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INTERVIEW

Entrance Into VOA

Q: Ed, under what circumstances and when did you join the Voice of America?

MARTIN: I was with the military government (in Germany) and then the High Commission, and the question came up whether I should stay in the State Department or not. Then I was transferred back and switched from the foreign service to civil service in the Voice. That was 1952, when the Voice was still in New York.

How the VOA Obtained the Transmitter for Munich

I had an involvement with the Voice with respect to the Reichspost transmitters in Munich, approximately 100 kilowatt transmitters which were used by the German propaganda service starting back in 1939. The transmitters were in relatively good shape, and we took them over and operated them with Reichspost employees, one for military government broadcasts and the other for Armed Forces Radio. The Voice came in, and arrangements were made to use the station. On the technical side, they built a receiving station (at Ueberacker) to receive programs from the United States. Before I left Germany, there was an arrangement to put a medium-wave station in Germany, initially a 150-kilowatt transmitter at Munich. Subsequently, a few years later, we added another 150 and made it 300 kilowatts. Then, in the spring of 1952, I came back and went into the Voice in New York, where my first assignment was as chief of the Central Frequency Staff.

VOA's Early Technical Problems; The Ring Plan And Difficulties Encountered in Constructing its Parts

The Voice was beset with a lot of problems at that time. They had probably asked for more money than they could handily spend. They were working on a program, the so-called Ring Plan, which MIT had been involved in. There were elements of "vision," such as you get from academics who haven't been out in the real world. The concept was to "ring" the Soviet Union, the target area, with very powerful medium-wave transmitters, 1,000 kilowatts. It was called the Ring Plan even before the locations of the transmitters had been decided upon. The first one to go in was in Munich, Germany, and there were two in the Far East, one in the Philippines and one in Okinawa -- those three being real estate that the United States essentially controlled as a result of the war. I think General Marshall actually signed the piece of paper authorizing the one for Okinawa. There was no great difficulty with respect to the Philippines. You notice I mentioned medium-wave for Germany. There was a big argument as to whether it should be medium-wave or long-wave. Subsequently the decision was made to get a long-wave transmitter in addition to the 300-kilowatt medium-wave that was already there; the 1000-kilowatt would be a long-wave transmitter. Over the years people have probably heard a variety of stories of how the frequency was chosen. It just happened to be co-channel with Radio Moscow. It had nothing to do with the politics of the Cold War. It was just a matter of sheer practicality. It would have been foolhardy to pick a frequency that would interfere with the Western countries that were more or less allied with us -- England, Turkey, and a

few others with transmitters to the west and south. So by a process of elimination the frequency that we chose to avoid problems with our allies just happened to be one that Radio Moscow was using -- 173. It wasn't with any intent of jamming them or causing them difficulty -- although that might have been in the minds of some of the people involved. There was no other choice, once the decision had been made to put a long-wave in, and you looked at the long-wave distribution in Europe. This was it.

There were ideas for transmitters in Turkey and various parts of the Middle East, where the British had a much more influential position -- Goa, places like that -- but none of them were developed, when you started talking about politics and realities. So for a long time we were left with the medium-wave transmitter in Munich and the two in the Far East.

(A) The French Let Voice into Morocco

About this stage an arrangement was made to get into Morocco. It antedates the Ring Plan. I heard a young chap the other day, whose history was not too good, who was formerly on the NSC staff -- Lenkowski, I think -- about how the NATO countries never had cooperated very much with us in allowing us to have real estate for relay stations. Privately I had to advise him that we were very grateful to Marshal Juin, who happened to be the individual who let us into Morocco. That's long since forgotten. We weren't looking for areas for short-wave facilities on the mainland, for technical reasons we can go into later, but Morocco was uniquely suited for many of our targets. Since we would be receiving from the United States and working in that north-to-northeasterly direction into Europe, Morocco was ideally suited from a technical standpoint. As far as I'm concerned, we should be grateful to the French for allowing us to be in there.

And in those early days, we had a small facility in Greece, in Thessaloniki. Again that goes back, you might say, to military ties, relationships that we had during World War Two. Actually it was General Zigatis, who was sort of a national hero as far as the Greeks are concerned, and who was then heading NBI, the Greek national broadcasting system, who used his influence with the various military and other governmental circles and cut a lot of corners to enable us to go ahead and get this small facility at Thessaloniki.

(B) McCarthy Attack Frightens Agency into Abandoning Plans for Transmitters in North Carolina and State of Washington

Then, going on to this Ring Plan, there was a concept of relatively high power transmitters in two stations to be known as Baker East and Baker West, one on the East Coast of the United States, in North Carolina, and the other in the State of Washington, on the Strait of Juan de Fuca, Port Angeles. And here's where we get into the interesting history of the Voice of America. McCarthy descended on it. He got into engineering, he got into programming. And there was a lot of misinformation that was purveyed about willful sabotage, you might say, in picking the planned sites in terms of radio propagation.

Some people are being criticized today for using the NSC mechanism for getting around bureaucratic obtuseness in some Agency members and some Agency heads. It's a part of this panic that the Agency managers had. These major transmitters, 500-kilowatt transmitters, were in procurement, and we were directed to declare them surplus before we even had them.

(C) Some Assistance from Technical Panel for International Broadcasting and Department of State

Fortunately, then we had a little more order in the running of government. We had something called the Operations Coordination Board, and under that you had something called the Technical Panel for International Broadcasting, which was more or less to assist (in studying) the U.S. capabilities and planning concepts for international propaganda operations. It was a body of specialists, who weren't necessarily to follow the dictates of bureaucratic superiors but were there to give their undirected professional judgment. I don't think they really expected that to happen, but it did. These transmitters were declared surplus, to comply with the directive of the then director of USIA, Ted Streibert, but through the friendly cooperation of the General Services Administration, no announcement was made that they were really in fact surplus. The papers were transferred, GSA held them, but they did not publish it for the scrap dealers or whoever else might want to get involved in this. And they could only be released on the direction of the Technical Panel for International Broadcasting. They stayed there. Two were released to augment the facilities of Radio Liberty, to be operated not as two 500's but as four 250's on the Costa Brava. The remaining six 500's were still with GSA, and became the transmitters that went into the eventual station in Greenville, North Carolina. As a part of this surplus operation, there were two other megawatt medium-wave transmitters, one of which subsequently went into Thailand, and the other one was split, one 500 to Kavala, in Thessaly, and the other to the island of Rhodes.

As a result of all this fear and panic in the Agency, we literally had no construction plan. The Agency moved quietly, and practically eliminated the professionals in our engineering staff because of the uncertainty of the construction plan and the budget to support it, but fortunately we held on to a small handful. For a long period, we had difficulty in getting plans even looked at by the succession of directors of the Voice. After the debacle of the McCarthy days, I think it was December 1953 when we put forth our first recommendations to get back in and get some facilities added, which the Voice desperately needed.

I had become chief engineer some time in the summer of '53. There was a great deal of negative attitude, of course, in USIA, still the residual fear of the Congress and all. So there was lobbying around town, not so much within the Agency as with a few more thoughtful individuals in the State Department who recognized (the importance of expanding facilities). Allen Lightner was one of them, the Assistant Secretary of State for Public Affairs. We had a very strong ally in what was then called the Telecommunications Division, a chap known as T.H.E. Nesbit, and we still had, you

might say, the NSC, the Operations Coordination Board, that type of mechanism for a supposedly coordinated government. While we were getting no place, really, at USIA, there was pressure coming from the State Department.

I'll be immodest. We had drawn up coverage charts showing great gaps in coverage. The State Department then started presenting similar types of maps. So that certain people wouldn't know that they were coming from the same source, the VOA maps were always on Mercator projection and the State Department maps were always on polar projection, centered on Sverdlovsk in Soviet Siberia. President Eisenhower was very interested. He could see the deficiencies, and wanted to go ahead with the thing, and directed the then director of USIA to get on with the plan. For one reason or another, I haven't found out why he never
moved. And to indicate that things don't change very rapidly in Washington, it took at least one year of lobbying before the Secretary of State raised the question of how we were progressing on the presidentially-approved directive on a plan for improving and achieving the necessary coverage for the Voice of America.

(D) USIA Director George Allen Gets Construction on Track

We never really had a major construction project until George Allen became Director of USIA. And George Allen largely ignored the negative attitudes that he heard in many parts of the Agency. He skipped all channels, and worked directly with engineering. It was George Allen who went, despite his budget advice, and other advice, and went to the President himself and really got us back into the construction business. The first major project was Greenville, North Carolina in '57 or '58 -- these dates can be checked. And at that time, the political judgment we were getting, as to what were the desirable targets, wasn't as good as one might have hoped for. For instance, at that time we were being pressured by certain commercial interests that the Voice shouldn't be broadcasting direct to Latin America -- Walter Lemmon and his Worldwide Broadcasting in Scituate, Massachusetts. George Allen personally called me up and said, "I know it's not in the planning we have, but I want a Latin American capability in that station." The money was almost frozen, that we were going to ask for, but luckily there was a little leeway, and a Latin American capability could be cranked into the new station in Greenville.

(E) Even Though Political Guidance as to Desirable Geographic Coverage is Imperfect

The political guidance we were getting at that period would surprise many people today. Africa was not considered important, but we did manage to go ahead and project a station for Liberia. In the light of what happened later, those that say indicated a higher priority for a facility in Iran than in Africa would be somewhat dismayed to see what subsequently developed. The Philippines was an interesting case. We had gone ahead with a small short-wave station and a small medium-wave station, and off and on for years we kept being told it was too near an upcoming election or it would be just after an

election and so the wrong time to approach them since the government was not firmly established, so it was a long, long time before we ever got approval for a major short-wave facility in the Philippines. It had 250-kilowatt transmitters and an arc of antennas that pretty well covered from northern Asia all the way down to Australia.

We did have a facility leased from the BBC in Woofferton. That dates back to some of the wartime Lend-Lease. I think it was 50-kilowatt RCA transmitters that were put in there. They were used for wartime propaganda operations by the BBC, and on occasion they were used for certain counter-measures operations. At the end of the war, the BBC was having its budget problems, and it was more or less a surplus facility, so the VOA could move in and lease the transmitter. The Aspidistra transmitter (of the BBC) in Crowborough was originally of U.S. origin. It was used for propaganda broadcasting and also for some of the black broadcasting during the war.

There's an interesting story of how that transmitter got there. It was originally procured for WJZ when the idea was out that the 50-kilowatt limit on American broadcast transmitters was going to be lifted. It was not lifted, and so WJZ had a surplus transmitter of some 750 kilowatts, and the BBC were very delighted to get it for the Diplomatic Wireless Service. That's the direct technical arm of the British Foreign Office, doing communications and certain broadcasting operations. It has a station on Cyprus and one on Masirah. Harold Robbins was the chief technical man for the Diplomatic Wireless Service at the time. I was amused at Henry Loomis when he stated that Harold was one of the most English Englishmen he'd ever dealt with, and I told him the reason he acted so English was that he was not English but Hungarian. During the war he never got deeply involved in sensitive matters because of his Hungarian origin.

Q: You emphasized the role of George Allen, but what part did Henry Loomis play in getting the pattern of non-support reversed?

MARTIN: Henry Loomis came aboard and didn't contradict anything George Allen had decided to do. He played along with the band. But George Allen, on his own, without any representations from the Voice, had made up his own mind. He had been Assistant Secretary of State for Public Affairs at one time, in the late 40's, and he had observed what was going on and that the Voice needed help, and wasn't getting it from the previous management. We were being dictated to largely by the Bureau of the Budget, and the Agency was going along. George Allen took it upon himself and broke that logjam.

Q: Well, on the program side, when the Marines were put into Lebanon in '58, you recall, this was the excuse George Allen seized to put English broadcasting on the air around the clock. It was cut back eventually, but never back to the six half-hours a day that had been the pattern.

MARTIN: He's never been given enough credit, I don't think, for the help he gave my predecessors when he was Assistant Secretary for Public Affairs and then when he came in as Director of USIA. I knew he was coming in before the general public announcement.

I was in Greece for some reason, and George Allen came in. He was Assistant Secretary for Near Eastern Affairs at that time, as I recall, [This is incorrect. George Allen was then Ambassador to Greece] and someone casually whispered in my ear, "That's your new boss in USIA".

Q: This was a result of the forced departure of Arthur Larson, after his speech in Hawaii attacking the New Deal, and Lyndon Johnson's slashing the Agency budget in retaliation. [The budget slash incident was a contributing but not the main factor in the Larson dismissal.]

MARTIN: A remark that Lyndon Johnson supposedly made about Arthur Larson was, "If you have a weed in your backyard you'd better pull it before it gets too big". With Arthur Larson, we thought we were making points about what we needed in the facilities line. We always got a very sympathetic response but it never moved to the out-basket. In Washington, so much is based on the words evaluating a project, regardless of whether the projects ever materialize or not. Success is achieved on the basis of the visionary planning that you have, whether or not it's actually accomplished -- as in today's world. And it was with the impetus of George Allen that we got our foot in the door, you might say, and could map out what we had known for a long time.

Assistance From Advisory Commission For Radio

Engineering had gotten a good response through the years from the Advisory Commission and other bodies; we had had a chance to make our representations about deficiencies in coverage. At that time we were better structured with regard to advisory committees. There was a separate radio advisory committee, and it had two subcommittees, one for programming and one for engineering. We had a director of the Voice who was unhappy that we had an advisory committee for programming -- Henry Loomis. I wasn't unhappy with having an engineering advisory committee, when you could have the top official of RCA and NBC engineering, the director of engineering for Westinghouse, the director of engineering for ABC. That was once that we had true professionals who understood what we were talking about and understood what was going on in the trade. We had no difficulty with our advisory committees; they were very helpful in supporting our technical desires. There was an unfortunate climate. It was easier not to go ahead, not to rock the boat and not to have controversy about the budget. A lot of people criticized Congressman Rooney for the attention he gave, what they called nitpicking attention to the USIA budget. But I'm grateful to Congressman Rooney for his approach to that. If anything looked half-assed he would take it apart and root it out. You'd better be able to justify what you wanted.

Q: I think he's taken a bad rap through the years.

MARTIN: I agree he's had a bad rap. In my experience with Congressman Rooney, if you could make a case and he sensed that you knew what you were talking about, you got it, and he supported you. Right in the middle of a hearing, he started quoting something that had appeared in the Congressional Record that morning. That's something I don't normally read each morning. I don't read it at all. But he asked me about 20 questions in sequence. When I answered them, he said, "Yes, that's just the way it appeared in the Congressional Record this morning". What had been inserted in the Congressional Record was a document that had been given to Henry Jackson the year before with respect to the technical aspects of the Baker East and the Baker West siting, which proved that it was not a technical foul-up as McCarthy had claimed, but in fact was using the best professional judgment available at the time. It had been checked out by, if anything, too many people, too many organizations. The concept of having a transmitter plant in the State of Washington and another in North Carolina was technically sound, and this document that Jackson had put in the Congressional Record a year later confirmed it. I might have been in a more difficult situation if I had not personally been the individual who gave the document to Senator Jackson. I didn't do it on my own. I had gotten entree to meet Senator Jackson by the then special assistant to the head of the Agency, Major General Frank Stoner, who had contacts all over town. I must say I was somewhat disturbed that after the meeting in which I made my pitch to Senator Jackson -- and it was a very good meeting with Jackson -- that nothing happened for so long.

Q: And it happened because John Rooney read the Congressional Record.

MARTIN: If you went up there to John Rooney and had too many documents, he wanted to see the one that was different from the one he had. He wanted to see the full text. A lot of our witnesses didn't know the unique architecture of the room. It has double doors, the outer of which is slatted. So many times, when people were waiting, when our particular part of the hearing was over, the principal witness would have a little session with John Rooney, in which Rooney would lecture him about his lack of preparedness and how presumptuous he was in coming up there without proper preparation. I'm not sure how good it was for morale to have the staff standing out in the corridor hearing their boss being lectured. There was an area director who had been a professor of politics or something -- I think it was the only government job he ever had, and that for only a short time -- and he was lectured, and Rooney told him, I hope you do a better job with your students than you're trying to do with me.

Story of VOA's Floating Transmitter on SS Courier, A Refitted Coast Guard Ship

Some place in the process we wound up with a sea-transported facility, the SS Courier, a Coast Guard cutter with a 150-kilowatt medium-wave transmitter on board, and two 35-kilowatt short-wave transmitters. It had sufficient power to operate the transmitters, and rudimentary studio facilities, which I don't think were ever used, and receiving facilities for receiving VOA programming from Washington. Here's another concept which I think was very sound. I do not think it should have been scrapped the way it was.

Within the Voice, it was pretty generally understood how it would be used, since there is an international treaty that says you will not broadcast from the high seas. We knew that very well, so it always operated within territorial waters. That was no great limitation, and in Greece in particular.

Because it was expensive having a seagoing crew there --from time to time we had to move it into dry-dock and all -- before it actually went out to Rhodes it was used in a political venture in this hemisphere, involving Guatemala. It was used for direct propaganda operations to influence whatever was happening in Guatemala. We were attacked, because instead of sending the ship out to a battle station to do propaganda war in the Middle East we were on a goodwill cruise in the sunny Caribbean. Sometimes you have to call things that, but there was an important mission about which not many people in the Voice of America knew, only a few in programming and two or three of us in engineering. That was its first mission. If you look at the log of the ship you'll see that it visited, in its goodwill visits, some port to the south of Guatemala and a succession of Central American ports within medium-wave range of Guatemala.

Q: But what did it carry? VOA wasn't broadcasting in Spanish at that time. Walter Lemmon was carrying the load of programming to Latin America.

MARTIN: Walter Lemmon was carrying the load, but we had programming, maybe from the Feed Service, that we thought would be appropriate and instrumental to the situation. There were all sorts of horrible things in the press about our just wasting time, but we just had to take our lumps because those of us that were involved knew that it was doing its first real tactical mission.

Q: The ship was already under the control of the Voice of America at that time?

MARTIN: The ship was under the control of the Voice of America from the time it was commissioned and launched. We were even criticized for the choice of the naval architects that we used, but we had the same firm that was involved in World War Two in the conversion of the Normandie. So they were big ship dealers. The Voice wasn't so clumsy as to hire less than qualified people. There wasn't any problem with the way the ship ran; it wasn't a speedy thing, it was a converted wartime ship. The question was, why did we use the Coast Guard? Because you'll find a unique organizational history and legislation: in time of peace the Coast Guard is not a part of the armed services; in time of war it is brought under the control of the Navy. So literally this wasn't part of the armed forces, and that's why the Coast Guard was the operator of our ship. And that's why I'm amused today to hear people flipping around ideas like letting the Coast Guard get a piece of the action in the Persian Gulf. Unless the legislation has been changed, there's a little legal barrier on something like that. And if you dig into the history, that's why we in the Voice sometimes do things with prudence, and why the Coast Guard was the chosen operator of our ship.

We actually had a program man on the island of Rhodes who didn't quite understand that at one time. We had worked out an arrangement for our program people and the people on the island to get into showings of the armed forces film service for entertainment, and so we were on the distribution for the films. The Coast Guard set up the projectors in a warehouse or some such place. We had someone who decided this should be more regularized administratively and got into the act and blew the whole damn thing. Since the Coast Guard wasn't part of the military you couldn't have the films. Could I fix it again as I had fixed it in the first place? No, it was an embarrassment to my friend in the Pentagon that I had fixed it with him in the first place to have all this come out. And so we were without films for some months. To the old pros in this town, through their informal contacts little favors like this can be done as long as it isn't publicized. It wasn't hurting anything to have an extra stop on the passage of these films through the various military installations out there. It was not an official thing, so when you try to formalize it the answer has to be negative.

Q: The Courier was broadcasting only in Arabic, or was it Arabic and English?

MARTIN: It had English, too, yeah.

Q: How long was it operating off the island of Rhodes.

MARTIN: It operated there until we got the Rhodes station built. We had a program center in Cairo, which packaged programs which were fed over from Egypt to Athens. I recall a flap in which the Greeks were having some trouble, and they interrupted that service. The then director asked me, "What does our agreement say?" I had to explain to the director that it doesn't matter what the agreement says, that part of the general telecommunications treaty, which the United States is a part of, says that a country reserves the right to stop ingoing, outgoing and transit communications in time of emergency. And all that the Greeks had done was to stop languages from flowing through their public communications facility that they lacked a censorship capability for. They considered it imprudent to have Arabic, which they couldn't censor, going through. We had a way of getting it direct, however, so it didn't really bother us a hell of a lot. I thought it was nothing but a little fuss within the Greek government; from time to time they had little troubles, coups and all. Let's let things rock along and they'll sort out their problems and go back to being the cooperative people they've always been.

Q: When did Kavala get commissioned and start building?

MARTIN: The late sixties. It went on the air in '72. And this you have to give credit to Leonard Marks for, because what you'll find out in this town is that you have directors of agencies and then you have your own chief of budget person who is dealing directly with the Office of Management and Budget. Sometimes they have a program and an agenda that's their own and doesn't necessarily jibe with the desires of the Agency or some of the people who have ongoing programs within the Agency. Money was not released to us, and I sensed that there was a stall going on until the administration had changed, from

Leonard Marks to his successor. That would mean starting this whole project over again, unless we were firmly committed, had let contracts or something was getting under way on it. It was fortuitous that Leonard Marks called up and asked, "Have you let the contract yet?" I said," No, there's some damned administrative stall. I thought it was at your direction." "The hell it was," he said. "I'll find out what." And so he preemptively directed his office of administration -- Ben Posner --to get with it, let's sign initial contracts and all. We got the station at Kavala into the hopper so that it was committed so that it wouldn't be so easy to cancel. Ben's a very good man as long as you're playing to his drumbeat.

Occasionally more points are made between budget people and the operatives in the Office of Management and Budget than are made with transient agency heads. That's one of the things you can count on in this town. Ironic but true. Sometimes it works for the better, sometimes for the worse. The old pros in this town have to use it the way they find it and not stand up and lecture on how it should be, like a high school civics class. Governments don't work that way.

Comments on Relative Value of Various Technical Facilities
(A) Paired 250 kW Transmitters vs. Single 500 kW Transmitter

I don't know the current status of Kavala. I do hear that the new people say that we were old-fashioned, having achieved 500-kilowatt transmitters by paralleling two 250s. If they really dig into a sophisticated operation, there's a very good reason for it. If you're operating paired 250-kilowatt transmitters and you have a fault in the final stage, you're running at half power, but you're not off the air. We more or less standardized, after the initial 500-kilowatt venture, on the 250-kilowatt transmitters for a very practical reason. You reach a point in weighing the costs, do you achieve the extra gain more effectively with a more expensive antenna or from a more expensive transmitter? The antenna might cost more to get that extra gain, but the yearly operating costs are frozen. With the increased cost of fuel, the increased cost of power, it's a very grave decision the management of the Voice has made. Fixed budgets, costs going up, do you cut out some programming, or what? I think you're getting locked into a situation that will make the conflict between programming and the technical operations more serious.

Q: That's been happening for the last ten years.

(B) Satellite vs. Ground Based Transmitter for International Broadcasting

MARTIN: Yes, and it's going to get worse. I don't think anyone would have envisaged 15 or 20 years ago the burgeoning costs of electric power. It dates back to the oil crisis in the early seventies. Just an aside here: there's a new study out by the National Academy of Sciences -- I won't talk about all the natter about ultra-sophisticated antennas, which there's probably no place it could be used in the Voice -- but they've gone into the concept that the Voice should be planning, getting ready to go ahead with direct broadcasting

satellites. Audio only. And they have recognized the power limitations on the conventionally used frequency bands. They can't accommodate the power on a satellite. George Jacobs and I did an article for a professional journal some 22 or 23 years ago. The powers haven't changed that we calculated at that time. But you have to get up into the gigacycle range, which we can use for television. The power is quite reasonable for terrestrial service. But they sort of dust over the international regulatory aspects. Somehow the modern-day generation feels they should walk into the International Telecommunication Union and change treaties like walking into a supermarket shopping. They seem to have lost sight of the fact that when the issue was raised in the United Nations about direct satellite broadcasting to the receiver, the listener, there was one vote for and every other vote was against, including our best friends. I can't see politically how things might have significantly changed in the United Nations or in the International Telecommunication Union. But that gets scant attention. They say we've just got to have powerful arguments in order to make this point so we can get it changed. I'd like to know what these powerful arguments are so that I could assess them, instead of just taking it for granted that they're going to succeed.

Q: I have said for years that this is a pipe dream.

MARTIN: I've used the illustration -- some of our people in USIA said, "Oh, we can bootleg receivers, just have the transmitters up there". I said, "I would sort of assume that the Soviet Union, which can control the manufacture of weapons in their country, can control the manufacture of receivers since the technology involved in making these receivers for the exceedingly high frequencies involved is much more complicated than building a damn machine gun. And I think the Soviets are fairly capable of controlling their own people; there won't be any bootlegged receivers if they don't want them. I'm not sure there's much mileage for Soviet officialdom to allow this to go ahead. It would be detrimental to one's career."

The other thing they've discovered is, I think it was an Executive Order about what the wartime capabilities of the Voice should be. Not wartime, but in an emergency. They're rewriting the thing because they found out the original Executive Order was vague, saying we should be prepared in time of emergency to broadcast in the official languages of the United Nations. I have some degree of familiarity with why that language is vague, having written it that way. It wasn't written to be specific. I thought it would be most desirable for us in the Voice to have some sort of vague directive so WE would decide what it is the Voice should be prepared to do, based on who's involved in the war or emergency. Then they go on about hardening and protecting facilities. We'll have a need for a great diversity of language talent outside Washington. They make the suggestion that we should locate alternate programming facilities adjacent to college campuses where they have program capabilities. But when you come to think about it, does any college have "significant" language capabilities for the programming of the Voice of America? In my limited knowledge, I don't think so. But then again, every other field seems to be easy when people start writing these types of study. They're all engineers of a

sort. They'll jump into programming concepts, language availability concepts, and say, Oh we've got wonderful advice, go ahead and achieve it.

(C) Usefulness of Transmission Facilities Located Underground at Emergency Relocation Centers

Q: Well, ever since the fifties, Ed, we've had that emergency relocation center, and when I went down there a few years ago with a representative of the Wireless File to look over the situation, we looked in that warehouse and here are all these rusty typewriters and yellowed paper and junk. And that studio and control room that were two halves of a trailer that you have to put out on a concrete pad and marry... I said, "We'll never on earth get a broadcast out of here. You have to haul that thing out with a major piece of equipment -- where are you going to find it in the first place? -- get it in position, hook it up, and by the time you get it done the war's over".

MARTIN: That's right. This is something they haven't realized, though. Maybe when some of this started 30 years ago... I still think it was essentially sound that we have HF communications capability between us and our far-flung plants.

Q: Absolutely!

(D) Further Discussions on Satellite Broadcasting Potential

MARTIN: This takes us back to the subject of satellites. You see, to the professionals in engineering, a satellite is merely a microwave or a transmitter on a high frequency on an elevated platform. It doesn't matter whether it's floating in space or set on a very high tower, the technology is the same. We can have power sources that are a little bit more reliable, say a terrestrial microwave. One thing that hasn't been evaluated that should be evaluated is the vulnerability of satellites if there should ever be a nuclear exchange, not only from the standpoint of the electronics directly of the satellite, but the solar cells from which its power is drawn. I worry a lot about our great reliance on satellites for communications and other things. I have the horrible feeling that when things get really serious we're going to be blind. And so maybe we should not have abandoned what a lot of people see as old-fashioned HF communications.

(E) The "Moceri Report" Re Satellite Broadcasting

Q: Were you still there when Jim Moceri made that report with the four alternatives, which was so obviously designed to have only one of the four alternatives accepted: getting rid of HF from both coasts, having nothing but satellite feeds to the overseas plants? I'll never forget the meeting we had uptown with Ken Giddens after Moceri had retired. Keogh had called this meeting to talk about the Moceri Report. We didn't know that he'd summoned Moceri back from Seattle, where he'd retired to. So here were these high-powered people, from the area offices, the general counsel's office and other parts

of the agency, Ken Towery, who was then the head of policy. I had typed up some 3 x 5 cards for Giddens to use in what we thought was going to be a discussion. Well, Keogh introduces Moceri to make his "presentation." And he sat there and read a formal statement for 27 minutes. Then Keogh turned to Giddens and had him reply. Giddens wasn't prepared for this kind of thing, but at least, to the man's credit, he took my little old 3 x 5 cards and made a very creditable response. Ken Towery, who had sat there by Keogh all day, finally said that he thought this was terribly unfair to the Voice because we had had no advance warning that Moceri was going to be making this presentation.

MARTIN: I don't think his work was as scholarly as the impression that was fostered at that time. In other studies he had another chap who worked with him, who had been a prisoner of the Japanese in the Far East. I think he lives in Pennsylvania now. Maybe I'm the reason he doesn't come to the USIA retiree luncheons any more, because several years ago he was gloating -- he was always onto direct satellite broadcasting -- he was gloating that it's practically around the corner because the FCC had extended some license grants, construction permits, and so to his way of reasoning, now it's open for us to squirt into the Soviet Union. Whoever was presiding at the retiree lunch, instead of answering himself, said "I see Ed Martin's in the audience, we'll let him answer." I said "I don't think the officials of the Soviet Union will take their guidance from the political decisions of the FCC." And that's been borne out, because all of these licenses have lapsed. There was no money in it. But he had drawn the conclusion that because they had a license that it was around the corner and would be achieved. You can't start raising your money till you get a license for construction. I'm afraid this poor chap did not understand everything he read.

Comments on "Studies" in General: Technological and Program in Nature

Q: Tell me about some other studies, like the Moceri thing, that were held about engineering through the years. Did you have a long-range plan, and keep refining it?

(A) In-House vs. Contract Studies

MARTIN: The long-range planning was essentially done in-house. We had a principle: we only went outside when we lacked the manpower to do something. It wasn't that we didn't have the understanding of what was needed. The engineering involved in the Voice of America is not all that visionary or difficult to grasp. Occasionally lack of manpower, for certain studies, caused us to go outside -- modulation techniques, certain antenna studies, and so on. But as for studies of what we should be doing, that was the furthest thing from our minds. We shouldn't have had the jobs unless we could see what was necessary to meet what it was that the Voice was in business for. We did lack guidance, you might say, as to what would be desirable target areas. I've mentioned how George Allen, when he was Agency director, had to say that regardless of what you might hear, you want a Latin American capability in the Greenville facilities. For a long time we in engineering had known of the great big gap in the Soviet Union that we weren't reaching from either the Far East or Europe. And so we wrote a political justification as to why we

needed a facility to reach deep into the central USSR. It's not all that difficult to find out the importance of that area and put something on paper. And we took it as a high compliment when Alex Barmine liked it and borrowed a copy of it, and urged its acceptance by the Agency. Really, when you think about it, there was no element of Agency planning specifically to be planning this kind of thing, and if we wanted to have a political justification we realized, damn it, we've got to do it ourselves. When Barmine liked it, I thought we had passed our examination. We went on to say what was being done in that part of the Soviet Union, from the standpoint of their economy and all sorts of factors.

(B) Language Priority Studies

Q: The language priority studies that have been conducted periodically through the years sometimes were principally Agency, sometimes principally NSC, sometimes principally VOA.

MARTIN: We even got into -- I'm not sure whether it was in this study -- the language distribution maps, showing what we'd have to run in parallel to reach language groups in the same area.

Q: You remember when we were panicking about getting Farsi broadcasting started into Iran all of a sudden, and we didn't have any facilities without knocking something else off the air to accommodate it.

(C) Alternative Antenna Structuring

MARTIN: I mentioned this study that they were coming out with that would have the antennas split up and down, varying the vertical bearing and horizontal azimuth, but to me, if you look at the distance VOA is from the target areas, and the programming load, rarely do we switch directions back and forth. Literally they work in sequence, and we'd be hard put to find a place where you'd have to be switching an antenna back and forth. You might have two bearings with a slight difference, but not leading to the necessity of slewing an antenna. What people fail to realize, to slew an antenna electrically, it becomes less efficient. To use a farmer's analogy, we can turn a team of horses by having both point in the same direction rather than hitching them reversed, front to tail, and literally pulling them around by horse-power in order to get them in the direction you want to go. That's essentially what you're doing; you're throwing energy away when you slew an antenna electrically. If you think you have surplus power, well, fine, but it's costing you when you put that power in.

The Affair of the Cracked Antenna Pole
at the Kavala Transmitter Site

Q: Back to the subject of Kavala. I recall a time when a crack developed in one of the steel poles that made up one of the antenna towers. What happened?

MARTIN: Some slight welding. You see, the drain holes in the piping had become clogged and water gathered in them and froze, which is not a great problem. If the maintenance crew had somehow kept these drain holes free -- it was a minor thing.

Q: It was not a fault of the manufacturer?

MARTIN: No, no, no. You see, people got concerned about this, what we call pressure piping, that was used for the things. They're used for the Texas Towers, the oil drilling rigs off the coasts of the United States and in the North Sea. They have to take some pretty damned rugged weather. It's the same type of piping that's used for these towers.

Q: What did you do to replace that pipe?

MARTIN: We didn't replace it. It's still there. You just welded these particular sections. Getting back to the great claims. We have a number of naive people who think because the contractor makes a claim that there's something wrong with the design. They cannot understand that once you sign the contract that it becomes an adversary proceeding. They're going to look for ways of getting extra money over the contract price. They're going to claim there's vagueness in the design. They're going to claim there's something about the materials that they didn't adequately understand -- although in this particular case they had to buy it themselves, and they had to fabricate it into the type of sections that were going into the towers.

Because in the fabricating process they happened to witness a piece that had been dropped, and it fractured, the people who were claims specialists decided that this was something they could probably use to get some extra money out of the Voice of America. And that panicked some of our people, perhaps some of our lawyers, when they started making their claims. Through engineering channels, we know that their engineers saw nothing wrong with it, but the management types felt here was a way to make an extra buck. You see, they said, this is brittle. But it's not as brittle as the engine block in your automobile. But you don't go around hitting the block with a sledgehammer. If you hit it like that it sure would fracture. And that's the same type of thing that happened with one piece of steel. We should have had the outlets free from clogging in the tower, but that tower is still there. But the talk about Ed Martin and his great goof in allowing this thing is still going on -- I hear it -- by the likes of clowns like Frank Shakespeare and other boobs like that. I mean, like there's a great thing that caused him a lot of trouble. No one will go back and find that nothing was changed. The towers are still there. It's true, some of my successors thought they found something and they paid another hundred thousand dollars to go in and have another study made. And while we're on the subject of studies, they hire a firm like Ammon and Whitney to make the study, then they'll hire some fly-by-night outfit, that's got a basement desk, for $10,000 to corroborate the other study.

But there is one point: Page extracted some extra money by, you might say, scaring the Agency. But the Agency was derelict. Once having paid the money -- it was paid on the

basis of the design -- then why didn't the Agency go on and recoup from the design firm for what they had to pay the construction firm? One might explore that. I shouldn't speculate too much on the record, but why don't you look at the personalities that made these decisions and see who their employers were. You've touched on the key point, Cliff. The towers are still there, and they'll probably be there another 30 or 40 years. Nobody is willing to explore it, because there happens to be a bridge in France of which the members are out of cast iron, which is far more brittle than is structural steel pressure piping as was used in this tower. But arguments are better carried on and are more effective if you don't bring facts into them. And that's a keynote in Washington, DC.

Faults In A New Transmitter Cannot Usually
Be Discovered In Short Term Laboratory Tests.
Only Usage Over Time Will Reveal Them

Q: When did Tinang develop? The same time as Kavala?

MARTIN: About the same time, yeah. And you'll hear -- and it's still going on -- that we're going to design a transmitter in which you won't have faults. They're going to do it through improved contract language, through testing and all. But when you think about it, many of our faults have been long in developing, and we have a body of knowledge which I hope has not been lost. After five or six thousand cycles of on and off, certain things tend to happen. Something so rudimentary as heavy power transfers, because the shock of energy being applied, and the pressures within the transformer, within the frame of the transfer, it's a, you might say, a fatigue factor. After a while, you work out a way to improve internal bracing and you solve the problem. Throughout the transmitters we've found these things. Some of our older transmitters that have been debugged -- and it's primarily the skills of our own people and what they've learned on the job by observation -- they'll be more reliable than brand-new ones. A brand-new one is going to give you a new set of headaches, and take a good period for them to be sorted out. And so a new wave of engineers will be criticized for having bought transmitters that will have faults. I have never known a transmitter of significant power to be procured -- a new design -- without a long debugging process, whether it's French manufacture, Swiss manufacture, German or American -- and you learn this in the trade. You don't go about bragging about these things, but if you've visited various transmitter installations, and you've seen them on the factory floor, you see what's going on. And there's really no way of avoiding it, because you cannot have, say, a five-year test on a transmitter before you accept the thing from the manufacturer. He can't afford it; you can't afford it' there's no place to do it. So literally the testing has to be done within your own facilities.

Q: You mentioned a while ago the plans for Liberia. When did that facility come on stream?

MARTIN: I think it was 1963. And then we built the program center there, because of the big push to increase African programming with the coming to independence of so many countries.

Q: And Sri Lanka?

More Stories About Studies and Their Fallibility

MARTIN: Sri Lanka was 35-kilowatt short-wave transmitters. And unless the programming load increases, I'm not sure they need a facility in Sri Lanka.

Q: They're talking about expanding Sri Lanka and Botswana and Liberia...

MARTIN: You see, with Kavala and Tinang, if you draw your coverage maps to the same standard, they overlap in central Asia, and provide good coverage of India. I did see, in a report of the Agency Advisory Commission, coverage maps, and it was obvious that they had been drawn to different standards for different stations, to show a convenient gap to be filled by the new station in Sri Lanka. That discrepancy was called to the attention of the Agency, but sometimes they don't know what to do with such information. I think if you look at the maps of an earlier vintage, (You'll see) we always drew maps to the same standard, and if it's an all-night path or an all-day path, we said so, so that we didn't mislead the recipients of our information. If someone wanted to be a salesman, he could say, "Draw a mixed path to the target, using dark and daylight." But coverage maps should jibe with what the program requirements are, since that's when people are likely to be listening.

I might indicate how studies are made. Years ago, there was a study -- I think it was the Air Force -- in which they wanted to contact amateurs and listeners all over the world to log when certain frequency bands were open. Many reports came in with some interesting information, but you could more easily deduce the eating, sleeping and work habits of the respondents than you could propagation because people tend to listen when they have time to listen and not necessarily when the propagation conditions are at their best.

I'll tell you another story, now that we have so many scientific discoveries and experiments. There was a case in which goats were exposed to different degrees of electromagnetic radiation at different frequencies, different times of exposure. Each goat pen was plastic, so you wouldn't have any dispersion of energy, and each pen was labeled. This went on for several months. And it seems the people conducting the experiment knew more about electromagnetic radiation then they knew about goats. Remember I said the cages were tagged, but not the goats. They learned that goats can climb, and that they were swapping cages each night. And so a whole body of supposedly scientific research went down the drain because they didn't know a simple thing like the fact that goats have a propensity to swap cages. I think of that when I hear of some of the scientific findings coming out today.

Martin's Relationship with VOA Director Ken Giddens

Q: You referred to Shakespeare bringing in Ken Giddens. What was your relationship with Giddens?

MARTIN: Well, Ken Giddens likes to listen to gossip, and he liked easy answers to things. I think he basically had good instincts. I think he tended to think more about his political contacts, and in that respect I think he was very, very effective. But when he started having ideas about what the Voice should be doing, I'm not sure -- it was always the last person he talked to; it wasn't well thought out. I don't think he liked to think, really. I think it was probably even painful for him to think. In approaching a serious problem, he always wanted a ready-made solution, and if you're dealing with gossip around town it's easier to get ready-made solutions than to get solutions that are going to be useful or practical. It all depends on what you were looking for for a director of the Voice. And I'm not sure over the years that we've really had a very good sampling. When they picked them I don't think they ever had any idea of what the job really is.

Short Evaluations of Various VOA Directors

Q: Well, in several cases they've been picked for political expediency at the time. I mean, John Chancellor was brought in to stop the criticism of the Vietnam credibility gap.

MARTIN: And you know Henry Loomis had annoyed Lyndon Johnson. I always refer to John Chancellor as the AirWick that came in (to clear the air).

Q: And I think John Daly, if he'd been able to stay a while...

MARTIN: I think John Daly was one of our better ones. I think he had a greater overall comprehension of what we were there for, and the political issues involved.

Q: This was after your time, but I think the finest manager we ever had was Mary Bitterman.

MARTIN: I never knew her.

Q: She was superb.

MARTIN: I'm only critical of her in one respect. She was supposed to have suspended one chap for three months without pay and another for one month without pay, and one of them talked her into just letting him go on since he only had another month to go to reach retirement, and the other one, since he was acting engineering manager, it would be awkward to have your acting engineering manage suspended without pay for a month.

Experience in Usage of Portable Transmitters

But back to the transmitters. We did get into the transportable facility arrangement at one time. We built a transportable medium-wave station which went down to Marathon,

Florida, for broadcasting to Cuba, which has been there ever since. We had three transportable 50-kilowatt short-wave transmitters. They were used for a while in Liberia, then were set up in the Philippines to broadcast to Vietnam. The receiving station went to Hue. Actually, I think it was a reasonably good idea as long as there are places in the world where it does do the job. Unfortunately, the transportable facilities become permanent, so then we have no reserve capability for shipping them around. While I think the Courier did a very good job, I'm critical of those in the Agency who insisted that we dismantle and take the transmitters off that ship, those that feared that there would be a mission and we'd have to use it again. It was easier to say you can't carry out the mission, if you don't have the ship. I tried to get somebody in the Defense Department, at various levels, interested in stashing the damn thing, leaving the transmitters on it, but they didn't give it any support -- there are a lot of cowards in this town. For years it was a training ship in the Great Lakes, in the Coast Guard Reserve. No one can explain to me why it wouldn't have been a perfectly good training ship for the Coast Guard reserve with those transmitters intact and still in place. They weren't in anybody's way. It was merely because certain people in the Agency had a fear that it might be activated and used as a ship again. True, it's a little expensive, but I'm sure in some of our political missions the cost would be justified. I can think about facilities to broadcast to Iran. There are places where we could have parked this ship and it would have been a satisfactory outlet.

Opinions on External "Interference" with Voice Management

Q: What you have said this afternoon, Ed, suggests that it has been the interference of Agency management in the VOA planning and executing of policy and plans that has been the sticking point, the principal obstacle...

MARTIN: There's a theory developed that if you don't have things like that you can't get into controversy.

Q: Those of us on the program side have been saying for years that VOA ought to be independent of the Agency to avoid precisely this kind of second-guessing and nitpicking and prevention...

MARTIN: It's a phenomenon throughout government, and apparently throughout industry. It's easier for a staff officer to get high ratings and be rated as an expert than a person who's got to do a job, because the staff officer only has to please his immediate boss and can always think of these ideas that somebody else has to explain. He can win high points for being a meddler because he doesn't have to accomplish anything. And we have a breed of that -- every agency has them, including State and USIA.

Q: When I interviewed Henry Loomis, I knew the position he had taken back in '75 at the time of the Stanton Commission report, which was against the recommendations. He takes the position, to this day still feels -- and I think he's quite sincere -- that the Agency leadership is the buffer between the Voice and the State Department and White House. My experience is that we've had a lot more interference from the Agency leadership than

we ever have had from the State Department or the White House -- except in very crucial, crisis-type situations.

MARTIN: I mentioned the contacts in State that were helping us for facilities when the Agency was not. There was greater understanding at the appropriate levels and appropriate spots -- the Assistant Secretary of State of Public Affairs, the telecommunications divisions, although it wasn't strictly their business -- and so literally our support was coming from State and not from USIA. These things probably change from time to time. I'm not a great one for believing you can solve problems by organization; I think you solve them with people and with the working contacts that your people have.

A lot of this goes back -- and I attribute it, in what may be oversimplification -- to the fear that was triggered by McCarthy, because that's when the Voice was really abandoned by the Agency. The Voice was a unique scapegoat. Oh, there was a little bit about the libraries, but the Voice was the chief one he chose to go after. And what we learned was that we were abandoned, left to be on our own. We learned very early that they weren't interested in the facts, they wanted to program the witnesses and not have the witnesses be independent and give their professional judgment. And I'm afraid we had some people in the Agency, and unfortunately some in engineering, who adopted the story, you might say, that they'd been rehearsed on. And so if you look back at the transcript of those that appeared, one of our engineering people was very negative -- the ideal kind of witness for McCarthy. He was stationed in Ceylon, and testified that the Ceylonese government had the right to censor the programs. Of course they never exercised it, that's the key point. You cannot get an agreement with any country in which they're going to waive their sovereignty and let you go in and do anything you want. There has to be some face-saving language in the agreement. But this boob makes it into a major case. Perhaps it was traceable to the kind of management they had in engineering before, because I found if the people you have around you can explain the thing, and they understand why these things are, you don't have the static. It's only when there's a great mystery about it. I think it's easily explained why you have to have this language in agreements as a face-saving device for the country.

Q: Were any of your people in engineering members of the so-called Loyal American Underground? I thought they were all program people.

MARTIN: No, no. This one I mentioned, I can't remember his name. Then we had a maverick who had left us, who stirred up all this thing about sabotage, like the station should be in Puerto Rico instead of North Carolina, and in California instead of the State of Washington. One doesn't base a whole engineering study on one professional article.

Q: Was Dixon or Delano a successor to Baker West?

MARTIN: No, they were there already.

Q: But Greenville is the successor to Baker East, right?

MARTIN: Oh, sure. And we could have used the same damn land. While we could hide the transmitters, through the mechanism of the NSC and GSA that I mentioned, you couldn't very well keep a piece of real estate out there when you're directed to get rid of it. In fact, I got a directive from the then-Director of the Agency to declare it surplus, and I did so --with the understanding that the Agency had and would have no requirement for a relay station in that part of the United States. That sort of makes the Director look like a goddamn fool, doesn't it?

Q: This was his idea?

MARTIN: To get rid of the land, yes. Ted Streibert. I would have considered myself a damn fool, knowing full well we were going to need a station, and blithely go along when someone says get rid of the land, without putting something on the record like this.

Anecdotes

Q: Give me some anecdotes through the years -- humorous, interesting, whatever.

MARTIN: I'll give you one that George Allen liked. We allowed the Moroccans to pasture sheep in the antenna field. And occasionally you run into hot spots in the guy wires. George had heard the story, but he didn't know the theoretical basis for it. Some of the locals thought it was the strange working of Allah, in which one of the sheep touched a guy wire and drew an arc. The Moroccans swore the sheep yelled "Harry Truman" as it died. (Laughter) It is possible that when you draw an arc under modulation it sort of rectifies and you get the audio component, so that wasn't too surprising.

Q: But Harry Truman! (Laughter)

MARTIN: George Allen could become very frustrated with ambassadors when he traveled. They'd say, "Why can't we hear the Voice of America?" When he was in Cairo once and got this question, he walked over to the radio on the ambassador's desk and turned it on, and there was the Voice of America. It seems we had an ambassador who knew the frequency of the Voice of America, 1260, but his receiver only showed three numerals -- of course, you assume the last numeral and you tune to that. But this ambassador didn't know that. This is what we get in some of our representatives abroad.

Bill Buckley once asked why he couldn't hear Rhodes when he was sailing in the eastern Mediterranean. I said, "Did you ever hear a station in Arabic that was so damn loud that you thought your receiver was going to jump overboard?" "Oh, there are some very powerful stations," he said. I said, "Well, the most powerful one, if you had been able to listen in Arabic, would be the VOA Rhodes station." "Why in Arabic?" he asked. "Well, we have the idea that most of the people out there speak that language."

Q: I'm amazed that Buckley wouldn't recognize that you've got to have Arabic to reach that part of the world.

MARTIN: Some of our smartest writers are really very simple when it comes to understanding concepts.

Q: Which would you consider the most successful period in all your years with the Voice, as far as engineering development is concerned?

MARTIN: It took until about '58 till we could start getting somewhere -- to get over the McCarthy period, and study after study after study, trying to make people understand the need for transmitters. Everyone would be in agreement, but to overcome the fear of sticking their neck out again and having the same thing happen again... I can't give anyone beside George Allen credit for breaking the pattern. His tenure was the best period.

Another anecdote: we had an Agency deputy director during the Eisenhower period. He came back from a trip and was talking to the President. "Why does it take so long to build these facilities?" asked the President. It didn't take so long when I was supreme commander." Well, I had a little military experience, too, and I said, "I don't think the President wants us to do it the same way he did it when he was supreme commander." "Why not?" I said, "He didn't build them when he was supreme commander; he went out and captured them! We certainly didn't build these monsters in Europe during the war, because we captured them." There was an interesting thing there: the Germans counted on the staff at the transmitters to sabotage the things, but the staff was smart enough to know that if they blew up this radio station they'd blow up their livelihood, and who'll get to live in the nice little suburban area out here around the transmitter if we blow the damn thing up? So most of the sabotage was cosmetic sabotage, and to a real radio engineer damage to the transmitters wasn't very serious and they were back on in nothing flat.

Q: Tell me about the switch of the 173 long-wave facility to the 209 of the Germans.

MARTIN: That happened after I left.

Q: Ann Case and I went to Bonn to talk to the Foreign Ministry people and the Bundespost people, quote negotiating unquote. Of course, there was no negotiating to be done because they had already taken it over. Under the Geneva agreement it was their station and their frequency.

MARTIN: Well, actually, it was very frustrating to keep the thing on stand-by after the Russians stopped jamming one time. When they started up again, whenever it was, maybe it was Czechoslovakia, anyway we wanted to go back in. I'd made a recommendation that we reactivate that station within 24 hours of some political event -- probably Czechoslovakia. You know it was one year before we got an answer from the Agency! One whole bloody year! And here we talk about being ready to go in a time of emergency.

Comments on Great Expansion of Engineering in Voice in Recent Years

Q: How much do you know about what has happened in the last few years in terms of the vast expansion of engineering?

MARTIN: Well, I think I have a reasonably good feel for it. I think I mentioned the other day, to me there's been no real justification of what it is extra that they need. There's also been no reasonable explanation that I can find of how much better it's going to be after they've spent all this money. Modernization, you might say, is a term of salesmanship. Really, is it going to be better because it is supposedly more modern? Some of the technology doesn't really change a lot, and just the fact that it's new doesn't improve the end product a bit.

Let's use an illustration: no one has seriously doubted that the battleship that we had off the coast of Lebanon could put its shells in where they were needed as easily as a new one. In fact, it's a good carrier for a lot of sophisticated gear that we want to have aboard ships. And so the mere fact that this thing is 40 years old doesn't mean we should go out and build a new one. And while we're talking modern technology, sophisticated switching and all that, very few people know that the 1943 telephone switchboard is still in the Pentagon, paralleled by a very modern, state-of-the-art, ultra-sophisticated arrangement. Not it turns out there are certain things that you want to do that can be more easily done on this old manual switchboard, and you want to do those things often enough that it isn't justifiable to take the thing out and scrap it. One shouldn't abandon the old just because it's old, and one shouldn't accept the new just because it's new. I think a lot of the things that are being studied have already been studied, if you manage to go through the literature. I don't know how you feel about the device we called the clipper -- a very much maligned piece of equipment.

Q: I never felt one way or the other because I couldn't tell whether it was better or worse, with or without.

MARTIN: You see, we ran exhaustive tests, and I will confess to a mistake in respect to the damn thing -- and that's in allowing it to be called the clipper.

Q: Define the clipper.

MARTIN: It's a device with which we deliberately reshaped the wave form that was going into the transmitter, in order to concentrate the energy on that part of the speech spectrum that is most conducive to conveying intelligibility -- to give literally a greater apparent voice power to the listener. So you might say it was a relatively inexpensive way of getting a more effective signal transmitted to the listener. Like most speech processing, it doesn't help music, so you disengage the thing when you have music on the air. But then again short-wave transmission isn't for carrying high-quality music programs. I've learned over the years that those that are most critical of the device are the ones that knew

the least about it. They're all engineers. And if you put them down and force them to earn about it and what it's doing, they really became the champions of it. Knowledge made them champions; ignorance made them critics. I've said to critics, "Have you heard the Canadians?" "Oh, yes, they have wonderful quality. If we could only have the quality of the speech processing system of the Canadians!" "Give me the phone, let's call Sackville right now." "Why?" "They're listening right there in my office. Ask them the degree of clipping Sackville is using. They're using the same device that we're using, but it sounds better when the Canadians use it than when we use it." "But the BBC is critical of it." I said, "Of course they're critical of it, because it's like being with someone with broad shoulders in an elevator. You wish he'd shrink. The clipper literally fills out the voice envelope, the speech envelope, so that we have filled out that chunk of sideband that's occupied by the voice. And so you can't work as close to a VOA transmission as you can to another type of transmission. So don't necessarily listen to people who have other reasons for being critical."

Q: Does VOA ever use them anymore?

MARTIN: No, they disconnected them -- and what's worse, they scrapped them all, so you couldn't put them back if you had somebody who used his head and wanted to use the thing again. A directive went out to scrap them all, instead of selling them surplus, which I think legally you're required to do in the government. All sophisticated short-wave transmitters for the last several decades, the specifications have been such that you can work with a clipped transmission, because you've got to have greater modulation capability within the transmitter. If you look at the specifications in the catalogues for Marconi transmitters, they have to be able to work with this type of wave form. The Germans built in the same capability in the 500-kilowatt transmitter that they put in in Munich; they built it in as a part of the transmitter design, and if you can read German and read the instruction books, they show you the wave form and all. Thompson-Houston has them in their transmitters.

I must tell a story on the French. They're so research-minded, they listened to our VOA transmissions and deduced what it was we must be doing, and came up from analyzing the wave form and called upon us and asked, "Is it this?" And we gave them all the specs. And we had the former chief of engineering director of the National Association of Broadcasters, who traveled around the world; he always could recognize the crispness, as he said, of the VOA transmission.

Q: So why did Langenbeck junk it?

MARTIN: Because there had been a lot of people that had bad-mouthed the device. It probably could have been improved, and we had people working on studies to make a better one. But he bowed to the clamor of the mob. Ken Giddens had become convinced that it distorted the programs. Distortion is another tricky word. If you really are interested in music, sometimes it is distortion, if you want to use that dirty word, that adds to the quality of the music. It's not the pure wave shape. The pleasing wave shape is

composed of many harmonics. A good musician can tell when his piano is in perfect tune. When you try to explain what the frequency is of the notes at each end of the piano, as compared with what the theory is, you find they're different. The ear has become trained by the tuning process. It's a significant portion of a tone off at each end of the piano. At one end it's higher, and the other end it's lower.

I heard a good quote from Thomas Jefferson the other day, not one of the standard quotations. You remember he had a very different attitude toward newspapers before and after he became president. After he became president he thought that people should not read newspapers. "It's better for them to be ignorant than to find out that what they know from the newspapers is really wrong."

Martin's Proudest Achievement

Q: You've talked about some of the problems, like the clipper. What is your proudest achievement in running the Voice's engineering?

MARTIN: My proudest achievement was breaking, you might say, the logjam and getting us started back on the track to get the facilities that we needed. I think we would have done it at a slower pace under others, but George Allen was the first director to be 100% for it. When we might have gotten some of the others I don't know. But I must say Keogh chickened out. We had an agreement; we could have gone into Korea, and I think it would have been a useful facility to have a major plant in Korea, and it would probably have been on the order of 35 to 50 million dollars. Wayne Hayes scared the hell out of him. He said, "Not as long as I'm here." And Keogh just meekly bowed.

I wished I had kept a diary over the years of the political assessments I heard on each of the countries we were interested in (for transmitting sites) and what subsequently developed. All I can say is the political pundits in each period were certainly not prophets. But I suppose that's like Old Testament prophecy: we don't hear the predictions of the prophets who weren't successful. Money needs to be spent, of course, but I'm not sure it's to the magnitude of what's going on, although I'm out of touch with the cost of things these days. I don't think the money they needed was of the order of a billion and a half. I don't think all of these studies were necessary.

Q: I don't think we needed 17 divisions to replace your old four or six or whatever it was, either.

MARTIN: No, no. That number of people tend to feed on each other. One of the arguments that Mort Smith has bored the hell out of people using is that it's difficult getting components, and that they have to manufacture components within the Voice. We did that not because we couldn't buy them but because we need certain skills around the place, and to keep those skills you might as well be using them. So we developed an in-house capability -- like certain things the Germans can do better in their little shop than, say, we can do in Greenville, and instead of going out and buying the items we made

them or repaired them. Now it got turned around as a justification of buying something new because you couldn't buy the parts, when it was really just to maintain in-house skills. I can think of a lot of illustrations why you might need that skill. It took only an hour or so a day. Well, what else are you going to use him for, you might as well put him to work making something or repairing something for some other part of the system.

Stupidity is not necessarily to be condemned any more in government. As long as you do it legally. As long as you don't break any regulation or any laws, it doesn't matter how stupid you are, or how wasteful you are. In summary, I think work certainly needed to be done for the Voice from a technical standpoint. I feel that a lot could have been done to improve it for far less money than they've got now. And it could have been done many years ago if the money had been available.

Q: Well, I've felt that myself through the year, but I'm glad to have you confirm my gut feeling. Thank you very much, Ed.

End of interview