

SAMUEL KALOW

An Interview Conducted by

David Morton

IEEE History Center

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and

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INTERVIEW: Sam Kalow #418
INTERVIEWER: David Morton:
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Morton: Why don't we start with your full name, where you were born and some of your background.

Kalow: My name is Samuel Jay Kalow and I live in Wyckoff, New Jersey now. I was born January 13th, 1930. I graduated from the University of Michigan in 1951 with a degree in mathematics. While I was at Michigan I met my current wife, Joan Peirce Kalow in September of 1950. I first met my father-in-law, Charles P. Peirce, in the spring of 1951 when my then future wife got sick and had to go to the University of Michigan Health Center. I think he wanted to check me out because we were planning to get engaged at that time. My father-in-law also came to the University of Michigan to attend my graduation. Then I drove him and his family and my future wife back to Chicago. On that trip he took me to see his factory, the Peirce Wire Recording Corporation, which was located in a small building in Evanston above the Tinker Toy factory. After we got married on December 29, 1951 I went to work in the wallpaper business. The Korean War was on then, and in order to get a deferment from the Army I worked on my master's in business administration at Columbia University. My father-in-law asked me every year to join his little dictating machine company and every year I said, "No, the wallpaper business is too good." However in 1955 after two children and my wife pregnant with a third and retail store hours in the wallpaper business I accepted his invitation and joined Peirce Dictation Systems on January

1st, 1956. My father-in-law said that only had two daughters, my wife and her younger sister Ellen, and therefore he thought it would be appropriate if I worked for him with the plan that I would eventually take over the business.

However after working together a couple of months he felt that we weren't really that compatible and said that he was going to try to sell his business. I felt that that would be appropriate, because if you work for your father or your father-in-law and don't get along in a business perspective that can really destroy the family life. I didn't think that was necessary. He negotiated first with Minnesota Mining and Manufacturing Company, who did copy the Peirce magnetic belt machine and came out with a machine, called The Scotch. It was never sold in the market. He negotiated with Bell & Howell and with Motorola and eventually negotiated with IBM. IBM bought the Peirce patents and developments in July of '59. Then I joined IBM in January of '60. IBM, using the Peirce magnetic belt technology, announced a line of office equipment on October 17th, 1960. Though Peirce was the smallest company in the American dictating machine business, IBM with the magnetic belt technology sold more than Dictaphone in '65 and became number one in the industry. By 1969 IBM sold twice as much as Dictaphone. Then I changed jobs. IBM's dictating machine business declined and eventually IBM got out of the dictating machine business. However it was a good run while we had it.

Morton: Let's back up a little bit. What do you know about how Peirce's business got started?

Kalow: Charles Peirce was born in a log cabin in Red Deer, Alberta, Canada in 1893. He died on February 17th, 1996 at the age of 103. He told me the story over many

lunches we had together in the four years I worked for him and many family occasions. The Indians came into his family's cabin one day and the fire got too hot and the cabin burned down. Then his family moved to Michigan. He was a typical farm boy in those years. He didn't even get an eighth grade education, but he didn't want to be on the farm. He had relatives in Chicago and he went there to be a tailor. That didn't work out and he got a job at the United Cigar store. The people who used to come in for cigars in the 1910s and 1920s were prosperous business people in Chicago. Charles Peirce decided to emulate these people. Along the way - and I never really got the details of it - he met and came to work for Reuben Donnelley of R.H. Donnelley & Company. They were big printers in Chicago. Then there was a big labor problem in Chicago that was settled by Judge Kennesaw Mountain Landis. Those familiar with baseball might have heard of Kennesaw Mountain Landis as the Baseball Commissioner during the 1930s. The Landis Award Commission was set up in Chicago by people like Swift of Swift & Company, Armour of Armour & Company and Donnelley of Donnelley & Company. These people ran the Landis Award Commission. They gave an award every year. The interpretation I got from my father-in-law was that it was given to the company that did the most to keep out unions. Charles Peirce became the only paid member of this organization. He was the executive secretary and he set up the meetings and ran the organization. He also did the fundraising and that sort of thing. Charles Peirce did very well during the twenties. He got married in 1926 to Lucille Kahnweiler. He told me as I was planning to marry his daughter that I was much too young to marry because he didn't get married until he was in his thirties

and had fifty thousand dollars in stocks. He lost it all in the stock market crash, but nevertheless he felt that one ought to have some wealth before getting married. In 1935 Senator Wagner of New York passed the Wagner Labor Act. That Act made it illegal to have an organization that was against unions. Therefore the Landis Award Committee had to disband itself. Charles Peirce went to these people for whom he had worked and with whom he had worked and asked their advice on what business he should pursue. These men suggested the electronics business. Peirce had saved his money. My wife tells me they were very poor in those days. They had to buy their clothes in the basement in Goldblatt's Department Store. Nevertheless, he looked around for about two years and in 1938 he bought a very small company called Radiotechnic Laboratories. Radiotechnic Laboratories did eighteen thousand dollars of gross business in 1938 and he bought the company for five thousand dollars. They had three employees and they made tube testers. And he made the tube testers under the names of General Electric, Westinghouse and Radiotechnic and several other companies that bought these tube testers that he manufactured. Business was very bad. He would get in his car with the tube tester in the trunk and drive to all the county seats in places like Michigan and Minnesota. I asked him, "Why did you go to the county seat?" He said, "Those were the only towns big enough to have a radio repair store." He would go to these places and try and sell these tube testers. Because he subcontracted to General Electric he was on their bidders list. He would try to get subcontracts. One day a subcontract came along for a cable assembly where several cables are yoked together. He realized that unless he got

some business he would be forced to go out of business, so he went to the place where people submit the bids and talked to various people and found that some were bidding \$8.25 and some were bidding \$8.10. His engineer and head of manufacturing, Emil Steinbach who later worked for IBM, told him it would cost a minimum of \$7.25 to make. To keep the business going he bid \$7.25. He got the contract. Then Emil found a way to make it for about \$3.50. Fifty thousand of these things had to be made, so Peirce had capital for the first time. He had money. Unlike a lot of other people, he didn't spend it. Up until this time, in 1940, dictation equipment were wax cylinder machines. If one tried to use them in a moving platform like an airplane or a ship the meter would fly off. The Navy contracted with the Gray Company to develop what became the Gray Audograph where they had a disc where the needle was fixed in place and could operate in a ship at sea. However the Army Air Force wanted a wire recorder. This is because during the First World War airplane pilots flying over France that saw let's say a bridge that was still standing had a kneepad and wrote that down on the kneepad. Then when they landed they would report about the bridge. However in World War II the planes were flying too fast to use a kneepad. They could say it over the radio, but most of the time they were told to keep radio silence. Therefore they wanted a way to record such reports while still maintaining radio silence. Charles Peirce found out that General Electric got a prime contract to develop an airborne voice wire recorder. Peirce knew of a graduate student, Marvin Camras, who had developed and patented a wire recorder working on his Ph.D. at the Illinois Institute of Technology. He made an arrangement with Marvin Camras where he

would pay Camras something like twenty-five thousand dollars a year - a lot of money in 1940 - to have Camras work with him. Then he submitted a contract to be a subcontractor under General Electric. They came to him and found out that he sewed up the only guy who could make a wire recorder, so they gave him the subcontract and with Camras' assistance he developed and manufactured airborne voice wire recorders for the government. A second contact came through where he bid as prime contractor. The government purchasing people came to Peirce's little factory above the Tinker Toy factory in Evanston and said, "We can't make you the prime contractor. You've got this tiny little shop here." He said, "You know I have been making these for General Electric and I have been the only one making them. Why can't you?" They said, "If you had failed, General Electric stood behind you, so we weren't worried about it. However if you are the prime contractor it's a different story." He asked them, "If I get somebody to stand behind me would you give me the prime contract?" They said, "It depends on who you get." One of Peirce's friends in Chicago was a man named Titus Haffa . Haffa owned The Dormeyer Company. The Dormeyer was a cheap version of the Mixmaster that the Sunbeam Corporation still makes today. It's a kitchen blender type thing. Peirce went to Titus Haffa and asked him, "Would you become my subcontractor?" and Titus agreed. Haffa learned the technology of wire recording from Peirce and later announced his commercial product called the Webcor wire recorder. He had the business background to get into the consumer market, having sold kitchen appliances, where Peirce did not. Peirce was very successful. Everything was cost plus during the Second World War making the airborne

voice wire recorders. When the war was coming to an end he went back to the people knew from the Landis Award Commission, these prominent Chicago businessmen, and he showed them the airborne voice wire recorder. He asked them what they thought he should do with it. They told him he should make it into a dictating machine. The dictating equipment they had used a wax cylinder. Only Dictaphone and Ediphone made them at that time. Peirce converted the airborne voice wire recorder to the Peirce Model 55B commercial wire recorder and announced it as a dictating machine in August of 1945 in Macy's Department Store. To my knowledge and to his knowledge, it was the first commercially sold magnetic recording machine. I'm sure you are familiar with the fact that Hitler had the Telefunken and the BASF tape, but that was certainly a big State Secret. It wasn't until Bing Crosby came across a couple of those machines and started the Ampex Company that tape recording was introduced in the United States. There was a real craze for wire recording right after the Second World War. As I was graduating from Jamaica High School in January, 1948, Esquire magazine came out with an edition where they said, "What should you buy the forthcoming college freshmen?" One of the things they suggested was a Webcor wire recorder. I convinced my parents to buy that for me. I think it cost about \$149. I had a wire recorder as I entered the University of Michigan in February of 1948.

Morton: That's interesting. What did you do with it?

Kalow: Several things. I tried recording the professors because I was not a good note taker. I would get the professors' permission and put the machine on the platform with the professor's lectern because in Michigan in those days they had very large

lecture halls that had 800 students. I tried that, but it didn't work out too well. It also happened that in 1948-49 Columbia Records came out with the first LP machines. The first LP phonographs did not have their own amplifier. One who bought a phonograph would then connect it to an amplifier. In my second semester at Michigan I roomed with a fellow who loved music, Bill Altman. He had one LP record, and we connected the LP machine to the Webcor wire recorder and that was the way we played the record. After listening to Brahms Piano Concerto No. 2 many I bought a second record and so forth. Basically I used the Webcor as an amplifier for the first LP machines. In addition people would record their voices and play it back for fun. The wire got tangled up often and it was aggravating from that point of view. However Peirce was able to get a number of dealers who signed on to sell these Peirce wire recorders. He priced the machine at about \$400. From his files I kept some of his original catalogs and I have some of the machines at home. He would give a 40 percent discount and manufacture these machines to compete against the Dictaphone and Edison wax cylinder machines. Although Soundscriber and Gray Audograph had come out with flat disc machines, they were just starting and his dealers did all right. Peirce never sold more than a few thousand machines a year and clearly his was the smallest American company. Nevertheless, he owned the company, had no stockholders except his wife and never took more than \$25,000 a year out of the company. And he continued to be successful. When I first got saw his factory in 1951 it was not very impressive. It was no bigger than the top floor of your building at the IEEE History Center. They assembled the machine but bought a

lot of the parts. I think they bought the motor from Bodine. He wound the magnetic recording heads himself, however. That was a little tricky, so they would wind the copper coils at Peirce's factory. He would subcontract out the base plate of the machine, the speakers, the microphone and things like that.

Morton: Did he stick with the idea manufacturing only dictating equipment?

Kalow: Yes. He stuck dictation equipment only. That was because he never felt he had the distribution to do anything else.

Morton: Did he have provisions like the Dictaphone machine had such as foot pedals?

Kalow: Yes. That was the point. That was what he added to the airborne voice wire recorder. The foot pedal had a rewind, but it had one unique feature that turned out to be very important competitively. That is that when using the machine as a transcriber one stops and starts as the voice gets ahead of the typing. When the foot pedal is pressed the wire turns. One listens and then lifts up the foot. If the recording was stopped too sharply the wire broke. What Peirce's engineers did was to let the tape run on a little bit before stopping. When the foot pedal was pressed to resume listening the wire reel would rewind a bit. The secretary would hear the last few words of what has already been heard. That was sold as "automatic word recall." It assured the secretary that no words were missed in the stopping and the starting of the machine. That later became a good competitive feature against the instantaneous stop and start of the stylus machines. There was a condenser in the foot pedal that gave back a little bit of electricity to the machine so it could rewind the wire. Despite the initial success, the Model 55B had two open spools of wire that often broke. One could tie a square knot to tie

the wire together. Then sometimes a square knot would get caught and the wire would break again. I had some of those spools for the 55B at home. Then in 1948 Dictaphone came out with plastic belt machines. They felt that the wax cylinder had benefits over the disc. We used to teach the IBM salesmen that there are two choices with disc recordings: constant linear speed or constant angular speed. With constant angular speed, such as Soundscriber had, the recording would get smaller and smaller in each circle as it got toward the center. Therefore quality was lost. Edison tried to avoid this problem by use of a relatively large disc - similar in size to a 45 rpm record - so that the center circle did not become as small. However there was still a perceptible loss in voice quality as more was jammed into smaller spaces. Gray Audograph tried to overcome this by having a constant linear speed. They drove the disc and had the needle fixed, but the problem was that when one would backspace to review the dictation it would backspace a different amount depending on where one was in the recording. Dictaphone decided that the cylinder was the best form of media because it provided both constant linear speed and constant backspacing. Therefore they came out with a plastic belt that was a flexible cylinder. It was called the Dictaphone Time Master Series. All of a sudden Peirce's commercial business declined very rapidly. Faced with this situation, Peirce went to his engineers and said, "I want everything that Dictaphone has, but make it magnetic." And they came out with the idea of a magnetic belt. It just so happened that the magnetic belt already existed on the marketplace. A company called Felt and Tarrant had a dictating machine called the Comptometer, which used a magnetic belt driven by

sprocket holes. Felt and Tarrent also used that name Comptometer for a calculating machine, which was their main product. The problem with the Comptometer was that sprocket holes wore larger and larger. The reason for using a magnetic belt was so that one could use it over and over again like tape. However the sprocket holes became worn, so that there was nothing to keep the belt tracking properly. Therefore Peirce's engineers decided to use an expandable rubber mandrel that would hold the belt fixed in place without depending upon sprocket holes. They copied the concept of the Dictaphone Timemaster but made belt out of magnetic tape material four and quarter inches wide. This machine was announced in 1952. However they had a great deal of trouble getting everything to work right, and though his dealers tried to sell it, it was not a commercial success in '52, '53 or '54. It was not until all of the technical problems of the machine were finally overcome in 1955 that the machine started to become a success. When Peirce announced the magnetic belt machine he called it the Model 560 Series. The improved model in '55 was the 560 D machine. The name of the firm was changed from Peirce Wire Recorder Corporation to Peirce Dictation Systems.

Morton: Let me interrupt you for a moment. Was it at about this point that you started to become more familiar with Peirce's history and business?

Kalow: I married Charles P. Peirce's daughter in December 1951 and was only peripherally aware of what was happening in Peirce's business until I joined him in 1956 and looked over the old correspondence. Before I joined the company, around 1950, Peirce decided to develop a more valuable and technologically

advanced wire recorder for the airborne voice needs. He used his own money. This was not under a government contract. His engineers came up with the idea of using a cartridge to hold wire and then he came out with a cartridge-based 200 series of office dictation equipment. The wire cartridge was then adapted to make a new airborne voice wire recorder. If the Korean War had not occurred I think Peirce would have gone out of business. However when the Korean War occurred and he had this airborne voice wire recorder already engineered using a cartridge the government ordered them. All of the jet planes of that era used the Peirce airborne voice wire recorder. He was the sole supplier to the United States Air Force on airborne voice wire recorders. Thus, even though his commercial business had done badly he was able to survive during this period. Looking back in history, it was the first of what we call a cassette today. It was the first commercially sold magnetic recorder where the reels of media were housed in a separate detachable unit. The 200 Series was not really a financial success. It was the airborne version of it that enabled him to stay in business until 1955 when the magnetic belt equipment was technically perfected. The first big order that the dealer sold that I know about was about two hundred machines to Zurich Insurance Company in Chicago. Once that sale was made it became a good reference point for all the Peirce dealers. The most Peirce ever sold was about five thousand machines per year. With the advent of transistor technology Peirce came out with Peirce portable machine. I joined in 1956 as the office manager. However the sales manager quit and he couldn't hire another sales manager for \$125 a week. Finally I said to him, "Dad, why don't you make me the sales

manager?" He didn't think I knew how to do it, so I made some local calls with the Chicago dealer and then I went with Peirce to Philadelphia. He showed me how to get a new dealer when an old dealer wasn't doing a good job and made me the sales manager. However as I said before, he was not happy with that situation and he continued to try to sell the business. In October of 1958 we got a call from IBM. We thought at first that IBM was looking to buy dictating equipment for their offices. In fact what had happened was that every year since 1948 the IBM electric typewriter people had been offered some different type of dictating machine for the typewriter salesmen to sell, but every year they decided those offers were not good enough for IBM. In 1957 they were offered the Norelco machine. Phillips of Eindhoven had come out with a cassette. It was not a standard cassette but a unique cassette dictation machine. IBM turned that down also. H. Wisdom "Wis" Miller, who was the general manager of the typewriter division of IBM asked, "Should we be in the business of selling dictating machines or shouldn't we?" He had his staff research it, and in the researching of it they looked at the Peirce machine. They studied it and decided that the Peirce machine was the best type of dictating machine. They negotiated with Charles Peirce and on July 15, 1959 they signed the contract purchasing his patents and developments.

Morton: Did the Comptometer machine remain a competitor?

Kalow: It remained a small competitor but went out of business before IBM went into the dictation machine business in 1960. There were a number of magnetic machines in Europe, but they didn't become formidable competitors in the United States

until Stenorette announced its tape recorder dictating machine in the late fifties. There was the Telefunken machine that used a pre-grooved magnetic disc; there was the Agavox machine that was sold in Scandinavia that used a pre-grooved magnetic disc; and a machine called Emidicta made by English Musical Instruments. It seems that every European country had its own national brand of dictating equipment. However they didn't affect the United States market until Stenorette came out with its tape machine. Fortunately for my position and for Mr. Peirce's position, IBM had no experience competing with foreign-made typewriters. Therefore when they looked at the market in the United States they really only looked at Dictaphone, Ediphone, Gray and Soundsciber. All those machines were stylus whereas Peirce was magnetic. From IBM's point of view it looked like Peirce had something unique. It wasn't until after they announced that they realized that it was not so unique. Dictaphone was number one in the industry selling about fifty thousand machines a year, Edison was number two, Gray was number three and Soundsciber was four.

Morton: Did those companies have no interest in magnetic recording?

Kalow: It was apparent that they had some interest in magnetic recording because in the late fifties Dictaphone came out with the Dictet. That was a battery-operated portable that used magnetic tape. They also came out with a line of recording equipment to record off a telephone system that police departments used to record every emergency call. They used tape on that, but they didn't see the advantage of going to tape equipment for other purposes at that time. In 1958 when Charles Peirce started to negotiate with IBM there was no point in my continuing to find

m ore dealers, so he asked me to try to sell locally. The Chicago Peirce dealer, Griswold & Company, had taken on the Stenocord line of dictating equipment. That was a German copy of the magnetic belt equipment. And I got calls in Chicago from companies that had been very happy with Peirce but could no longer get service from the Chicago dealer. We started to give them service from the factory. And I started going out and calling on these people trying to get them to stay with Peirce instead of going to Stenocord which was about half the price of the Peirce equipment. In doing so I would make a sales call and then I would make canvass calls in the neighborhood. I started to sell some Peirce equipment locally, and Al Smith, a Dictaphone salesman, started losing business where he never lost business before. Al Smith went to talk to the president of Dictaphone. Dictaphone only had 400 salesmen at the time. He suggested they set up a group to study the Peirce equipment and figure out how best Dictaphone could compete with Peirce. Smith and a couple other fellows came up with a study that concluded that the Peirce machines were actually better than Dictaphone in every feature and function. Dictaphone's advantage was that they had a better reputation. They also offered better service since they had branch offices. Al Smith then went to Peirce and said, "I'd like to sell your equipment." Charles said, "I really would like to have a dealer," and Al didn't want to become a dealer so he offered to sell without any advance. And Peirce said, "If you'll just sell on commission I'll hire you." Al Smith became our Chicago sales manager and was very successful. He sold 147 machines to Continental Casualty Insurance Company. Smith told me at that time that Dictaphone got so much revenue from

their plastic belts which could only be used once that they were very reluctant to change to a magnetic belt. In the late sixties Dictaphone finally came out with a magnetic belt machine which one could say was a copy of IBM's machine. Gray came out with an exact copy of the IBM machine, Soundscriber went out of business and Edison came out with a tape recorder and magnetic machine. Eventually the whole industry went to cassette machines like you are using to record this interview.

Morton: Looking back over this period you mentioned some of the important customers. I noticed that at least two or three were insurance companies. Were there certain kinds of organizations or businesses that were heavy users of dictation equipment and other businesses that just did not use dictation equipment?

Kalow: We taught the salesmen that the best prospects were hospitals. The medical records department was an excellent place to sell centralized dictation, because the doctor had to write or dictate a surgical report that had to be part of the medical record after every operation. With centralized dictation he could pick up a phone anywhere and record it. The radiology and pathology departments were excellent prospects for individual machines because they had to look at the slides or X-rays and prepare reports very quickly for the doctors to read. Peirce saw that that the stylus manufacturers had centralized machines and announced uniquely wired telephone systems. The telephone system was wired to the central recorder while the wire was separate from the telephone system. Dictaphone and others came out with PBX machines. AT&T, which controlled the whole telephone industry at the time, came out with a connection where one could connect

dictating equipment to a PBX machine. The problem however was that one could not get instant stop-start using a dial telephone. This caused a lot of blank spaces in the dictation because the speaker would hesitate during telephone dictation and leave large blank spaces. People did not like to reach down from their telephone handset to the bases of their telephones to control the unit. That was very annoying and unproductive for the transcriber. Then Dictaphone, Ediphone, Gray and Soundscribe all came out with voice-actuated systems. This was basically a magnetic recording machine that was placed in between the stylus machine and the telephone so that if the voice actuation heard nothing it didn't turn on the stylus machine. If it heard something it turned on and passed the recording on to the stylus machine. This was in '56, '57, '58. Peirce, having a magnetic machine, did not face this problem. The dealer in New Jersey - I think his name was Cliff Rumsey - operated out of the distributor of New York named Dicto Incorporated. That was the Peirce distributor whose principal was Dick Parks. As the sales manager of Peirce I had done business with Parks. Rumsey sold Bell Telephone Laboratories in Murray Hill and Whippany, New Jersey something like fifty Peirce individual dictating transcribing machines. The laboratory people said they'd like to have a Peirce PBX recorder. Matt Langendorf, Peirce's electrical engineer, came up with the idea that since the Peirce machine used the solenoid that slid the soundhead over the belt and went to the previous track in order to backspace, that if the machine heard no voice it would keep backspacing. Therefore a second machine would not be needed for voice actuated control. He developed this machine and we sold it to Bell Labs. We installed it and it worked

very well. We announced the Peirce version of a PBX recorder before the IBM acquisition. I think the sale of the PBX to Bell Laboratories was so important because when IBM did its big study and investigation of Peirce one of the places they went was Bell Telephone Labs. In 1959 IBM had a very cozy relationship with Bell Labs due to the use of the computer over the telephone lines. Bell Telephone modems had to be used so IBM and Bell worked together. Rather than competitive, they were very cooperative. IBM didn't know much about voice recording and figured Bell Telephone must know something about voice. Therefore they went to Bell Laboratories and said, "Look at this Peirce thing. What do you think of it?" And the people at Bell Labs said, "We just bought fifty of their machines. It's great." We think that was one of the key reasons IBM made their decision in favor of Peirce. IBM hadn't acquired a company since 1933 when it purchased the Electromatic Typewriter Co., so none of IBM's then current management knew much about acquiring a company. All of IBM's growth had been internal. This was a very big step for them to take and they were very nervous about it. They decided not to buy the Peirce Company outright because they didn't want to get Peirce obligations. Rather, they acquired the patents and developments of Peirce. Langendorf, Peirce's key electrical engineer also developed the Remote Microphone Network (RMN), an automatic network that used microphones. We sold the RMN to the Borg-Warner Company, which was out of Chicago. IBM later made its own version of the RMN. Fred Wehmer was Peirce's the chief mechanical engineer and Emil Steinbach was the vice president of manufacturing and engineering and one of his most longstanding employees.

These three fellows were asked to join IBM to work on the IBM magnetic belt line of equipment and they did. However IBM never took full advantage of their talents because none of them were graduate engineers. IBM didn't think much of people who didn't have a degree at that point in time. Another man who was critical to Peirce's success was Steve Karkowsky, who has since passed away. He was the foreman of assembly. He was the one who really knew the insides and guts of the machines. I didn't know the engineers who worked on the wire recorder. Steinbach, Wehmer and Langendorf were the three critical engineers during the magnetic belt era, from my perspective. About ten people out of the hundred that Peirce employed joined IBM.

Morton: Did IBM actually move people when they bought the patent rights and so forth?

Kalow: Yes, those that they eventually hired. Peirce agreed to let go. One of amusing things was that IBM came running back a week later and said, "My God, we realize that ninety people will be out of jobs because we acquired you. That would be a terrible image for IBM." Mr. Peirce said, "Don't worry about it. I guarantee that everybody will have a job before I go out of business." They said, "How can you make that guarantee?" He said, "Well, because I know all these people. They are good wirers and solderers and so forth. I guarantee." IBM was very relieved. Peirce initially asked for IBM stock. They said, "No, we want to keep this as confidential as possible," but it turned out to be a very cooperative deal. After the acquisition was made and Peirce got his check on July 15, 1959 it was still to be kept very confidential. They asked him to hire Elliot Noyes who was the designer of IBM typewriters and the chief design consultant of all IBM products. He

designed the case for what was to be the IBM machine. IBM preferred to reimburse Peirce for paying Noyes. Thus Noyes designed the case for what became the IBM 210 Series of dictating and transcribing equipment. Peirce designed it with a commercially available motor. IBM would have designed a smaller, flatter machine like Dictaphone's Time Master but would have had a unique motor. One of the reasons IBM management bought Peirce was because they felt that by doing so they bought time. In other words if they would have waited to develop their own version of dictating machines it would have taken them five years in their estimate. In this way they announced dictating equipment in the United States on October 17, 1960, a little more than a year after the acquisition.

Morton: What did Peirce do after that?

Kalow: Part of the contract was that he would become a consultant for IBM, but they never really consulted with him. After the acquisition, Bill Maloney, IBM's district manager in Philadelphia, was promoted to market planning advisor to get IBM into the dictating business. He moved to the electric typewriter division headquarters, which was at 545 Madison Avenue. He told all them that they would have to prepare to get into dictating machines. Suddenly the phone started ringing in Mr. Peirce's office. For example the head of customer engineering in the service department, Jim Boaz called up and said, "Mr. Peirce, I just learned I'm going to have to service dictating equipment. I would like to learn more about what parts are needed, what has to be replaced, how often the machine has to be oiled and serviced, how much to charge for a maintenance contract, etc. I have

one of my people assigned to that. To whom should he speak? Who is charge of your service?" Peirce said, "Have him speak to Sam Kalow." I met with that fellow, and then a week later Maloney would have talked to the advertising manager. The advertising manager, Bob Hutchings, realized that he would have to prepare advertising for dictating equipment, so called Mr. Peirce. "I have to do this. What's the trade practice? What industry magazines? Who is charge of your advertising?" "Sam." Then similarly with IBM's marketing people and so forth. Then Bill Maloney came to Chicago. I showed him how Al Smith and I, in an effort to get rid of the Peirce inventory, sold dictating equipment. At that point he offered me a job. I told him that I would very much like to work for IBM. He said, "You have to realize that to work for us you have to start as a typewriter salesman. Then you become a typewriter manager and then a district manager and then you eventually become a headquarters executive like I am." I said, "Well, that's all very well and good, but with all these people calling me about all this information they need, why don't you hire me as your assistant? Then when you announce dictating equipment you won't need me anymore. Everything I know your people will know. Then I'll go to typewriter sales school." They hired me on that basis for \$15,000 a year starting January 1st, 1960. The announcement was October 17th, so I went to typewriter sales school in November. I expected to be reassigned somewhere as a typewriter sales rep, but in February of '61 there was a reorganization. Maloney was made the assistant sales manager. Then he called me to tell me I had been promoted to sales manager of dictating equipment. I never did sell typewriters. I was a manager after thirteen months with IBM. It was a

very wonderful and unique career. Because I answered all the questions IBM would otherwise have asked Peirce, they never had to ask Peirce. Two years later IBM wrote Peirce a letter and told him that his consulting contract was ended. Then he wrote them back and said, "I don't think that's fair." He said, "I set up an office in Evanston and prepared. The fact that you never called me is not my fault," and they extended the contract another year. IBM was very adverse to any bad publicity in those days. Peirce retired. He was past sixty-five in 1960. He started to travel around the world. Anyone who travels around the world finds out who they are that go on those eighty-day cruises: everyone is more or less retired. One hears, "I am a retired doctor," "I am a retired lawyer," "I am a retired businessman. My son or my son-in-law took over the business." When people asked Peirce what he did he'd say, "I'm retired, too. I sold my business to IBM." That brought him a lot of prestige. Over the years I would remind him that if he had not sold to IBM and I continued to work for him he would have been so aggravated that he would never have lived to be 103.

Morton: Tell me more about your career after you went to IBM. Was that a big change?

Kalow: That was a very big change. Peirce did a million dollars worth of business a year.

In 1960 IBM had just become a billion dollar corporation.

Morton: Was there any tension between the office equipment people and the computer people?

Kalow: Yes, there was a great deal of tension. If one applied for a job at IBM in those days they took the tests IBM then had for computer people. Applicants who made low marks or failed on those tests but were good looking, sharp, answered

questions well and were very personable would be referred by the IBM branch manager to the typewriter division. The typewriter division was formed in 1957. There had been major changes at IBM after Tom Watson, Sr. passed away and Tom Watson, Jr. took control. Watson, Jr. announced the reorganization of IBM at a conference in Williamsburg, Virginia and the establishment of a separate electric typewriter division. At that time Watson, Jr. told his group of executives that he had only two objectives for the IBM Corporation. One was to double the business every five years and the other was to maintain what was called an "equal-equal program." That meant that if the volume grew 10 percent then the profits should grow 10 percent. And he wanted to do all that within the ethic of the IBM Corporation that his father had established. The general manager of the new typewriter division was Wis Miller. The people in his division got together and realized that since they were already selling 60 percent of all the electric typewriters in the business and IBM was the number one manufacturer that if they sold all of the typewriters and if all the typewriters that were manual became electric they still could not double the business every five years. Therefore they looked at diversification. One diversification they developed was a billing/typing/accounting machine. If one typed an invoice for let's say ten rolls of wallpaper at \$3 a roll with a 30 percent discount, the accounting machine would do the arithmetic and the typewriter would type out the invoice. This was announced as the 632 Accounting Machine. They quickly found they had to sell that machine with a separate sales force. It never really became very successful as a product and eventually was sort of dropped into the computer division and just

disappeared. In fact IBM lost its opportunity to be successful against Digital Equipment Corporation (DEC), because that would have been a good idea for a minicomputer. However they did not pursue that any further and left that area of the computing business open for DEC. IBM looked to other things for diversification, such as copying equipment and of course dictating equipment, as a way to try to answer the question of how to double the business every five years. During the acquisition of the Peirce equipment it had been assumed that dictating equipment would be sold with a separate sales force. That changed after Bill Maloney came with me on sales calls. He saw how I had to canvass, where we just made cold calls and I introduced myself as Peirce Dictation and most of the people didn't want to see me. Maloney realized that if I changed my name from Peirce Dictation to IBM all those doors would have opened to me. He went back to Bart Stevens, then the sales manager of the division, and convinced Bart that the same typewriter sales force should sell the dictating equipment. That caused a lot of friction within that division at IBM. The people with a typewriter background said, "The salesman is spending the whole time just selling typewriters and typewriter supplies. They are averaging ten typewriters a month. If they are forced to sell dictating equipment they will either sell nine typewriters and one dictating machine or they will sell ten typewriters and no dictating machines." Maloney argued that if the dictation equipment were sold with a separate sales force there would only be two salesmen selling dictation equipment in Kansas City as opposed to twelve typewriter/dictation salesmen in Kansas City. There would not be the coverage. He looked back to the experience they had with

the 632 when they had separate salesmen and were not getting the coverage and they didn't have success. He won that argument except for five branch offices where they insisted on testing a separate sales force. I give him a lot of credit for that. Thus a thousand IBM typewriter salesmen had to be trained on how to sell the dictating equipment.

Morton: Did IBM target the same kinds of markets that Peirce had traditionally targeted?

Kalow: The only new thing that IBM tried to do was to sell the non-user. They named the machine the Executary, a combination of executive and secretary and tried to say to the existing competitors that, "We are not here to hurt you." Mr. Woodbridge, who was the chairman of the board of Dictaphone, had been a friend of Tom Watson, Sr. in the 1920s and 1930s. Tom Watson, Jr. knew that his father had apparently, somewhere along the line, promised Woodbridge that he would not go into the dictating machine business. Therefore when the final decision came to be made, Tom Watson, Jr. did not say yes. What he said was, "I'm going to let you guys in the typewriter business make the decision." Watson himself used Dictaphone equipment. He had Dictets in his airplane, boat and car. He in fact was one of the few IBM executives that used dictating equipment. He was hesitant about the idea of IBM selling dictation equipment.

Morton: Was that common for executives not to use dictating equipment?

Kalow: Oh yes. In the electric typewriter division headquarters at 545 Madison Avenue there was only one person that had a dictating machine. His name was Stan Swedersky, and he had a Stenorette.

Morton: Why do you think that was the case?

Kalow: There are a lot of reasons. There are still a lot of people who won't use dictating equipment. Dictating equipment is a very tough sell.

Morton: Why is that?

Kalow: First of all, people find that it's very difficult to communicate verbally. Some people do not have the kind of mind where they can remember what they are saying and what they are thinking about. I spent four years at Peirce, ten years running IBM's dictating equipment sales, and then there was the whole word processing thing that tried to relate dictating equipment to automatic typing equipment. My judgment after all these years is that some people have the kind of a mind where they need to get the feedback from what they see. Whether what is seen is handwritten or on the screen, an enormous number of people need that sort of feedback in order to come up with their next thought. Another thing is that even though we can claim that talk is six times faster than writing, most people spend their time thinking and not writing. People who don't have the kind of mind where thoughts can be kept and recorded without visual feedback don't save much time when using dictating equipment. IBM did some research on this later on in the 1980s, and that led to the invention of the IBM voicemail system. Some fabulous research was done on this. When researcher completed the study and I saw it, I wound up believing him even though I had been selling the equipment for many years. Dictating equipment does not produce a net productivity gain for most people.

Morton: That's an interesting problem. On one hand there are institutions like the hospitals where dictation equipment is heavily used, and on the other hand there are so

many executives that have not been interested.

Kalow: For some people it works well, and for some it does not. There are lawyers for instance in the same profession and with the same specialty: one will love dictating equipment and the other will hate it. Another factor was that secretaries didn't particularly like it. First of all it isn't a very attractive thing to have earphones stuck in the ears. If one tried to use a single earphone so that the other ear was available for the telephone - because most secretaries needed to answer the phone - there was a lot of interference and the sound quality was not very good. If a secretary used use the double yoke earphones recommended by the dictating manufacturers she could not listen to or participate in other conversations around her. Therefore, by and large, secretaries did not encourage the use dictating equipment. That was a big objection. Another thing is that a lot of people don't have a good speaking voice and the quality of sound of the dictating equipment is not that of the high fidelity tape recorder. That also can make it difficult to transcribe and understand. There are a lot of mitigating factors. On the other hand there are ways that we found to overcome these objections and we could sell the dictating equipment. I can give you many stories where we sold it and the people used it. And then, as there was turnover in the organization, the new people wouldn't use it. In two or three years the machine would wind up sitting on the shelf. Then the company or organization wouldn't buy more. Initial sales could be made, but it didn't sustain itself in the same way as for instance when people bought copying equipment. No one wanted to go back to packs of carbon paper. Once they used electric typewriters nobody wanted to go back to

pounding the keys on the manual typewriters. Dictating equipment didn't have that sort of success story in most situations. We sold 98,000 machines in 1969. That was the peak of IBM's success in selling dictating equipment and my last year as Product Manager of Dictation Equipment. Another 100,000 American-made dictation machines were sold in the United States that year. Foreign imports probably amounted another 100,000. I'd say probably 300,000 dictating machines were sold in '69. There may be half a million sold today if one adds up all the little handheld tape recorders that are sold, these dictating machines called note takers and so forth. In terms of actual usage, the industry has been very stable. With digital dictation today, one can use the computer to transcribe a recording. I don't think the industry has progressed much further. The industry is a little bit like wallpaper, if you will. The two businesses of my career have not really been outstanding success stories: wallpaper and dictating equipment. Contrast that with the use of fax machines. All of a sudden they overcame the marketing problem by having a standard for fax machines. Then the sales of fax machines took off. I used to give talks on the office of the future. I said when voice recognition comes in 1995 then maybe sales of dictating equipment will take off. Voice recognition is just starting to come, and there is a possibility that when the new IBM operating systems and the new versions Windows have voice recognition in them and one can talk and see the words on the screen, maybe then. Maybe. [end of taped interview].