response was, "It is terrible. It is the worst thing that has ever happened. If I could possibly move my village down river fifty miles and get away from this, I would." He said, "The young people are just going to be watching TV. All the arts and crafts are going to be gone. The hunting and fishing will die out. It is horrible." And of course, they were running videotape on this and they're getting it all that they're going to show to the national audience. So we finished the interview and the chief invites us over to his store. He owned the general store. We walked in and the whole back wall of his store was covered with television sets for sale, black-and-white TV sets. And Terry asked him, "I got to ask you: don't you feel hypocritical? I mean, you just made this big speech about how horrible this is to your lifestyle and your culture, and now you're selling…" And the guy looked at him and he said, "Hey, I may be an Indian but I'm not stupid. Television is here to stay." And he was absolutely prophetic. He was right. I mean, there it exploded.

One of the problems with initial television again in the test phase that RCA had to deal with, again going back to RCA, is the state -- in its wise and wonderful wisdom -- determined that, well, this is a test, so half of these villages we will give entertainment television to. They can watch Starsky and Hutch and Charlie's Angeles and Walter Cronkite and whatever. The other half will be educational only. They'll get to watch, you know, how to plant a rose -- the programs that were popular on PBS back then. I mean, they had some programs that were so ridiculous for rural Alaska. I mean, they didn't care about the Westminster Dog Show, you know. If the dog wasn't big enough to pull a sled, I don't want to look at it, you know. But half of the villages -- all they got was entertainment.

So it didn't take long in the villages before the local people figured out if they went to the earth station site they could just dial down and change the frequency. And they would move from educational to the entertainment so they could watch Charlie's Angels -- so they would do that. The way the law reads is you are licensed by the FCC to provide a signal to a location. And so the minute they did that, we were in violation because at that time we were operating and maintaining the earth stations for the state. So we would have to charter an airplane and fly out there and go to the earth station and change the frequency back to how to make donuts, or whatever, you know, how doilies are tatted or knitted or whatever. And I don't mean to make fun of public broadcasting but you understand the difference in programming concept. And the people in the villages weren't really pleased when we showed up and turned off their entertainment and turned on their get-smart program.

The worst example was at Huslia. We went there once and changed the frequency, and we weren't back in Fairbanks a day before, you know, the word came back: now they're downlinking the other stuff again. So went back out there, and this time put a big fat padlock on the door. Back in Fairbanks a couple days later, padlock is gone. Well, they weren't quite right. The whole damn door was gone! And they had gone in and changed the frequency. And they figured, you know, by taking the door and hiding it that we couldn't lock the door up, and they were right. So we went back, changed the frequency again. And the last trip we made, they met us at the airport -- and I'm repeating what I was told; I wasn't there -- two young fellows from the village both holding shotguns. Now coincidentally, it was duck-hunting season so it would not be unreasonable for them to have shotguns. They never pointed them at anybody, just held them, and said, "Are you here to change the earth station frequency or change the earth station program?" And our people said, "Yes," and they said, "Don't do it. We like it where it is.' And so we got back on the plane and left. I mean, our guys got paid money to work on communications, not to go to war.

Within about six months of this whole brouhaha of entertainment-versus-education, somebody developed the technology where you could get both simultaneously and so that's how the problem was solved. Because if… I think, if they had never developed that technology, you'd never have ended that problem. Who would… do you want to be the one in charge of saying, "All right, in Noatak you get to watch, you know, Sesame Street.

However, you guys over there in Arctic Village, you can watch Charlie's Angels." I mean, that was just no place nobody wanted to be -- and RCA was paranoid about being put in a position of selecting programming… didn't want to do that at all. No. Huh-uh.

Now by the time we finished the 23-village experimental program, all 23 were turned up. It became obvious that the state -- who had contracted with us to maintain and operate these things, the earth stations and the mini-transmitters -- wanted out. They were looking at what the cost would be, because what I left out (was) every legislative session, a legislator would stand up (and say,) "Well, those 23 have TV. Why doesn't my village have television?" It became apparent that it was going statewide. So we negotiated with the state and we became the agent that went in and put satellite earth station dishes at the remainder of the villages.

Hilary: The remainder of…

Tom: Mini-transmitters.

Hilary: We're talking 100-plus villages.

Tom: Oh, yeah. At that point, I think… we ended up ultimately with about 265 villages on the satellite system but initially the first hit was for 100 and then it grew. So you went into the villages, you put up the earth stations the mini-transmitters were in. They were licensed to the state. They were coordinated with the broadcasters and television arrived full-time -- one channel video -- in Alaska. We talked about what they saw. Now, that created some other unique problems for Alascom. Alascom, again, didn't want to be in this business. I mean, they didn't want to be programmers and decide who watched what. But because Alascom was the gateway, was the mechanism which TV came in and went out, they had to be involved.

At the Eagle River earth station, that's where everything came in and went out in the state, and so we had been around enough to know (that) you want redundancy. So a contract was cut where we had one satellite dedicated totally to Bush television and we were looking at the other satellites to pull down programming. We had a second satellite as a standby bird. If something happened, we could go to the backup satellite. About once a month, you would test to make sure that it worked.

Now there were instructions written in twelve-foot-high, huge black letters saying, "Whatever you do when you test this thing, don't put it on the air and show it to Alaska." Because what we were looking at, the backup bird was the adult channel transponder on another satellite. And when I say "adult", I don't mean that just all the characters were 21 or older. I mean that this was "R-rated-to-X-rated" adult-television programming. And that was the backup bird. And if we lost the primary transponder in Alaska, the deal was you call them and say, "Okay, take that off because we're going to use your transponder, your satellite," and then you'd switch traffic and it would work. But anytime you tell

somebody not to do something, the odds are pretty good (that) sooner or later somebody is going to do it.

One afternoon, about four in the afternoon as I recall, our technician at Eagle River…it was time to (do the) monthly check on the backup transponder. And so he threw it up to see what it looked like on the monitor at Eagle River, and at the same time plugged it in to the entire state of Alaska television network. And he was intrigued with what he saw on that backup transponder so he sat there for -- we figured out later -- about eight-and-a-half minutes watching it himself personally, and marveling at the activity being depicted on the scene.

Hilary: Quality of the picture, I'm sure.

Tom: Beats me, yeah, but he just was really enthralled. Probably taking notes as well before it occurred to him that he was also transmitting this to the entire state of Alaska and threw the switch to the proper location and killed it. As a result, within the next three or four days, I had no idea about the phone calls I got. I mean, they were just literally in the hundreds, but in the next three or four days, mail started rolling in -- and somewhere in excess of 500 letters came in. "How dare you bring this filth into my living room?" "God will get you." "You will spend eternity in the fires of hell, you heathen person." And the other half wanted to know when the rest of the movie was going to be shown. So it proved beyond any doubt that, even in rural Alaska, there were differences in opinions on programming standards.

Hilary: And that people watched TV.

Tom: Oh, yeah, they certainly did watch television. And there is no doubt about that to the degree also it didn't take them long to figure out that in a middle of a snowstorm (if) you get real wet snow, it will ice up the antenna, the dish, and it will just sort… until it finally just destroys the television signal. I made the mistake one time of telling one friend I had in a village, "Hey, if you have a problem with your TV, give me a call and I'll see if I can help you." And there were other numbers they were to call, you know, at the operating center, but this guy was a good friend. We had gone to school together and so, "If you have a problem that is not getting fixed in the normal channels, call me." Well, being a nice guy, he shared that number with everyone he knew, and it wasn't long before any time that the village had any TV problem, my home phone rang. And occasionally you'd get people who would actually call (when) there was nothing wrong with TV (but) they just didn't like the program that was on that hour and wanted to know why I wasn't changing it. And occasionally they would have had a lot to drink and, you know, it was always fun at three in the morning to talk to some drunk who wanted you to take off that thing that is on there and he had a favorite program… he thought, There's a TV number I'll call them. It was really a wonderful time to be alive.

Hilary: Satellites, you were talking about satellites. What satellite were you using and when did RCA's own satellite go in? And then you had your Alascom satellite. And then you had your naming contest, talk a little about that.

Tom: TV first started arriving when it went full time on the RCA Satcom birds that RCA owned. They weren't stupid. As long as they were stuck in the business, they contracted to use their own satellites to provide the service for both voice as well as television, and so the RCA birds worked fine. Excuse me. RCA satellites had nothing to do with Alascom but I thought it humorous. During that era, RCA was launching a lot of satellites and it became apparent (that) communication satellites were going to make a lot of money as were other companies. But one year, I think it was October, there was a launch of a satellite for RCA. And the way it works is: the birds launch, in most cases, at Cape Canaveral and it goes up to an elevation of 22,300 feet where it is sitting in a vacuum and then that's where it operates. The way it gets there is that they control the firing of the rockets and then they turn the rockets off at a certain time so that it drifts into space and when it gets to the right altitude they fire the rockets on the other side and stop it. And then they just… in this particular satellite launch the rocket never stopped. It just went right on truckin' past 22,300 and out into space. It was a bird that we were going to have some traffic on, so we were aware of the fact that it didn't make it. It was gone. That year at Christmas, the standard story was we weren't going to get any bonuses but we were going to get binoculars so that we could all go out and see if we could find that satellite. I guess ultimately it was located many years later where it finally ran out of fuel way out there in the hinterlands or something.

But anyway back to what you asked. The Satcom birds were the ones that were used up until 1982 when Alascom launched its first bird, and in that time frame… by the way, in 1979 RCA sold the company to a little outfit in Portland, Oregon, that nobody had heard of called Telephone Utilities, which was owned by a company called Pacific Power & Light, which became Pacificore, which now doesn't even exist because it made an attempt to buy out a power company over in Scotland and the Scots got angry and bought it instead. And that just happened about a year or so ago.

But anyway, the first bird was launched under what was then called Alascom ownership. RCA didn't launch the first bird unique to Alaska. So we designed, our engineers designed, the first satellite specifically designed for Alaskan use that would have the footprint and the EIRP (Effective Isotropic Radiated Power), which is the radiated power, the electronic output and radiated power of the bird that would best service Alaska and would be put far enough west in the arc for giving maximum coverage. That was an interesting prospect… in that building the bird, designing it, working with the people and… RCA built the bird, by the way. They built the satellite. Delta built the rockets and then the two were married and held hands down in Florida and were launched in October of '82 at about a $250M investment.

And here are a couple of other sidebars that I heard over the years. I was involved in that launch and that I did all the PR and was down there for the launch. But there is always a

concern, you know… you insure the satellite that it will get… there are several insurance policies you can carry. One you carry to guarantee ignition of the spacecraft or the rocket to launch it. Another to insure that you'll get liftoff from the pad. Another you guarantee the satellite will be in space, in place, and will stop at 22,300 miles, and the last one you guarantee that it will work. And you pay a premium for each one of those. But one of the arguments was how do you know… or the question was: how do you know if you have liftoff? It just goes ka-boom right there on the ground. How do you know if it lifted off and went ka-boom or just went ka-boom before it lifted off? It never worried me but it worries insurance people and lawyers. So they tell me that what they did to determine this is they instituted -- buried in the concrete of the launch pad about an inch and a half – a two-inch stainless steel cable that was also attached to the base of the space launchcraft with the rocket. And if it went ka-boom, they went out there and if the cable was broken you have liftoff and then that policy paid, and if it wasn't broken (it) didn't. So I learned all these technical things while I was learning about satellites.

We had a fun time with the first bird. We decided, PR-wise, that Alaska being a community in a small state; let's name… let's have a naming contest, so we did. We contracted with the state of Alaska Chamber of Commerce and they ran the contest, we funded it, and it was to name Alaska's satellite. And we limited it to schoolchildren in Alaska and I think it was about a six-week contest. I was smart enough as a PR director -- and there are very few things I will take credit for but I was smart enough this time to know I didn't want to be a judge. I didn't want to be there. I have been to enough beauty pageants in my life to know what happens to the judge that makes the wrong decision. I didn't want to be a judge. So we convinced (inaudible) -- several very prominent journalists and university people to be judges in this. Jimmy Bedford from the University of Alaska, well-known Alaskan journalist book writer and so forth, and several others, I'll just leave it (to them) to be the official judges.

And we thought maybe we'd get a couple of hundred entries. Turned out we got well over four or five thousand entries. So it became a full-time project that we helped the Chamber with, using what were then limited computers -- but computers would print out everything. And the contest was… I think it was in 50 words or less, 25 words or less, "What would you name a satellite and why?" And we had, of course… we had to log them because if you got the same name… As it turned out for the winner, we had the same name entered three times so we had to log the first one that came in. So you had to log the day you got it, the time you entered it.

But kids are so creative. One kid wanted to call the satellite Snicker because we already have a Milky Way up there. Now that's pretty creative. Another kid wanted to call the satellite Booger. He wanted to look up in the sky and be able to point and say, "Boy, look at that booger go." I'm just telling you what was said. Ultimately this greatly accredited authority and pool of judges selected "Aurora, the goddess of the dawn." As a sideline, a kid by the name of Nick James, eight years old, in the Eagle River area was the winner,

and so two things happened as a result. One, we had a model, one-fifth-scale model of that satellite made. We had several of them made. One we displayed at our headquarters and one we took out to the Smithsonian Institute 'cause they had an interest. It was the first generation of new communication satellite and we took Nick and his family out as our guests for when we had the ceremony when it was submitted out there. And it was on display for an hour-and-a-half, two hours, whatever they do at the Smithsonian before they lock it up in the archives. But that was done.

So we launched the satellite, "Aurora". It became "Aurora 1" because about nine years later you had to replace it when it ran out of fuel. Then Aurora 2 went up. We knew the second time we launched -- and I was involved with that – we didn't want a name contest again. To this date -- and we're talking almost twenty years later because it was launched in '82 and this is 2001 -- I still meet people occasionally and they say, "You know, remember when you named that contest, name that satellite contest?" "Yeah," I said. "Well, you know my kid had the best name and why didn't you pick him?' That really happens, Hilary. People still don't forget. And I point out I was not a judge. "I personally would have selected your son's name or your daughter's. I mean, that sounds like the best one to me, but I wasn't… I didn't do it." And I usually blame Jimmy Bedford as the tie-breaking vote because Jim is no longer here so I don't have to worry about him being abused.

But people are funny that way. They take pride in ownership. And I notice that since we sold the company -- or since RCA and Alascom and then Alascom was sold to AT&T -- AT&T launched a new generation and it was launched I think four, five, six months ago, very quietly and it was launched in Guyana. It was not launched in Cape Canaveral or at Cape Canaveral. There was no publicity about it, nothing else, and when it was all over and done with they just announced they were moving traffic to Aurora 3. So they didn't want to buy off on a name the satellite contest either.

Hilary: That's a wonderful story.

Tom: One other sidebar with that, with the launch of the bird -- and I find this fascinating as an Alaskan. When we launched the first satellite and the second one for that matter, we asked the state of Alaska for authority to have on the satellite, on the launch, a copy of -- if you will -- the flag of the state of Alaska. And I remember writing the letter to the Attorney General's office the first time back in the 80's and got a polite letter back, "We'll research this and get back to you." Well, they never did. So we illegally launched, I guess, because they never said no and we had asked, but they never said yes either. So when it came time to launch in '90, we just didn't ask. So for what it's worth, I don't know if it's legal to have a replica of the state flag on a spacecraft or not.

Hilary: But it's up there.

Tom: Well, actually it is not, because it is on the rocket so it came back down, but I'm trying to think what else went on with satellites. Satellite technology was fun to explain to people.

People were used to long distance calls that we called "noisy". "Noisy" being static on the circuit.

End of Tape 1 Side B

Tape 2, Side A

(Side conversation about naming the Bartlett earth station – see Augie Hiebert's tapes.)

Tom: Satellites, where was I going with that? Oh satellite technology, (how) the sound of communications evolved over the years. Initially, Alaskans in the 50s or 60s were used to real noisy circuits and you had to holler loud to be heard and so forth, and then the technology cleaned up a bit and circuits were clearer and you could hear better and then with microwave technology it became even better and better and then we introduced satellites. And the satellite is, as I said 22,300 miles above the earth's equator, so that means when you talk into a phone, your voice goes from that telephone through a system of wires and microwaves to the nearest satellite earth station and then up 22,300 miles where it is received at the satellite. And the satellite says, "Oh, well, this is a call from Hilary to so and so in California," and it does a couple of magical electronic things and then it retransmits that voice down 22,300 miles in California to an earth station in the system to whoever you called. It takes about a sixth of a second for sound to travel from the earth 22,300 miles up and another sixth of a second for it to come down. So that's one-third of a second that you've got tied up between the time Hilary says, "Hello," and someone on the other end hears, "Hello". Now that's not much time: a third of a second. But if, in the switching on the ground as well… it slows down as it goes through the computer switches and maybe at another third of a second, which is not unheard of.

Then you got a problem, because now we're talking two-thirds of a second between the time you say, "Hello" and it is heard on the other end. And that's where the term "clipping" came from. You would hear clipping. It would sound like you'd say something and it was cut off, and then you'd start to say something and it would be cut off -- and it was inherent with satellite communications. People complained about that. I don't blame them. It wasn't the same quality.

So the engineers went to work and tried to figure out how to fix that. They did some things electronically to fix it but in the process they created a wonderful thing called echo. And so it was not unusual for Alaskans to hear -- when they'd call and say, "Hello, hello, hello, hello." "How are you, how are you?" "I'm fine, fine, fine..." You know it drove people nuts, nuts, nuts. It just truly did. So then they came up with echo suppressors and as a result they got that fixed. So what I'm saying is, it took… once we got the technology in place, we had to keep fine-tuning it and fine-tuning it and fine-tuning it to make it work because, yeah, it just was a different technology and worked differently. They have now fine-tuned it to the point that I don't think anybody notices

the difference any more, and satellites are now to the point where you can almost transmit Internet data at the same speed you can on the ground. Almost but not quite.

The other thing that is unique to satellite technology in Alaska, very much as third-world nations, is that it will never go away. In the Lower 48, we have seen the technology evolve from hard copper wires in the ground to microwave to satellite and fiberoptics. In Alaska because it is so huge, the geographic expanse so large, it is just not cost-effective to run fiber or microwaves from the Anchorage and Fairbanks and Juneaus of the world to Nome or Barrow. Satellite space technology will always be needed. So they'll continue to fine-tune the technology and make it hopefully better and better, but as long as people have something to do with operating it, things like the stories we have been talking about will continue to occur cause people make errors and we all do it.

End of Tape 2, Side A