

COMSAT HISTORY PROJECT

Interview with Horace Moulton

Interview conducted by Nina Gilden Seavey

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August 8, 1985
3:00 p.m.
Hockessin, DE

Nina Gilden: If you could just start out a little bit by talking about your tenure with COMSAT; how it is you first became involved and how long you stayed on and that kind of thing.

Horace Moulton: Well, we were interested in any form of communication at AT&T. I was General Counsel to AT&T. Of course, AT&T had the first electronic satellite in the air--that was TELSTAR I--and that was a low orbit operation. It became apparent that there was going to be legislation to try to solve the problem of who was going to operate communications satellites. We were talking then in terms of international, because it wasn't until much later that the domestic satellites came along. So we were involved in the formulation, shall I say, of the Communications Satellite Act. There were....we spent a good time--mostly Jim Dingman and I, a few others at times--attempting to protect the interests of us and the United States in this operation. And that was a long story. Ultimately, in the Summer of '62--this is all history, well known--a filibuster occurred and the Act was passed. Nobody thought the Act was perfect at that point. Then we, in

effect, subsidized half of COMSAT. The stock issue was \$200 million and we undertook to underwrite half of it. Of course, we actually, because of the interest that the other communications companies....I think our interest [AT&T's] was somewhat over \$50 million. Then of course there were the formative years even before that when the Directors were appointed by the President, and they had this chap who was [with the] Washington Post...

NG: Phil Graham.

HM: Phil Graham. And ultimately, there was an election of Directors. Of course, the set up as you know, three....let's say, six Directors for the carriers, six for the public stockholders, and three Presidential appointees. I was among the....AT&T had three of the six carrier Directors, and I was one of those three, Jim Dingman was another. That was about 1964 when that was all arranged, and I served until 1973. My Lord, this was 12 years ago.

NG: Let's go back and flush out some of the issues that I think are key issues for AT&T in this whole business. Initially you said that you protected AT&T's interests during the development of the Satellite Act. What does that mean?

HM: Well, we were interested in communications--international communications. We were, with our foreign partners, the only communications--voice communications--and we were therefore interested in seeing that this operated properly and was in our...so we were supportive of the whole operation. The only point where we....oh, there was an original thought that the carriers as a consortium might take this over, but that died aborning. Then the other point of difference was who should own the ground stations, and there we thought that the carriers, not just AT&T, but the carriers should own the ground stations. There were others who thought they shouldn't, so ultimately a compromise was arrived at, and COMSAT owned it with however, with ownership and the carriers [SIC].

NG: 50/50.

HM: And the old carriers committee....I mean the ground station committee, I never served on that, but that....

NG: But initially, AT&T wanted the monopoly that ultimately COMSAT was given, is that correct or incorrect?

HM: No, I think that's incorrect. I think that....well, I'm sure AT&T would have preferred to have the satellites, because we had all the other voice communications, but that was

obviously not going to be feasible. There was an effort, as I recall it, for the carriers....now this is ITT who had international operations, and who else? Well, I think RCA....

NG: RCA Globecom.

HM: That went to the [Federal Communications] Commission, and that obviously wasn't going to fly. Then the Department of Justice got into it, and they had it all--they had some problems all the way--and we had problems with them until....

NG: You mean with the monopoly situation.

HM: Well, it isn't a monopoly. It's a monopoly now, until recently.

NG: I was going to say until very recently.

HM: It's a monopoly now. But it is a diverse monopoly owned by a lot of people. So I think when you talk monopoly I think you're using the wrong word, because this was an effort to advance this new technology....and so ultimately the Act was passed....

NG: To AT&T's satisfaction?

HM: No, not necessarily.

NG: Well, what were some of the gripes about the way it was passed?

HM: Well, the whole....I don't think that the substance of it was that much, but the Act itself surely was full of problems; it has been right along.

NG: For example?

HM: Well, the whole ground station situation.

NG: You mean that it was so unclear?

HM: Unclear, that's what I mean. I think, had it not been for the filibuster, we would have had a much clearer Act; but we didn't and we had to take what we got. We were as supportive....I think we supported, and I think anybody who was there, while we were there, will tell you that we were supportive of that operation right straight through.

NG: When you say "that operation" are you talking about the formulation of COMSAT or the formulation of a commercial

satellite communications system?

HM: Once satellite and once COMSAT was set up, that is exactly what it was. I mean, you're supporting whatever there is there.

NG: So, you're saying that COMSAT as an entity....the only reason I make this point is, there have been several books that have been written on this subject and what not, and I'm sure that you've read all of them...

HM: Oh, no.

NG: No, at least have heard about them....that have said that AT&T was supportive of the notion of the development of satellite communications, but not necessarily of the institution or establishment of COMSAT as a company, and that's what, I guess, I'm trying to get at. What was the real feeling there?

HM: Well, we were trying....this was a political mess, everybody was in the act. We were trying, as best we could, to get something which would get satellites moving; that we did. This was in the formative stages before the Act was passed. When the Act was passed, with all its imperfections, we undertook to support that Act. Had we not said we would

underwrite half that stock, it wouldn't have gone. That's about as much support as you can get.

NG: Precisely.

HM: So we continued in that role until it became obvious that there were other interests coming in; I've forgotten what they were, but we get off....

NG: You mean in 1973.

HM: Yeah, well, the FCC was getting antsy about that.

NG: Let's talk a little bit more about the beginning. When you talk about....one the comments that's been made--and this relates to your comment about putting up essentially half the money--one of the comments that has been made is that, had it not been, not just for the international common carriers, but for AT&T specifically, COMSAT not only would have had a very hard time economically, but politically in the international arena.

HM: Well, actually what happened was (and you'd better get this from Jim Dingman) but there was a meeting--I wasn't there, Jim went--[in] a town in Germany (the name of it escapes me at

the moment. My memory of names is--that far back--is not as good as it used to be). Jim went there and FCC people went there and there was an attempt to get the foreign partners interested. I think you will find that Jim was the one who said, (now I wasn't there) but, "That if these other people weren't interested, we'd do it ourselves." That got them. Of course, you must realize that we were the ones who had the partnership with the foreign authorities--mostly governmental communications authorities--because we had cables with them, we interchanged with them, and that was done on a 50/50 basis [cable ownership] and so on, so....

NG: You had very good relations with these people, as I understand it.

HM: Oh very good relations, extremely good relations.

NG: And that that then helped pave the way for COMSAT.

HM: Well, actually, when we said that the United States was going to do it--in effect the United States, I mean COMSAT, AT&T and so on--were going to set this up, the others didn't want to join. Now this is second hand to me. You'll have to get Jim to comment. So that's what happened, and this was after the Act was passed, and when there was some doubt as to

where this [satellite communications] was going.

NG: This was in maybe '63 if I'm correct.

HM: I guess it was '63. Well, the Act was passed in '62, so it was around then. Sure.

NG: Now let me ask you a question, from AT&T's point of view--now granted, they put money into this thing--but they also provided a different service, i.e., cable. Now here you are, you're going across the ocean, whether you or Mr. Dingman, but AT&T is representing themselves to the foreign nations--the foreign PTT's--and saying, "We want you to support this effort, we're supporting it, these guys are serious, they're going to put up a system, and we want you all to buy off on it." Now that automatically develops competition for the services that you already provide. How did AT&T justify that in its own corporate mind?

HM: The old statement: "Satellites can be shot down, cables can be cut." This was another useful method of communications, and we were interested in communications. I think our concept was that a mix of 50/50 [satellite to cable] would be about right.

NG: Which is what you got, eventually.

HM: Well, a mix of 50/50 cable [to satellite] and so on. We were supported in that by the Defense Department and other people who thought cables were perhaps a little more secure. The alternatives of communications, plus the doubts which to a certain extent still exist with respect to the echo in the transmission of satellites. I remember a letter which we wrote, Jim wrote, and we discussed, saying that, "It should be"--now you know you can't be exactly 50/50 but, at least for that time--"50/50 would be a reasonable approach to this new technology."

NG: About when do you think that letter or that decision was....

HM: Oh, very early in the day.

NG: Very early on.

HM: Yeah.

NG: I see. Let's talk a little bit then about the satellites themselves and the decision of COMSAT to go into geosynchronous orbit as opposed to with the TELSTAR medium range system.

Apparently AT&T pushed very hard the the TELSTAR-type relay system.

HM: No, we did not push very hard for that.

NG: What happened?

HM: We were....well I was there, Jim and I were doing this, Jim Dingman and I, and Jim was pretty effective. We had been advised by our people, that the synchronous satellite was somewhere in the future, admitting the difficulties with the low altitudes because you had to have them coming around that much. And not only was that the view of our technicians, I mean, but it was the view of NASA, at one point. And then Hughes came along and put up the 22,300 mile job and from that time on there was no dispute about it. I mean this was purely a technical problem which really was an argument for technicians, and so that wasn't a dispute over which way to go, because this was a technical dispute or difference as to when this geosynchronous satellite would come into being.

NG: So, it's what would work as opposed to....

HM: Oh, sure. Once you established the fact that geosynchronous was practical, we were all for it. There was

never any argument after that for the low altitude.

NG: I remember picking up somewhere that on Early Bird, which had several hundred, 250 or 260 circuit capacity, I understand, once it was put up, and once it was tested, and once they had done some actual commercial tests--having the voice transmission operational, and then calling people back after the conversation was over and saying, "Was there a problem with this echo business," and what not--why is it that AT&T then only rented 60 circuits on Early Bird? Was that not a show of lack of support, or what was going on?

HM: God knows [laughter]. I don't.

NG: You don't know? Ok.

HM: Well, Early Bird wasn't much of a bird.

NG: It wasn't a big bird, but it worked.

HM: Well, that's right. It worked, it worked, it worked. And there was a substantial question, and there still is, about the delay in the echo suppressors and so on and so forth; because you had to have echo suppressors. In those days they were not perfected to the point where they are now. If we only took 60

circuits, I imagine because we thought the quality wasn't going to be as good as it might, and why commit ourselves for any more? Of course, we didn't have to commit ourselves for any of them. So, you're saying we weren't cooperating, we were.

NG: Well, now, now, I'm not saying you weren't doing it. It's been raised, and I wanted to check it with you, because you're the original sources here.

HM: Well, Early Bird, as far as I am concerned, was there, and it was there for a short time, and it wasn't a communications satellite of great value, because it didn't have as many circuits, and you had to have your ground stations and all that. There weren't enough circuits in it to warrant the ground stations; probably, I don't know, I'm not a technician. But, there was a very substantial...oh, we used to talk in terms of "one way cable," or "one way wire," and "one way satellite," if you wanted to get to avoid this delay problem. I've recently had experience with some of the domestic satellites through some of these operations, and you can get some awful bad communications, awful bad.

NG: That's true. Let's move on a little bit to the point at which you started to serve on the Board. This is after the stock issue, you get elected to the Board of Directors as a

Series II Director. How did you and Mr. Dingman and Mr. Botkin see your roles? Here you are, you're both customers/consumers and competitors of a corporation in which the company holds stock. How is it that you saw your role as member of the Board of Directors of that company for which you were both a consumer and a competitor.

HM: Oh, we were wholly supportive. I think you will find that from the others.

NG: I don't think there's ever been any controversy about that.

HM: We were wholly supportive.

NG: Did that ever create any controversy or conflict between your role as an AT&T official as well as your role as a COMSAT official?

HM: Not that I know of. You can ask almost anybody who was involved. No, we were wholly supportive. We were there as COMSAT Directors and if...I don't recall our taking any action which was motivated by a competitive instinct from AT&T. I really do not.

NG: What about what happened when AT&T got into the TAT V and

VI applications before the FCC? That was the only time I could think of that there might have been...here you are you wanted to lay a big cable, instead of saying, "We want a bigger satellite, we want more circuits on our satellite." AT&T is saying, "We want a bigger cable."

HM: Well, this came later in the day. I've forgotten what the dates of V and VI were but COMSAT was being competitive too at that time. We had an honest...that was a....I was not as much involved in that, that was more of a technical argument than anything else. Of course, we were dealing with...we weren't the ones who were going to make the ultimate decision necessarily, because you had your foreign counterparts and they were involved. There was a lot of talk about which is the more economical, and you've got two different kinds of animals: one with a long life; a cable; and a satellite with a seven year life (used to be, I don't know what they are depreciating it over now) and so you try to total up the costs, you had a problem. I don't know how they...how do they come out now? Is it about 50/50, or what is it?

NG: Well, you know the deal has always been 50/50. Although I think one of the things you may be responding to is I think it was in 1970, there was a report by a gentleman at the White House, called the Hinchman Report that said that the FCC was

not using cost as a factor to set the 50/50 ratio. That if you looked at economics then you'd have to go with satellites.

HM: Well, that may be.

NG: But there were other compromises here that were being....

HM: Well, of course you had the Defense Department who wanted both.

NG: Right, and they did.

HM: They were very firm in that.

NG: So what you're saying is that you really did manage to step back, in a sense, from any conflict of interest....

HM: Well, we tried to, we tried to, we did our best. And it worked pretty well.

NG: Do you think the other carrier Directors did the same; None-AT&T?

HM: Well, I'm sure that...you see there were only three. One was the independent industry, which was Douggie Guild. The

other was ITT....

NG: Ted Westfall and Eugene Black....

HM: Yeah, Ted and Eugene Black. I wouldn't characterize their efforts as being antagonistic to COMSAT, but ITT sold its stock, or a substantial portion of it rather....

NG: Early on. In '67.

HM: Early on. But they didn't have the interest in it that we did, because they weren't significant users.

NG: Well, they were record carriers not voice carriers.

HM: That's right. They were not significant users, and yet they'd put in a rather substantial financial commitment. Why they did it, I don't know, but they did. Of course, COMSAT was over-capitalized by a hundred percent.

NG: At least. But I think the original idea obviously had been to go for the medium altitude system, and that...

HM: Well, I don't know. I wonder. I think they wanted enough and Lord knows they sold out. I haven't followed COMSAT very

much. I don't know what it's currently selling at, I haven't looked at it. Of course, we could never own any, because we were affiliates, and we were not permitted to own any.

NG: Do you think that the capitalization for \$200 million was too much?

HM: Well, I don't know, whether it was or wasn't. Of course, I think the original Board--the appointed Board, the Presidential Board--wanted to be sure they got enough. Also there was a problem as to the attitude of the foreigners, and if the foreigners weren't going to put their money into it, then they might need to [capitalize at a greater rate]. So I'm not criticizing the over-capitalization, it's just a fact. And I know there are some people who said, "You ought to disgorge part of it to your shareowners, because you've got too much.

NG: Can you tell me who advocated that position?

HM: No, I'd rather not. We didn't.

NG: Ok. Good enough.

HM: We didn't. So that was that.

NG: Let's talk then a little bit about the Board itself as you served on it. You served essentially through Leo Welch, Jim McCormick, and Joe McConnell--through a portion of Joe McConnell's tenure as Board Chairman. Did your role on the Board change as those Board Chairmen changed; them being different men and having different priorities?

HM: Well, they had different management styles.

NG: Such as?

HM: Well, the Board, when it was first organized, started its meetings at 8:30 and ran 'til lunch, which could be 12:00 or 12:30. Then you had a lunch and it was very polite, at some nice place and so on. Then when my friend Joe McConnell got in there....he has a place the same place I do down in Florida now. We're members of the same club. He would start at 10:00 and he'd be done by 11:30. Then he'd go back to Virginia; so a different style. But they had some different people. I know it was Fred Donner who said....the question was--just after the Board was organized--"When should we start in the morning?" So he said, "I always get to work at 8:30, so we start at 8:30" which was pretty early for a number of us who were from out of town. But those are small things.

NG: What about the substance of the issues that you worked on, under those three different Chairmanships? Did they change as a function of the management?

HM: No, we had not gotten into all this fancy stuff--when I say fancy stuff, SBS and all that business. Now the issues were pretty much the same, and actually as far as issues go, you had the pension plan, you had this sort of thing, and you had the ordinary run-of-the-mill corporate things which had to be done and those take time. Then you had reports on developments. It was a very civilized....there was never any real controversy on the Board.

NG: What about the management itself at COMSAT? The Board has always been a Board of very....it's been a hands on operation. The Board has been really a part of the decisions of the management, it hasn't given a lot of leeway to the management. What was your role as a Board member with the management of COMSAT in this hands-on managerial function that the Board took on itself initially in the first place?

HM: Well, I'm not quite clear what you mean. It didn't seem to me that the Board was more involved in matters than it would be in any other corporation.

NG: Is that right?

HM: I don't think that was the case. You had some people on there who were pretty knowledgeable, you had some who weren't. But, when you have a Board of that diversity--and my favorite of all of the Directors was George Meany....

NG: You're not the only one who has said that.

HM: He was my favorite. He never interfered in any way, but he knew more about the politics of the Hill than anybody around in those days. When he had a cogent remark, he made it. But he never interfered with any labor question. He was opposed to an annual stipend for Directors. Every other company in the world had an annual stipend.

NG: Sure, that's not that unusual.

HM: And I think somebody suggested an annual stipend of \$1,000 or something like that, and he opposed it. Then, I'm told, that subsequently (I've forgotten whether this was when....I think this was when Joe McConnell was there, although Joe wasn't there too long before I got off. Joe was a pretty good politician himself) and somehow or other it was arranged that maybe we could pass something like that if George Meany were

absent. So it became a fact at first. I don't know what they're paying now, but it was a pittance then. And George, I am told, gave his meeting fees, and presumably whatever he got after that on the annual fee, to charity.

NG: So you're saying the stipend was passed in his absence. One day he wasn't there and....

HM: Now I can't...I'm pretty sure that's true. Now you'd have to check it, but I think that and I don't know what his conscience was, it wasn't that he was opposed to big business. I remember one time we were down at the Cape--Cape Canaveral--it wasn't at a shop, but the Board had a meeting down there, at one of these motel resorts with a little golf course...and we had a....[change of tape] I think it was overnight and in the morning we all went in to have lunch, you know, and I happened to sit with George, and somehow or other, something had happened to AT&T and I wondered what the stock had done. He went over to the table and picked up the newspaper and got it and solved that problem--what had happened. And he said, "You know, I had some of that AT&T, I gave it to my sister or somebody or my son," or I don't know who--he gave it to somebody, but he had some AT&T stock at one point.

NG: I'll be damned. Who would ever have known?

HM: Of course. Of course, there are 3 million times I don't how many, who did have it so it wasn't a commitment; it's just a big business. And I don't think it was very much. But he was a humorous, very humorous man--in a gruff way--but he was a humorous man.

NG: Let's talk some more about the changes that went on at COMSAT during the time that you were there, now a little bit later on, say from the '66-'67 time-frame, to where COMSAT really started to diversify. One of the comments that has been made is that COMSAT was very, very good at doing what they did in terms of putting up the satellite, getting the ground station--the whole global system organized, set up--getting INTELSAT on line, that as far as it being a competitive company in other areas--providing other services or acquiring other businesses--that it hasn't been as effective as it might have been. What do you think?

HM: Well, I don't know as I am in any position to judge, because that was all happening after I left.

NG: Should it have happened while you were there? Should they have been doing more, did you feel?

HM: No.

NG: Why not?

HM: Well, because in the first place, they weren't set up to do it. I had some serious doubts as to whether the intent of their incorporation was to become a conglomerate because they were substantially barred from domestic satellites--everybody wasn't. I mean this [COMSAT] was not set up for domestic satellites, and I'm not at all sure that they were equipped as of the day I was there--at the time I was there--to become an SBS or whatever else they're in. I see they're out of that [SBS] now.

NG: Yeah, they're out of that.

HM: And they sold some of the ground stations.

NG: Yeah, well AT&T is going to be taking over the ground stations.

HM: What ground stations are they taking over, that was 50/50 wasn't it?

NG: It used to be 50/50. And now the US ground stations are now being sold to AT&T.

HM: All of them?

NG: It's my understanding, I could be wrong, but I think it is.

HM: What about Hawaii?

NG: Don't know. So what you're saying, in essence then, is that it really wasn't part of their mandate necessarily to become a corporation in the sense that other companies are built as private companies.

HM: If anybody had said before the Halls of Congress that, "We're not only going to be a satellite operation"--I mean the representative of the United States in the international consortium--"but we're going to go into the business of the transmission of intelligence by electricity for pay, domestically," I think there would have been a loud howl.

NG: You think so.

HM: Oh yes. This was not conceived that way. Now this goes way back. We had enough problems trying to get the

international thing going, and that was its purpose. But all you had to do was to read the Act when that happened.

NG: Now the argument, though, that COMSAT did make ultimately was that because they had been given the monopoly over international voice communications, that then when this issue of a domestic communications came up, that then they made the argument that they should have that as well.

HM: Well, they didn't get very far with that.

NG: [Laughter]. Obviously not.

HM: They didn't get that very well, and I don't have a copy of the Act, and there was something in there about domestic satellites, I think but I'm not sure. I was surprised that they tried to stretch out that way, and never knew why they did. But it was none of my business...

NG: Yeah, but that time you were gone.

HM: Yeah. But it's interesting, because we'd sold our stock, and we were out of it. We sold our stock not under pressure, but the FCC thought that we should, and management couldn't see any further purpose in our being there because the thing was

going.

NG: Do you think--in relationship to the FCC, in this case--that COMSAT was ever at a disadvantage in front of the FCC on certain issues that they raised? AT&T always had a very good relationship with the FCC and were very effective in the presentation of their applications.

HM: [Laughter]. I wish that were true.

NG: Is that a difference of perception?

HM: Well, I'm sure we made nice presentations, but I'm not always sure that we had anymore influence with the FCC than a lot of other people.

NG: So you don't think that COMSAT was ever at a disadvantage in front of the communications commission?

HM: [Sigh...] Well, I don't know really in what regard they would be, if you mean on the cable versus satellite...

NG: Or on the authorized user decision.

HM: Oh, the authorized user decision, yea, I'd forgotten about that.

NG: Yeah, that didn't turn out quite the way that COMSAT, I think, would have liked it to have. How do you think that happened? Were the arguments that COMSAT was making, were they poor arguments, or were they really at a disadvantage?

HM: Well, really, I can't tell you. Because I don't go back that far, and I don't remember that much in detail. I don't think COMSAT, at least until Joe McConnell came aboard as Chairman, were as knowledgeable in the Washington scene and how to go about it, as some others. And I'm not saying AT&T was either, but they were not--nor were they particularly staffed up to for that kind of approach. They had competent people, they had good people, but they were a young organization, and they did very well in getting the thing established, and in the relationships with INTELSAT and so on. But as far as their authorized user and so and so forth, I couldn't pass a judgment because I don't remember.

NG: Do you see COMSAT as a highly political organization? You mentioned politics

HM: Oh, no, I'm not talking politics, I'm talking about the dealings with the government.

NG: I just wanted to make sure we were clear.

HM: Oh, no, no, not politically. I mean, I'm not talking around the corner business or anything, they just were good people, but they were scientists.

NG: Definitely.

HM: Except for Leo. And Leo was only there shortly and Leo was....I can remember when he had Wilma Soss, Mrs. Soss carried out of the first Annual Meeting when she failed to stop talking when he told her.

NG: Who is this?

HM: Mrs. Soss.

NG: Soss?

HM: Oh, no you don't know Mrs. Soss?

NG: No!

HM: Oh, she is the great female attender of annual meetings.

NG: I see. [Laughter].

HM: Women Stockholders of America or something like that. She always goes to all the meetings, she gets up, and she talks, makes motions and so on. At the first Annual Meeting, why, she got up and Leo was very forthright gentlemen, told her to stop, and she wouldn't stop, so a couple of gentlemen came in and carried her out; much to the embarrassment of everybody.

NG: Oh, I can only imagine.

HM: I noticed she had a pants suit on, though.

NG: And in the early '60's, that would have been already quite a statement.

HM: I guess she was ready to be carried out.

NG: I guess so. It may not have been the first time. You know you talk about Leo Welch, what about Jim McCormick? What kind of a guy was he?

HM: Jim was a sweet guy. And he had a very good record. He wasn't a very forceful person. But he was a gentleman, and he ran a pretty good show. Of course, Joe was there the whole

time, and....

NG: Well, how did you all see his role? I mean, obviously he was President of the company, but he brought to the company an expertise--obviously from having been Under Secretary of the Air Force and a scientist himself--what was his role? He wasn't CEO for a very long time.

HM: I know. Well, I was not in on those decision, I mean, except as a member of the Board. But I guess it was felt that he was more of a scientist than he was a businessman, and that they needed a man of business, or someone who had perhaps broader experience, and I don't know why Jim was said to have had broader experience, except he had been with MIT and he had been various places. It wasn't that Joe wasn't considered very competent in his business, I think there might have been some question as to his political judgments, I mean his approach to things.

NG: How do you mean?

HM: I can't be more....I can't say anything more except that...than that really. I don't know how to explain it. He just didn't seem to be....I guess, of course, I don't know what happened, I know it was some time after I left there that he

became CEO, that was after Joe McConnell. I think you'd have to talk to Joe about that, because Joe was the one who finally....no, I guess it wasn't Joe, Joe had retired before....yeah, it was at the time of Joe's retirement that Joe Charyk became CEO. I don't know, that's a mystery, he was always there, he always made a presentation, always made sense, but the Chairman ran the meetings, and that was that.

NG: During your tenure at COMSAT, what do you think the major obstacles that had to be overcome were?

HM: That had to be overcome?

NG: Uh, hum. What were the big issues? What were the big ticket items?

HM: Well, I guess the big ticket items were getting the satellites into the air, getting the laboratories or whatever, do they still have that?

NG: Sure.

HM: Getting that set up, getting things going through INTELSAT and, of course, one big ticket item was the charges--how much were they going to be charged? I mean FCC had jurisdiction,

and that was a bone of contention and was an important one because that was the source of the money. There was a good deal of discussion about how to approach that. It was just a regular corporation going on, there were no big alarms or flaps, really.

NG: Let me ask you one question, somebody made the comment that at the end of the definitive arrangements, which would have been finally in 1971, that the Board was not authorizing Joe Charyk to go and sign the INTELSAT agreement. Do you recall what the problems were from the Board that may have given them some reason to hesitate?

HM: No, I don't remember that at all.

NG: Because, I picked that up from somebody and I wanted to try to maybe find out from somebody who had been in the room.

HM: I don't remember that incident at all.

NG: Was the Board supportive of the final agreement as it was negotiated?

HM: I assume so, I don't know. I don't remember it. I don't remember there being any particular problem. I remember there

was a lot....we had representatives at those meetings and so on, and I assume that at some point, we [inaudible] to the final result.

NG: I had picked it up and I wanted to find out if that in fact had been a...

HM: I don't remember any great controversy about that.

NG: Are there any things that we haven't gone over here in terms of your tenure with COMSAT that you feel that I've missed in terms of the kinds of issues that I've raised from the geosynchronous orbit, to the cable-satellite ratio decision, to the Board, to whatever personalities or what not that you'd like to put on the record?

HM: Well, I don't think of anything beyond what we've talked about. It was a very interesting experience for all of us. It was a very pleasant experience. There was not a case where there was any divisions within the Board based on any personal interests as opposed to somebody else's or business interests.

NG: Did you see COMSAT as a success during your term?

HM: Oh, yes. I thought it was a success. Certainly, of

course it was. It was making money. Then the only real problem they had was they had too much money.

NG: Put a lot of it in the bank.

HM: Well, I know, but they were....and then they were tempted to go into some other things. I have no doubt that it was this money that was the cause of their going into SBS and trying to branch out.

NG: Trying to spend it.'

HM: Sure. I'm not at all sure they wouldn't have done better to have given it back, you know, to the stockholders. But we never, of course, supported any such notion at all. When they set up the subsidiary, why then....

NG: COMGEN, you mean. COMSAT General.

HM: Yeah. Then they had a place for their money. Then they got into...what else are they in?

NG: Oh, this Environet thing, they have ERT, and they have the DBS that they've been working on....

HM: DBS, what's that?

NG: Oh, the direct broadcast services where you have a dish on your roof.

HM: Oh, yes! How's that coming?

NG: Uh.

HM: Not well, I think.

NG: It's not for me to say.

HM: No. No. Well, I mean there are so many people into that and environmental, what's that?

NG: Oh, the Environet is they acquired a company called ERT and it does all kinds of monitoring of pollution through satellites and all this kind of thing. Then they obviously have INMARSAT, the MARISAT system, for, which has actually done very well.

HM: They have that. Weren't they bidding for the weather service?

NG: At one point. They also were into electronic mail, there was some movement in that direction. So there's been a variety of different kinds of outreach....

HM: Efforts.

NG: Efforts, yes. All right, well thank you.

HM: Well, I'm delighted.