

Rowan University

Rowan Digital Works

RCA Oral History Transcripts

University and Regional History Collections

7-31-2015

Interview with Gene Alexander

RCA Heritage Program

Follow this and additional works at: https://rdw.rowan.edu/rca_histories



Part of the [Engineering Commons](#)

Recommended Citation

RCA Heritage Program, "Interview with Gene Alexander" (2015). *RCA Oral History Transcripts*. 15.
https://rdw.rowan.edu/rca_histories/15

This Article is brought to you for free and open access by the University and Regional History Collections at Rowan Digital Works. It has been accepted for inclusion in RCA Oral History Transcripts by an authorized administrator of Rowan Digital Works.

File Name: 0903151121_Gene_Alexander

File Length: 00:30

[0:00:07]G. Alexander: I am Gene Alexander, I worked at RCA in Camden from 1950 let's see, the end of 1954 until I retired at the end of 1987. My last year or two were out in the suburban location in Moorestown, but for the lion's share of it, I was in Camden.

[0:00:25]Interviewer: What were some of the first projects, the major projects that you worked on?

[0:00:33]G. Alexander: When I came into RCA from the old Philco Corporation in Philadelphia where I had worked on naval airborne radar development I fit right in because I joined a project that was doing some airborne radar for the Navy. It was kind of a small-scale project. But it was a learning experience for most of the people in the group that were working there.

During that time we worked up a proposal to the Canadian government who were about to build what has since become a legendary aircraft called the Arrow. Movies have been made about the development of that aircraft. We wrote a proposal to do the electronics for it, and were the successful, to do that project, partly because we happen to have an affiliated activity in Montreal, RCA Canada Limited. That got us going big time in the airborne fire control and radar business, which is the kind of system you need if you're going to be able to fly in a supersonic jet and shoot down a supersonic bomber.

[0:02:05] Having computed where the collision of the weapon with the enemy will take place many minutes before it actually happens, and miles away from where you are when it does happen.

The technology was moving rapidly at that time. The Canadians were posed to build an airplane bigger and faster than anything that had ever been built before for the military. And it was a pretty thrilling assignment particularly for me because I had written part of the proposal and when we got the award I was immediately appointed to do the inter corporate and customer liaison. So I was running all over the border to Toronto and Montreal and Ottawa and Minneapolis where we had a co-contractor in Honeywell. This was my first really big time project.

Unfortunately, the political picture changed as well as the technological picture and although the Canadians had successfully built prototypes of that aircraft and flown it at Mach-II before anybody else in the world had done that with a military aircraft. The program got to be canceled and we were all suddenly unemployed. But fortunately at that time, the US government decided that they were dependent too heavily on Howard Hughes Aircraft

Company, which was developing fire control radar and successfully equipping the aircraft for the Korean War, at that time.

[0:04:00]

The concern was that Howard Hughes who ran the company himself was such a kook that the national defense of the United States should not be dependent on him. And so our General Sarnoff, he was a general by honorary degree, was called into Washington and awarded "for the convenience of the government" that means, no competitive bidding. Take as much money as you need and create a second source for these radar systems to the Howard Hughes organization. And so, we still were in the big time after all.

That total experience resulted in the hiring of hundreds of engineers and technicians, and draftsmen and so forth. And contributed heavily to the development of these suburbs, which were all built up in the, I guess, late 50s early 60s and 70s. This is the time that Cherry Hill evolved from an orchard, a cherry orchard on a hill. And embraced the race track that had newly been built and became a big entertainment center with the Latin Casino and we had a lot of elegant restaurants and the Cherry Hill Inn and so forth that kind of created an identity for this little suburb that was just springing up between two time honored colonial towns, Haddonfield and Moorestown.

[0:06:00]

RCA was very much a part of that.

A number of developments that grew up around, in this area, there were literally thousands of houses built during that time. This was also coincided in 1969 and 1971, there were race riots in Camden that succeeded in pretty demolishing the retail businesses and drove a lot of merchants out of Camden into Cherry Hill and Pennsauken. And so that boosted the suburban development even further. And that's kind of how the picture evolved socially at that time.

[0:06:44]Interviewer: So when you started out at RCA did you have any mentors to kind of show you the ropes?

[0:06:51]G. Alexander: It turned out that I had to be a mentor because I had, I don't know, a few years of background in the design of specifically radar display systems. And my first assignment was as the lead engineer on a group of guys who didn't have the first idea of how to do what they were trying to do.

It was kind of a, I don't know -- yeah, I picked up some mentors along the way. Irving Brown was one that sticks in my mind, he is long regarded. He lived here in Cherry Valley. But he was a good mentor. A few others, as time wen by, but I had a career that was constantly changing. I don't know.

[0:08:00]

Maybe I had a restless attitude or something but I did such a wide range of things. Ranging from those display systems for the radars to some small

projects that we did in the field of medical electronics in kind of a joint venture with the Hawthorne/ LaRoche Pharmaceutical Company. They were looking to get into building electronic equipment to go with their drugs. And they gave us a few assignments to develop a few units. It was fascinating to do something completely different.

And ultimately my final project, program before I retired was developing a system for the postal service. So, for me it was constant variety and a really enjoyable career. And of course I skipped over one major highlight, which was the space program. Working on equipment for the Apollo moon launch. It was a pleasure to go to work. There never seemed to be an unpleasant job.

[0:09:21]Interviewer: That was my next question, what was it like to work for RCA kind of as an overall experience?

[0:09:26]G. Alexander: Fun, when I was still in high school some of the kids that I was friendly with, there was one young lady who was -- she was at the time, a college student but the sister of some of the guys and girls that I was familiar with.

[0:10:00] And she had a summer job at RCA. Back in the days when Camden was where they did the radio, the phonograph business. Her job was to write the blurb, what they called the blurbs, the page that went inside a 12-inch record album that described the artist and their music and so forth, and so on. She wrote a little verse, which went something like "RCA, RCA that's the place to work and play. RCA, RCA that's the place to go and say RCA, RCA". I thought that was kind of cute and it stuck in my head. But, I think that's maybe the right answer to your question.

[0:10:45]Interviewer: Do you have any stories about maybe what happened outside of work or just kind of stories that --

[0:10:48]G. Alexander: No, just the everyday sort of thing, you know the fact that we were in a new community and a school right down the end of the block and a swimming pool that was available to the community. And the fact that things were happening all over the township at that time. It was a great experience.

[0:11:13]Interviewer: So how did RCA kind of affect your life outside of work?

[0:11:19]G. Alexander: Well, it provided much needed income and I don't know, it was my job and a fortunate one because as I said, I enjoyed that job.

[0:11:40]Interviewer: What do you think would be the best thing about working for RCA?

[0:11:43]G. Alexander: What would be the best thing? I think the total experience as I was discussing before of having the opportunity to participate in a lot of nationally significant and perhaps even globally significant developments.

[0:12:00] It was a place where you know there was always something good that was going on that you wanted to be a part of.

[0:12:16]Interviewer: And what do you think the worse thing was about RCA?

[0:12:16]G. Alexander: The worse thing about RCA? Well for the most part, the facility was kind of shabby. Whereas some people worked in lovely, palacial, brand new facilities with marvelous new labs, we were working in this old building with checkerboard linoleum floors and plywood benches, workbenches. But we didn't mind it you know because maybe it was deliberately that way so that our minds were on our work.

[0:13:00]Interviewer: So what would you say that the impact at work was for you, kind of a role?

[0:13:06]G. Alexander: Well the impact on me was that, for the most productive years of my life experience I guess I had the opportunity to be doing what I liked to do. And it provided the wherewithal for me to live the way I liked to live and raise my kids the way I felt they should be raised. And you can interview them later if you want, to find out if I was successful. I may or may not have been.

[0:13:52]Interviewer: Do you think that RCA was one of America's most important company and how do you think that changed?

[0:13:58]G. Alexander: Well, as I said earlier, it was a unique kind of company in that the work we did there was always at the cutting edge of technology and provided many, many breakthroughs. Everything from you know, when you think television that essentially began with RCA. Our worked in the space program. Our contributions to all of the wars that were going on in terms of communications equipment that was built, encryption equipment and things of that nature. Facility were... I've been speaking only for the work that was done in Camden. I haven't mentioned the things that were going on simultaneously at Moorestown, which came to be the provider of the so called, shield of the fleet, the AEGIS system which is the protecting radar that goes on every ship that's been built in the last 20, 30 years I guess.

And of course, more or less the engineers in the home instruments division, got run out of town by us expanding I guess but they wound up in Indianapolis where their facility was located. These were the guys that did the television design. And prior to our expansion in the military equipment field, they were the RCA people.

[0:15:45]Interviewer: So you mentioned how, I mean, how long you were in Camden. How do you think RCA affected both Camden overall?

[0:15:53]G. Alexander: My mind is wandering here because I'm thinking...

[0:16:00] It was one of these examination questions that are given in which they will ask the same question differently a little later than they asked at the

beginning to make sure you're being honest in your answers. Is that the question you just asked me?

[0:16:15]Interviewer: It might have been.

[0:16:20]G. Alexander: Say it again.

[0:16:18]Interviewer: Just if you have any thoughts about how RCA impacted south Jersey overall.

[0:16:24]G. Alexander: All of the above. Yeah, well to be serious for a moment. Yeah, I think RCA happened to be a contributor at a critical time in the development and certainly of Cherry Hill Township, which was nothing before this very same period of time. The mere presence of us as a large group of residents with what would be called upper middle class income, or at least middle class income. So that just you know in terms of dollars and cents, we had an impact.

[0:17:30]Interviewer: When you worked at RCA would you maybe describe it as a family or was it just a job? How would you kind of describe what working at RCA was like?

[0:17:40]G. Alexander: Well, the term RCA family actually existed. Our so-called Lunch Club, which was the name given to the cafeteria in the service restaurant that was built in this part of it, also had a take home shop.

[0:18:00] Kind of like the old Horn and Hardart less work for mother. The RCA family was served that way. The women that were working could take home pre-cooked meals. The other RCA family terminology was from the family store, which was where you could buy television sets and radio and tape-recorders and so forth at a discount. You could always match those discounts almost anywhere for the simple reason that RCA was bound not to undersell their own retail outlet -- not their own, but the retail outlets that you did business with. So they never really offered discounts better than you could get in the discount stores.

However, they did do sometimes, special promotions that were unusual. For example, the so-called anniversary model color television set, which was the first one that was production -- that was suitable for production. The earlier ones were kind of, they drifted and the colors changed and there were all kinds of problems that were developmentally worked out. But when they finally got one they thought could sell and be reliable, the first place they launched was at an attractive price, for this one special model for all the employees to be paid off at some miniscule amount out of your paycheck for a couple of years or something like that. And so, we had one of the first color television sets that was available. But, that was one of the nice features of the RCA family store.

[0:19:48]Interviewer: Do you have any other stories or any other thoughts about what it was like working for RCA. Especially because you were in so many different projects?

[0:20:00]G. Alexander: Oh, I'm sorry. All of the above.

[0:20:21]Interviewer: I guess do you have any final thoughts to sum up how you worked there versus there, versus , down here?

[0:20:29]G. Alexander: Final thought, it was a lot of fun as I have said. And I'd like to get the chance to do it all again.

[0:20:41]Male: You mentioned Apollo, you worked on the Apollo program?

[0:20:43]G. Alexander: Yes.

[0:20:46]Male: And what did you work on?

[0:20:47]G. Alexander: I worked on a gadget that was the range backup unit. When the Apollo -- let me recall the nomenclatures here. We had the lunar excursion module that was the LEM as it was called. That was the thing that landed on the moon, and it got there attached to the command module, which was the larger more powerful device. When it was time to go home, it was a very critical thing to be able to get the LEM back into its mounting bracket on the command module for the trip back down to earth.

The big risk was that they'd crash together instead of coming together gently and latching the way they should.

[0:22:00] The primary means of accurately gauging the distance as the two were coming together, was by radar. A specialized radar that but since everything, there was not a chance of leaving anybody behind on the moon. Everything was backed up, so there had to be a second ranging unit in case the radar failed. And that second ranging unit was derived from the fact that the radio transmissions from the command modules, the words being spoken and sent out by radio to the LEM, and their returns were utilized so that periodically parts of the message would go out and come back immediately being retransmitted by the equipment automatically. And the phase delay that is the technical term, it's actually it amounts to that tiny bit of time delay that it takes for the message that goes out -- that can be calibrated and give you the distance. knowing the speed of light, which is how electronic information travels.

We built a little gadget about the size of a small shoebox, I think. And if you go to the Smithsonian you will find it under the seat of the, guy in the command module that was operating, it was built in there. And happily it never got to be used. That's the nature of that business. We build stuff and you do... make it the very best you can, and in some cases it's just a case.

[0:23:55]Interviewer: Do you have a favorite project to work on?

[0:23:58]G. Alexander: Well my favorite project really was my swan song, more or less. That was the system call ECOM, Electronic Computer Originated Mail. The

postmaster general had come to believe that if the postal service would offer a means of communicating the billing information that people like, well the example at the time was Shell oil, and the credit cards back in -- this was in the late 1970s. Digital communications for business use was just really beginning to evolve. Electronic mail as we know it where people just you know type something in and it automatically gets magically sent to wherever and they get an answer back the same way.

At that time, that kind of electronic mail was you know really just a twinkle in people's eye. And the postal service thought well, gee if we are able to get people's electronic mail and transmit it from one post office to another and then print it out and have the letter carrier bring it to them like their bill for their credit card purchases of gasoline, which was a big thing, it would be a good thing.

And so RCA was awarded a contract to in one year's time, design, build, install equipment that would enable the postal service to accept mail from users via telephone lines or being carried in on computer tapes or whatever. Sort it and then transmit it to all the other cities that it had to go to after it had been sorted electronically in the computer. And then to print it out of those destination cities presorted so that the letter carrier could just pick it up and drop it. Nice idea but you know, nowadays that's ridiculous. But at the time it was something that they thought was worth doing.

They named 25 major post offices around the country and said, if we could do this job in one year, we could have 40 million dollars, which was the amount of the contract. And the small group of us that had been doing some studies for the postal service in advance of that. I wound up being asked to write the program plan for this. Well the whole job was pretty difficult, but the program plan was impossible.

We had a so-called, red team evaluation and proposal by the various managers of different sections that came in to look it over and tell us what they thought of our proposal and they all said it's a loser, it's never going to succeed. But that was 40 million dollars there for the taking so we took it and we went with it, and doggone if we didn't actually do it. We got computers into 25 and in those days we're not talking desktop computers. We're talking four racks of equipment and several great big disk drives that were the size of washing machines. And we had to train like 250 postal workers.

[0:28:00]

In order to do that we built a schoolhouse in the parking lot of RCA. We had a local contractor, well somebody down in Maryland... actually put together a couple of modules and create a little schoolhouse building, a wooden building, and it was comfortable actually, fully furnished.

We got the service, RCA Service Company, who were in the business of training military technicians to maintain the radars that RCA sold. We had them develop a course to teach these people how to do all this mail handling. And then we had to do the software, and we had to create a billing center for them, which was set up in Wilkes-Barré, PA. And we had to get it all into operation and tested out, and of course the postmaster general made good his threat, and announced it at the time he awarded the contract that we were to deliver this in one year's time and he was going to be there and we did it, it worked. Of course was something that technology quickly surpassed. So it disappeared after two years of operation. But, it was my most difficult job. The most difficult challenge that I faced and just I guess because it was successful, I take the most pride in it.

[0:29:37]Interviewer: Anything else you want to say?

[0:29:41]G. Alexander: Just what I said before, I guess. If you find out how I can get a chance to do it all over again for another forty years, I'll do it.

[END OF TRANSCRIPT]