



Interview with Richard Frenkiel

Under the Auspices of the
Monmouth County Library Headquarters
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Ms. Paul: When and how did you come to Monmouth County?

Mr. Frenkiel: I was born in Brooklyn, Brighton Beach. I ended up in Monmouth County because I took a job with Bell Labs.

Ms. Paul: When was that?

Mr. Frenkiel: 1963.

Ms. Paul: Was your family in Brooklyn?



**Richard Frenkiel,
present day**



Mr. Frenkiel: My mother and father and two sisters, and we didn't have a whole lot of relatives. My mother had a couple of brothers and sisters living in New York. She was from a big family with thirteen kids of whom about half lived. My father immigrated to the United States by himself, so we had few relatives from my father's side.

Ms. Paul: Where did he come from?

Mr. Frenkiel: Poland. Both my mother's family and father came from Poland.

Ms. Paul: Where did you go to school?

Dick Frenkiel and his daughter

Mr. Frenkiel: In the local public school and then to the Brooklyn Technical High School. Then I went to Tufts University. It is not particularly known as an engineering school.

Ms. Paul: Why did you choose that school?

Mr. Frenkiel: My sister had gone there.

Ms. Paul: And she liked it?

Mr. Frenkiel: She was still there. It makes you feel more comfortable, I guess, at a place knowing somebody is there. So I went. I graduated in 1963 and took a job with Bell Labs in Holmdel.

Ms. Paul: And where did you live next?

Mr. Frenkiel: I got married that December. My wife was a student at Tufts, also. She got a job in East Brunswick High School, teaching Latin, and I got a job at Bell Labs. I was also going to Rutgers for my masters at the time. We lived in East Brunswick because it was convenient for her. It was also midway between Rutgers and Bell Labs. We lived in an apartment there for three years and then moved to Manalapan. In a Hovnanian house, which cost \$22,450, if I remember correctly.

Ms. Paul: There were a lot of other people doing the same thing at the same time.

Mr. Frenkiel: Oh, yes. This was a strange area in that time. Hovnanian was really the first big development in Manalapan. There was also Levitt's US Homes. Between the two of them, though, there were maybe 1000 homes, and the rest was all farmland. We used to go to Freehold to shop. The nearest supermarket was FoodTown on Route 9 and Schank Road.

Ms. Paul: What was your job in Bell Labs?

Mr. Frenkiel: Well, that was kind of odd. I was a mechanical engineer and Bell Labs is a pretty electronic place. They use mechanical engineers, but not in a fundamental way. I think I mostly took the job because they have the Masters Degree Program. I figured I couldn't lose; I'd come out with a degree and go somewhere else if I didn't like it. They had me designing what were called heavy duty announcement machines. These were like big drums. Imagine a drum about two feet in diameter with fifty to one hundred audio tracks on it, each one with a recording head riding on it. And they would have it where one track would say, "At the tone the time will be." Another track would say, "One" or "Two," and they would splice together those messages. In the pre-computer days, that's how you made a message that told you the time of day or the number you have called. So they would program it to make a message out of these ninety-six options on the tracks. And that is what I did for two years, maybe a little more. And one day they came in and said, "We need some people to work on this idea called cellular." This was in 1966. I worked on that for sixteen years. In the beginning, I knew nothing about what I was doing. I mean, as a mechanical engineer, I wasn't particularly adept in radio. But they made me into a systems engineer, which means somebody who worries about the whole system and how things go together, and what does the handset have to be doing, and what does the base station have to do, what does the switch have to do? And I liked it a lot. That was a good project.

Ms. Paul: Well, it had a profound effect.

Mr. Frenkiel: Yes. And we kind of knew that. We didn't know how much. For example, we were hoping to have a million customers by 1990 perhaps. And we exceeded that by a lot. I think we knew it was a big deal because people wanted radio-telephones in their cars even then. It was like a luxury item in those days. So we knew a lot of people wanted it. There was a waiting list with 50,000 people on it to get service.

Ms. Paul: As soon as you invented it?

Mr. Frenkiel: Before. There was a big pent up demand. And we kind of knew that the radios would get smaller. But when we ran our first trials, the radio weighed about thirty pounds, I think. It went in the trunk of your car and then there was a telephone hanging on the dashboard. And it took about, oh, I don't know, maybe five years for it to get to be something you could carry around in your hand, which was then about the size of a brick. And I think it weighed two pounds. Nowadays, it weighs three or four ounces and rattles around in your shirt pocket. And that's what made all the difference. We saw it as the car telephone, but what it really turned out to be was the pocket telephone. And that is why there are 200 million people using them in the world today.

Ms. Paul: You received a Presidential Award as one of the inventors of this?

Mr. Frenkiel: Yes. Two of us got it.

Ms. Paul: Who is the other person?

Mr. Frenkiel: A guy named Joel Engel, who I worked with in the earliest days. There were hundreds of people working on this. It is hard for any one person to seem like he is responsible for anything. But, since I have admitted that, they wanted to give somebody an award for it, and I am pleased that it was us. But as I said, hundreds of people were working on it in my company alone.



*To Richard Frenkiel
Best Wishes* *Bill Clinton*

Dick Frenkiel with President Clinton

Ms. Paul: Let's talk about Bell Labs for a minute. Bell Labs at that point was part of AT&T, right?

Mr. Frenkiel: Yes. In fact it was called the Bell System at that point. There were three phases. When I started working there, it was the Bell System, and that meant New Jersey Bell, New York, New England, Chesapeake and Potomac right across to the Pacific. There were a whole bunch of Operating Companies, and then there was AT&T, which was Headquarters. There was Western Electric, which was manufacturing. There was Bell Labs, which designed stuff. The breakup of the Bell System broke off the service from AT&T, Western and Bell Labs, where the telephone companies went their own way. That happened right when cellular happened. We argued with the FCC for fifteen years that they should give these channels to the Bell System, because we could build the best system nationwide. And they finally agreed to give us half the spectrum, finally; and this was in about 1981. And then we were planning, and building, and getting started. A year later, they announced they were breaking up the Bell System. And the way it went, AT&T did not get the system, it went to a lot of telephone companies. So it was kind of a bittersweet moment. We had worked on this for so many years, and it was being built, but the company that we were still in, which was AT&T, didn't get the service. They have it now because they bought it back. We had to pay twelve billion dollars to get back what we had invented in the first place.

Ms. Paul: I was walking on the Boardwalk with some people this weekend, and somehow the subject came up again about how it was that we had the phone system that the entire world envied, and then it was dismantled. And people are still arguing about whether or not that was a good thing, whether it should or shouldn't have been done.

Mr. Frenkiel: Look at the United States economy, and at those things that AT&T used to have as a monopoly. If we hadn't broken up the Bell System, the Bell System would be a big part of the whole US economy. So another way to look at it is that it had to happen. It released a lot of energy. Monopolies tend to be stodgy; AT&T could not have done the Internet. AT&T would have done it a different way. In fact, they tried to. But they thought in terms of a centralized organization and money didn't matter so much, because they were a monopoly. So I really think that it has been for the best. It has gotten a lot more competitive and a lot cheaper. I mean, look at long distance rates.

Ms. Paul: AT&T certainly has had an enormous impact on Monmouth County. It is a huge employer in Monmouth County and a preferential kind of employer because it is so white collar for the most part. It has had an enormous impact on a lot of the communities, certainly Freehold, Holmdel. Lots of people have worked for that company.

Mr. Frenkiel: It's been a good employer for the people, but less so today, I think. When it was a monopoly, it could afford to be more generous. It was just an easier place to work. No place is easy now. If you count all the pieces, New Jersey Bell, Bell Atlantic, and AT&T, and research, it is bigger than ever. And it is still a good place to work, but probably not as good as it once was.

Ms. Paul: My stepdaughter works for AT&T. She actually just finished working six years there and is taking a leave to go get her Ph.D. in Statistics. But she has found it a difficult place in a lot of ways because the structure that used to be so mentoring, with employee development, is largely gone. It is a more difficult place, but still, an interesting, productive part of the economy.

Mr. Frenkiel: Its big challenge today, I think, is behaving like the small, fast, entrepreneurial companies. These days, more and more often both AT&T and Lucent are buying the little companies that did the things they wish they had done. It is hard to develop the right product. AT&T is a telephone company. They are not a computer company. And with the switching of everything to Internet, they no longer automatically have the technology that no one else has. Now they are one of many companies. And a lot of companies are developing great new products. AT&T and Lucent are buying most of them at a very high price, which is not so good for people working at AT&T and Lucent. My son worked there. He had a couple of projects in a row that he was working on when suddenly they bought a company that made that product and they just disbanded a team. They gave him something else to do eventually, but it is discouraging.

Ms. Paul: How long did you work for Bell Labs/AT&T?

Mr. Frenkiel: Thirty years. I retired in December of 1993. After thirty years you get vested in a pension plan, and can immediately take a pension.

Ms. Paul: And what have you been doing since then?

Mr. Frenkiel: Well, my son was newly married, and he and his wife had a child. They were buying a new house which wasn't ready yet, so they moved in with us. And it was kind of funny. I mean, everyone was going to work or school; my wife, my son, and my son's wife were all going to work. Even the baby went to day care. So every morning everyone disappeared, and I was there. I cleaned the house, I shopped, cooked, and I found it very satisfying, after thirty years of pressure to perform, to be doing things that were very controllable. I

don't know that I would have wanted to do that for the rest of my life. But for a year, I enjoyed it a lot. I did it for a year and two weeks, I think. And then I went to Rutgers. An old friend of mine was in charge of the research lab there and he asked me to join him. So I went there and started working about half time. A few consulting gigs would come in now and then for people like me. I had a very interesting job consulting in Thailand a couple of times with a friend of mine. The thing about that, I felt, was I had the chance to do what I never would have done if I had stayed in Bell Labs.



Dick Frenkiel (left) with his son and grandson

Ms. Paul: I know you have been involved in Manalapan politics. When did you start that part of your life and what did you get involved in?

Mr. Frenkiel: That was funny. I'd never liked politics much. It was not the sort of thing I would have ever said that I'd be involved in. After I retired, some people I knew who were in township politics came to me and asked me to be on the Zoning Board. And I said yes, that is something I ought to do. If you are asked to do something like that it is sort of public service to your town. And it turned out to be very interesting. I spent a year on the Planning Board, during which time we had this very controversial water tower proposal for which the retirement community came out in force. It was an almost frightening experience. The first day of the hearing they filled the room so full that we had to close the meeting down. Actually, when I came into the meeting, people from Covered Bridge were sitting in our seat on the dais. So we cancelled the meeting. That proposal turned into a year of hearings. It was an interesting experience, because that is political. When you get hundreds of people excited about something, it is going to be primarily a legal issue whether they should get this or not, but it is not purely legal. It can't be. So you see democracy at work when people show up. Finally, after about a year, one of the members of the Township Committee died unexpectedly and they asked me to fill that seat. And it was very strange. I said, "Why I would want to do that?" But I thought about it some more and I decided it might be interesting. That was in April. I had to run in September to fill out the last year of that job. And then I ran again the next year and won. It turned out to

be about five years. I ended being Mayor my last year, which was fascinating. I am really glad I did it, because it was an experience to serve, particularly as the mayor. There is a lot happening. You learn a lot about what is going on in town. To me it was service. I mean, they don't pay you much. They pay you \$5,000 or something. But it is not about money. What was unusual about it was I didn't have to work very hard for it. I mean, some people come and say, "Boy, I really want to get that office and I'll raise money and campaign and go door to door." I was appointed by what was then a popular committee, so getting elected wasn't a problem. I was in the right party. In my fifth year, there was a shift and they started to elect the other party. And in my last year serving as mayor, we had a split committee, with two Democrats and two Republicans. I thought it became much more political. Instead of just thinking about what is the right way to handle some issue you ended up thinking about what the other party was going to do, and that makes it harder and much less pleasant. So when I lost last year, it was enough. Serving on a local township committee is a great experience, except that the town has grown. I think when I moved in there were probably 8,000 people in the town. Now there are 35,000. People who no longer know their town are living in town. You can't blame them because they commute. They spend at least four hours a day on buses and trains. They come home tired. They are not interested in going to town meetings. They barely get themselves going for the sports stuff for their kids. So they are not interested in government locally. In the election that I lost last year, less than 25% of the people voted. That is disappointing because you end up thinking that no one cares. It is not whether you get elected or not. It is that people did not care enough to vote, and that is disappointing. I think that is a trend in this suburban town. People think of their town as a place to sleep or something. They are very interested in the schools because their kids are in school, but very uninterested in what is going on locally.

Ms. Paul: Unless something happens that threatens them in some way, right?

Mr. Frenkiel: Yes, and that would usually be the schools. I guess two things happened in the schools while I was the mayor. First they had a grading policy debate, and then about possible overcrowding in the high schools. That got a lot of people upset. A lot of people felt that the township committee should take a proactive role, but I didn't. I felt that since the school boards are elected by the people, they should be allowed to manage their own business. And then, of course, the development of the town gets to be an issue. People see the farms disappearing and developments coming in and they don't like that. We always say that each person who moves into Manalapan wants to pull up the bridge after they move in. They want to be the last.

Ms. Paul: Does Manalapan have an active Green Acres Program? That seems to be a trend to try to save some of the open land.

Mr. Frenkiel: We worked extremely hard on that the last year I was in office. That was what I wanted to do if I had stayed in office. We developed a major plan

about what was left, how much we could save, saving farms, creating parks and greenways, and what to do with the wetlands. We came up with an extensive proposal and put a two cent tax on the ballot for that and people passed it. But they didn't elect us. So far this year, it has been six months now that I have been out. I don't think they have done anything. They are not collecting the tax that we passed and the new people in office are much more concerned about tax reduction than about saving land, in my view. So I am not holding my breath. But that goes beyond politics. There is not much land left.

Ms. Paul: So where are you going to live in retirement?

Mr. Frenkiel: Here in Manalapan. We bought a beach house on Long Beach Island, and that is a nice combination. It is about an hour-and-a-half to the beach. I think that is a very nice way to retire, where you have two places. When you are home a lot, you get tired of any place. It doesn't matter how luxurious it is. It is just nice when we get cabin fever to go to a different place for a few days. But we love the beach, and we love Long Beach Island. We have been vacationing there for twenty-five years. So finally three years ago we bought a place. When you retire, you can really appreciate a place like that. When I was working I would not have bought it. It is too hard when you are working five days a week to enjoy it: those days, you spent your weekends catching up on the things you didn't do, and so I think two houses would be a chore until you retire.

Ms. Paul: Your wife Maizie retired from her job as the school librarian?

Mr. Frenkiel: Yes, it has been really nice. Our beach house has turned out to be a winter house as much as a summer house for us. It is a great thing to do in the middle of winter. We spent Christmas week there last year.

Ms. Paul: Are there any other organizations or activities that you have been involved in that have meant a lot to you? I know Maizie is very active in the American Association of University Women.

Mr. Frenkiel: Yes, she has been the family volunteer. In the thirty years that we lived here and I was working, I was really only interested in work. I mean, except for going on vacation once in a while. I loved my work, so I didn't pay too much attention to the town and she always volunteered. She was a part of the Soccer Club, the Literacy Program, the AAUW, the Historical Society, and she was a part-time teacher. She grew up in a small town, so she had this sense of belonging, or wanting to belong in the town. I grew up in New York, and I couldn't



**Maizie and Dick
Frenkiel**

imagine really being involved in politics, because in New York it is a big deal. So I think it was Maizie as much as anything that got me to join when I finally went on the Zoning Board and Township Committee. I felt like she had been volunteering all those years, and it turned out to be worthwhile personally for me to do it. I didn't feel like anybody owed me anything for it, but I probably wouldn't have gotten involved if she were not. In fact, people wouldn't have known me if she were not involved.

Ms. Paul: Tell me about your trip to the White House.

Mr. Frenkiel: Well, first we had a whole set up, and it was a big deal. They make you tell them who might be coming from your whole party, and they have to check it off to make sure there are no terrorists or something. The whole thing was set up, and then the President was called away. I think that was when he went to Israel on one of his peace missions. So we canceled. We set it up again two months later.

Ms. Paul: And when was this?

Mr. Frenkiel: 1995, I think. It was quite a nice affair. It made you feel good. We went to this old auditorium on the mall in Washington. It was presided over by the Vice- President. The President was in a meeting with someone else. We went up and got all the awards.

Ms. Paul: How many people got presidential awards then?

Mr. Frenkiel: Ten or twelve maybe. They were split between science and engineering, and maybe half a dozen of each. What was really neat was when, after the ceremony, they took us to the White House and we went to the Oval Office and we met the President, shook hands, and took pictures. Being in the Oval Office is quite neat. I remember he had this big old desk sitting in front of the windows of the Oval Office. It is not a really nice desk. It is just a big, old, wooden desk. It must have some personal significance. I was standing next to it when they were setting up to take pictures, and I noticed laying on his desk in the pile to be read was a report on a book called *The Bell Curve*. It was a very political thing at the moment. And he had this position paper that he must have been reading when we came in. But it was funny to see working materials on the President's desk. It was quite a mess, too. The desktop was messy, but he had this big pile of documents on the floor, and just a mess of paperwork, like everyone else has. But the whole thing was nice. They had a big banquet at a place called The Museum of Buildings. I don't know what it is. We went into this thing. It is very old and we were in a very large hall. If I remember, the whole building was a very large hall. All open, open quite high, and I could see that the walls of the room were different styles. So I thought maybe they had put together this room out of different architectural styles. But other than that I have no idea as to what the exhibit was.

Ms. Paul: Yes, I think there are models of things there. Well, thank you very much for doing this.

Mr. Frenkiel: You're welcome. We finally got here. What has it been, a year? Six months at least.

Ms. Paul: We finally got to do it, but thanks a lot Dick.

Mr. Frenkiel: You're welcome.