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Interview with Bob Thompson

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[START OF TRANSCRIPT]

[0:00:07] Bob Thompson: I am Bob Thompson and I began in June of 1957. I was a Co-op student from Drexel Institute of Technology and continued all my Co-op assignments in Camden in the, um, what was the...become the communication systems division. And, ah, graduated in '61 and after some assignments in Moorestown and Manhattan and Princeton, I finally got a permanent job in Camden. And then quickly ah, became an engineer in the applied research division in building ten on the eight floor, ah, doing designs for video recorders.

[0:01:06] Male Speaker 2: Okay. So what was your first assignment and how did you feel about it?

[0:01:12] Bob Thompson: Well, ah, my first assignment was to... as a Co-op student was to, ah, help the engineers develop a better solid state digital component called a Flipflop. And in those days, ah, a Flipflop was a number of transistors, capacitors and resistors on a single plugg-in card. And, um, I had to test uh, new type transistors and new type capacitors, and, ah, it was a little bit difficult for a first-year electrical engineering student who hadn't had any electronics background at all. But I was very fortunate to work in the laboratory with some very expert laboratory technicians who, uh, you know picked me up and carried me by my elbows.

[0:02:15] Male Speaker 2: Okay. And then you, uh, came to RCA. What major projects did you work on?

[0:02:21] Bob Thompson: So, ah, I guess one of the most exciting projects was one with the National Security Agency. And, um, we're pledged not to discuss exactly what we were doing with them except that it was well-known that we were building very exotic recording equipment for them in their activities overseas.

[0:02:54] Male Speaker 2: Um, and then from there, where did you go?

[0:02:57] Bob Thompson: Well, ah, some of the more interesting assignments involved a video recording for the broadcast television industry. At that time almost every TV station and every facility that made programs for TV used an RCA television camera, especially after colored television became very popular. Uh, but there was always a host of video recording equipment to go with the TV cameras, and that was a split between the Ampex Corporation, a company that invented video recording and RCA, the company who licensed Ampex for all the television

circuits that were in the video recorders. And in an essence, we split the market with Ampex corporation. So there was for every time a network or a TV station wanted to buy recording equipment, there'd be a competition, and that was where the fun began.

Then what that led to was some exciting new technology in video recording and the creation of standards for the videotapes so that, um, the company that made the program and put it on tape could send it to a studio and the studio had a compatible video recorder to play it back, and, ah, I became involved in the standards committees. And this was a combination of the manufacturers RCA and Ampex and others and Sony, and the networks CBS, NBC, ABC, which were the only networks at the time.

[0:05:04]

And, ah, that led to some very interesting political, uh, maneuvering. One example is, um, when high definition was first exhibited in Japan, it became all the rage. And the standards committee for determining the number of lines per picture height and the number of picture elements per picture width and the frame rates, uh, were all very important issues that the Japanese wanted to solidify right around their development. But it didn't make sense from the point of view of users. So it became important for committee members like myself to help, uh, guide the standard so that it would be maximally useful for the users, but also not such a burden that the manufacturers would have to redo everything they had done up to that time.

And we had just come out with a new camera that, ah, we were trying to sell all around the world, and the head guy from the company in Japan called NHK, the, ah, television big deal in Japan said, "We will buy your first production run of cameras if you convince your standards committee to use our format exactly as it is right now." And of course we couldn't do that but then I thought it was a very interesting ploy on their part.

[0:07:07] Male Speaker 2:

Now, you, ah, donated a color TV camera to us. Um, they, ah, charge coupled device camera, um, what was that about?

[0:07:19] Bob Thompson:

Well, ah, we, we had pioneered the use of computer-controlled cameras that use conventional tube pickups as the sensitive device that converts images into electronics. Um, and then one of the engineers said, "You know, that...those tubes require a lot of circuitry for high voltage and, um, control and complex computer, we could actually improve the imagery if we used a solid state device to replace the tubes." So, ah, based on a lot of work done at the Sarnoff Princeton Laboratories, they decided that charge coupled devices would be very appropriate to replace the tubes in a

television camera, and they developed a very impressive model at Princeton and then the engineers in Camden took that and actually made it into a camera, and took a model to the World Series and showed off one of the, ah, big advantage of the solid-state camera.

[0:08:53]

And that was...you could see the scenes of the pitcher's pitch as it came toward home play. And, ah, once that was shown at the World Series, almost every TV camera customer, ah, around the United States called in and wanted to buy one right away. Of course, they weren't available for a number of years. But, um, as a result of that development, we did have a production run of those solid-state cameras. And in addition, we won an Emmy Award, a, ah, Emmy Award for engineering achievement, and that went right on the tail of a previous Emmy Award we had won for the first camera recorder. We made the tube type camera and a small video recorder into a single package that you could carry around on your shoulder including a battery.

[0:09:58] Male Speaker 2:

So as far as your work at RCA, how did your career progress? How was the experience?

[0:10:08] Bob Thompson:

Well, um, when I graduated, ah, I became one of several thousand engineers that were here in Camden. I remember, ah, our first day as a Co-op student in the orientation. The, ah, the head person said, "You're joining 16,000 people here in Camden." And that wasn't including the several thousand that were in Moorestown at that time. So, ah, being one of the several thousand engineers you always wondered what was going to happen. And, um, the, ah, the whole idea was to, ah, get your project done in a timely manner and get the circuit that you were working on as an electrical engineer, ah, to be completed in time to meet the program schedule. And then, another point was to work with the mechanical engineers who had a difficult job of, ah, putting these circuits on to circuit boards and into cabinets, ah, to make the project remain on schedule.

[0:11:40] Male Speaker 2:

Um, talk a little bit about your co-workers. How was it?

[0:11:43] Bob Thompson:

Well, that was a very interesting thing. Ah, growing up in South Jersey, the only people I ever knew were people from the local area. But as soon as I became an engineer here, ah, the, uh, engineers around you were from New York State, Wisconsin, Virginia and, ah, it was, ah, exciting to meet people that you didn't grow up with. The thing I remember most about...most of these new engineers I met was how smart they were. The, um, the portion of the company called College Relations made it a point to try and hire number one or number two in their graduating class of electrical engineers or

mechanical engineers, which were mainly the type of engineers we worked with on our projects.

[0:12:55] Male Speaker 2: What about your supervisors?

[0:12:57] Bob Thompson: Well, ah, the one good thing that, ah, where we were very fortunate in the applied research group was that, ah, the supervisors were all comparatively young. And, ah, as soon as they reached 40, someone from one of the operating divisions would pluck them out into a bigger assignment either in Camden or Moorestown or maybe Indianapolis or Manhattan for a bigger job, and that always, ah, left room for a younger guy to become a supervisor and then the young supervisor to become a manager. So, ah, as a result, um, you got to rub shoulders with these brilliant engineers who were always working their way up, ah...You work with them two or three years and, boom, they'd get a promotion to another business.

[0:14:07] Male Speaker 2: It sounds like there was a lot of hiring from within as far as the promotions spot.

[0:14:12] Bob Thompson: Oh, definitely. It, it was very unusual to see an assignment of a manager or a vice president that came from outside the company. Ah, I think the priority in the...We called it the personnel department at that time. I guess, ah, it might be called human resources by now. Ah, but personnel seemed to guide the presidents to hire from within.

[0:14:49] Male Speaker 2: Um, in several of the interviews, the term "the RCA family" has come up, what does that mean to you?

[0:14:56] Bob Thompson: Yeah, that, that, ah, that term "the RCA family" has great meaning because even though it was used by the personnel department and, um, and it was a talking point, you really had the impression that it was true, that they considered you, ah, more than just an employee. And, um, even in meetings with your supervisor and in larger meetings where his supervisor would be present, ah, you had this feeling of a true family. Um, I remember, ah, once a week the head of applied research who was three levels up would have a meeting with all the engineers and technicians and he would give a little speech and he would give out a piggy bank to each of the new fathers that were in the room. And, ah, I think that was a, ah, a good example of how everybody bought into the family concept.

[0:16:22] Male Speaker 2: What about socializing outside of work?

[0:16:26] Bob Thompson: Well, ah, one nice thing was, ah, every Friday we would get together and drive a couple of blocks down into South Camden and go to an Italian restaurant. And we always had an hour, a one hour lunch

period, and on Fridays we might even extend it to one and a half hours. And, ah, there would always be a group of 12, 16, 20 people sitting around a big table at the Italian restaurant in South Camden. Um, and then, ah, more than once a month we would get together after work. Um, during the, um, layoff times, ah, when engineers would get better jobs elsewhere because they were on layoff, we would have these, ah, great going away parties for them, ah, and, um, they were always fun.

[0:17:34] Male Speaker 2: Well, we've also heard about, um, Christmas Eve and Christmas parties and things like that. Do you have any...

[0:17:40] Bob Thompson: Well, ah, I was, ah, single for about 10 years after I started here. So those Christmas parties were always a joy for me because I was not obliged to go home, ah, right after work. And, ah, there was, ah, always quite a bit of celebrating going on in the Christmas parties.

[0:18:09] Male Speaker 2: We've also had some suggestion that RCA had a significant influence on South Jersey. Do you have any, any input there?

[0:18:22] Bob Thompson: The one thing I remember is, ah, the, the influence on Camden, ah... On a Friday night, ah, which was pay day for many of the employees, it was, uh, difficult to walk along the sidewalk on, uh, Broadway or Federal Street because, ah, there were crowds out shopping, ah, in the heart of Camden. And, um, this extended for blocks and blocks and blocks, and I attributed...well, not only to RCA but to the other businesses in the city that included Campbell's Soup.

[0:19:11] Male Speaker 2: Um, how do you, uh, how would you rate RCA among the industries?

[0:19:21] Bob Thompson: Well, uh, since it's the only place I ever worked, it's hard to compare that, however, in comparing notes with customers and partners, ah... For example, we had a very important customer, the Lockheed Missile and Space Company in Sunnyvale, California. And, ah, we work closely with a number of their employees and we learned that, um, we were a lot better off, ah, than the average Lockheed employee. Um, one of the things, of course, was the, ah, the family... um, and the other was the way your, um, supervisor handled you, ah, which was, ah, more paternal than what you would learn in a business.

[0:20:27] Male Speaker 2: What would you say was the best part working for RCA?

[0:20:33] Bob Thompson: The money. **[laughter]** Uh, RCA was not shy about, ah, giving you a raise if, ah, you warranted it. And, ah, when I became a supervisor, uh, I never felt constrained about giving any of my engineers a raise if everyone felt they deserved it.

[0:21:02] Male Speaker 2: What was the worst thing about working for RCA?

[0:21:05] Bob Thompson: Well, of course, the worst was, um, when large government contracts would come to an end and there had to be layoffs. And you had to spend hours and hours and hours in meetings making determinations of which engineers to keep and which engineers to let go.

[0:21:32] Male Speaker 2: So how would you sum up your time at RCA?

[0:21:37] Bob Thompson: I felt it was terrific. The, ah, one of the, ah, best things that ever happened to me was finally our, ah, television equipment business had to close, and, ah, the president of our company, Joe Volpe, ah, instead of looking for a new job, he stayed with the group and made sure every single person in his huge business had a job offer somewhere whether it was inside RCA or from another company, and he never gave up until each person had a job.

[0:22:29] Male Speaker 2: That says a lot. Any stories you remember or anything that, uh, particularly stick out from...from your experience?

[0:22:37] Bob Thompson: Wow. **[laughter]** One of my favorite stories involves a \$2 billion competition for five warships for the country of Norway and, uh, we had this, ah, brilliant engineer who would travel with us to Norway and, uh, the Norwegians were extremely technically oriented but they also had a budget. And, ah, the Norwegian engineers would ask these very, very difficult technical questions, and, ah, so, um, one thing I made sure I did as the leader of the team, uh, trying to win this competition was to make sure I had a, uh, a fairly smart engineer with me to handle the difficult questions.

[0:23:55] And, we came down to the final meeting where the Norwegians were going to decide between the ship builder and the combat system supplier, the ship builder being the Spanish shipyard Bathan and RCA the supplier of Aegis naval combat systems and a uh, German shipbuilder and, ah, the combat system supplier for that German shipbuilder and, ah...Our chief engineer, Lenny Woyton, got up in front of the Norwegians and, ah, he was trying to paint this, ah, picture of how, ah, we have all these exotic brand new computer programs and state of the art computers, and, that ah, presentation went over very well. Then we went back at night and we had to continue the presentation the next day. We got a phone call from home that said, ah, that US Navy will not let us, uh, use those exotic computers or programs for the Norwegians. They have to use a, ah, much older computer called ANUYK 43.

[0:25:39]

So the next morning, Lenny got up, he went in front of the group and he told them how he had this, uh, good idea overnight to save them some money and use this, uh, very tried and true ANUYK 43 computer to house the very mature computer programs that were in use all over the world. And he never got a question from the Norwegian engineers. They bought it and they gave us this \$2 billion contract.

[0:26:17] Male Speaker 2:

That's classic. I love it. Alright, well that's good. Um, anything else that, ah, that I haven't asked or that you have thought of that you want to add to the...

[0:26:29] Bob Thompson:

The one..The one thing that, ah, I recall was, in the early days, there was so much activity in Camden that it was very hard to drive to work. The roads were clogged. Of course, everybody either came to work at 7:00, 7:30 or 8 o'clock. And, ah, a lot of people had bought homes up in Willingboro, ah, it might have been even called Levittown at that time, and the roads were so clogged that somebody bought a boat and he would take people from the dock here up to Willingboro on the Delaware River in his boat to avoid the traffic jams coming back and forth.

[END OF TRANSCRIPT]