Thomas Kamp Oral History

Interviewed by: Tom Burniece

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Tom Burniece: Good afternoon. I'm Tom Burniece, a volunteer at The Computer History Museum. I am here today to interview Thomas G. Kamp who, for over 20 years, was behind the organization called Peripheral Products at Control Data Corporation. He was president of that group and one of the first people to build a successful OEM peripheral business. As a matter of fact, many people call Tom the father of the OEM peripheral business. In a certain sense, Control Data did this out of necessity because it needed good peripherals for its products and couldn't buy them from anybody.

Thomas (Tom) Kamp: IBM wouldn't sell them to us

Burniece: So the bottom line was it was done out of necessity but it became a very successful business, with well over a billion dollars in annual revenue by the middle '80s. Tom, I'd just like to start out with you introducing yourself. Tell us where you grew up, where you went to school, a bit about your family and your early years. I know you went in the Navy for a while. Then we'll get into the business side.

Kamp: I grew up in Dearborn, Michigan. My father and mother came from Holland after World War I and settled in Dearborn, where my father was a mechanic at Ford Motor Company. My mother was the stabilizing force in the family and directed all of her five children to get a college education. This was very important to her and all of them were quite successful. I went from Dearborn High School to Calvin College in Grand Rapids, Michigan at 17 years old. I sent them a letter that said, "Do you want to have a student who's not a high school graduate yet, but has the required credits, come to your college?" They said, "The University of Michigan was doing that … but we'll take you." Boy that was a surprise, so I went there for one semester, as a pre-med student, but I found out that I still had a problem of being a university student who didn't have a high school degree. So how was I going to get a degree? I was at school with no money and worked at a hospital. I found out that the Navy was going to accept students from the college to get into medical schools that they would supply, so I applied to that. There was a guy coming to the campus who said, "You have got to take this test," so I took it. Three weeks later, I got a letter from the Navy that said, "You've been accepted to the Navy Officer Training Program as a pre-med student at Middlebury College in Middlebury, Vermont." I couldn't believe it,

Burniece: <laughs>

Kamp: That was an interesting acceptance for me, since I still was not a high school graduate. I discovered the state of Michigan had passed a law that said you had to have a course in American economy to graduate from high school and I didn't have that, since it came in your senior year. So I had to go back to Dearborn high school and sat in the library for one full week studying that course, then took the exam and passed it. My dad took me down to the train and I went to Middlebury College in Vermont in 1943. I went there as a pre-med student but ended up with a Bachelor of Engineering degree, not a medical degree.

Burniece: Tom, you said it was a medical program you got in but it was an engineering degree you got. So how did that work?

Kamp: It was a pre-med program I was in at Middlebury College in Vermont but it didn't take me long to realize that, boy, this was a difficult program for me. So I went to the Navy and asked for a transfer to the

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"Deck Officer" training program, which they granted and I passed that. They sent me to Midshipmen's School at Columbia University in New York City and the courses I took there were in engineering, navigation, etc. For example, with airplanes thousands of miles away, how are you going to find them? How are you going to find land, everything else? I learned that, and had perfect 4.0 in that course. I graduated from Midshipment's School in April, 1943 in the top 10 percent of my class and went from there to the Navy's Advanced Line Officer School in Miami, Florida. Then I was assigned to the new Franklin D. Roosevelt, the biggest aircraft carrier in the world, for its initial "shake-down" cruise. The interesting thing that happened on that trip was the captain of the ship said to me, "You get to go out and practice your navigation today." He said, "We're going to anchor at night and you can sleep. In the morning, you practice navigation again." I said, "Okay." So I did that. We pulled the anchor up one morning but it disconnected, yet we came back to exactly the same spot the next day.

Burniece: <laughs>

Kamp: I said to the captain, "We're at the same spot. This is where the anchor was that was disconnected the previous day." We dropped the anchor and the same anchor came back up again.

Burniece: What year was this?

Kamp: That was 1945

Burniece: The Franklin Roosevelt was a new carrier …

Kamp: Yes.

Burniece: towards the end of World War II, right?

Kamp: That was the best of the carriers of World War II. It wouldn't even fit through the Panama Canal.

Burniece: Oh, is that right? Was it an inch too big or something?

Kamp: That's right.

Burniece: I thought that was a prerequisite for the Navy, that all ships had to go through the Panama Canal <laughs>.

Kamp: We went to South America and represented the United States in Rio de Janeiro for the inauguration of President Dutra. That was my first exposure to what the rest of the world was like.

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Burniece: Was that after World War II?

Kamp: That was right before the end of World War II.

Burniece: What was the degree you ended up with then?

Kamp: After the navy. I went back to school as a third-quarter freshman in engineering at the University of Minnesota and got a degree in electrical engineering. I still have that degree today.

Burniece: So you started out in pre-med in Vermont, through the Navy, and ended up serving as a navigation officer on the Franklin D Roosevelt, before going to the U of Minnesota after the war, to get an EE degree?

Kamp: Yes.

Burniece: So when did you graduate with your EE degree from Minnesota?

Kamp: That was June,1949. I went from there to General Motors in Milwaukee. That's when I said to my future wife, Janette, "you either have to marry me or I've got to pick out somebody else."

Burniece: <laughs>

Kamp: She decided to go with me.

Burniece: Wow. That was a good plan. She's here in the audience by the way <laughs>.

Kamp: We had one little car with a gearshift in the middle. Everything fit into the car.

Burniece: So you went to GM in 1949 and what did they have you do?

Kamp: I had a group of about 40 people, mostly women. They did various things for auto pilots. A guy got transferred to Michigan and I took over his department, making autopilots.

Burniece: Was that for military aircraft rather than for automobiles.

Kamp: Yes, military aircraft and they accepted them for the B-36 bomber.

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Burniece: and you were in charge of manufacturing?

Kamp: Yes, that's right**.** I went from there to Lear in Grand Rapids, Michigan, and started working in their mechanical engineering department, fixing gyroscopes to go into computers.

Burniece: And about what year was that when you went to Lear?

Kamp: That was February, 1952.

Burniece: So you started out in the military avionics business and did autopilots and then got into gyroscopes. What happened next?

Kamp: When I was at Lear I would get letters from my mother. My parents had moved to Minnesota and she kept saying, "You have to come to Minneapolis" So one day I saw an ad that Honeywell had some openings for people with gyro experience, which I had at Lear in Grand Rapids. So I went to Minneapolis with Honeywell in the summer of 1956 but was there for just nine months and "felt demoted", so I was very frustrated I was approached by Jim Manning, the owner of Cedar Engineering, a small manufacturing company in Minneapolis that had been a customer of Lear. I was offered the position of "Chief Engineer" and took it in February 1957, although it was really Chief "Production" Engineer Shortly after that, Control Data Corporation (CDC) bought Cedar Engineering and I became the Plant Manager. Jim Manning soon left to form another company in Canada and I became the General Manager of the Cedar Engineering Division of CDC. Bill Norris was the CEO of CDC and came every morning for three weeks. He said, "What are you going to do now?" and I said to him "why do you come every day? Why don't you just turn this division over to me?" He said, well, he'd let me know; he'd talk with the other senior people at CDC, like Seymour Cray, Frank Mullaney, and Bill Keye, who were all at the headquarters building. Bill Norris also had a little office in that building.

Burniece: Let's back up just a little bit, because you went through three companies in a hurry there. You went back to Minneapolis to go to work for Honeywell. And at some point, you left Honeywell and went to Cedar.

Kamp: In nine months, I went to Cedar.

Burniece: And Cedar was in Minneapolis.

Kamp: Yes.

Burniece: Tell us a little bit about Cedar and what they were like in those days. What was their business when you joined them?

Kamp: They were manufacturing miniature motors for people, like Lear and other companies.

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Burniece: So they're doing miniature motors, like server motors and precision positioning motors?

Kamp: Yes.

Burniece: Control Data was formed, in July 1957, by Bill Norris and several others, and they bought Cedar Engineering relatively quickly, like November 1957, right?

Kamp: Yes and Bill Norris came over to see me right away. He had a falling out with my boss, Jim Manning, and said they had separated.

Burniece: So the falling out was between the original owner of Cedar, Jim Manning, and Bill Norris?

Kamp: Yes…

Burniece: Bill now put you in charge but he was checking up on you every day.

Kamp: Yes, he talked to the other people and they said, "Just give it to him."

Burniece: Tell me a little bit about Bill Norris. What was his personality like?

Kamp: He was an ex-military officer, with a lot of intelligent experience. His whole background was computers. He was the founder and head of Remington Rand UNIVAC in St. Paul, and Seymour Cray was one of his people.

Burniece: So he was in military intelligence, during World War II, as an officer. Was he part of the group called ETA, the original computer group that Remington Rand bought?

Kamp: I think he was.

Burniece: So he then became a manager there and Seymour, who I think also graduated in ~1949 from Minnesota, was an Electrical Engineer…

Kamp: Yes

Burniece: At some point, they got frustrated because Remington Rand did not want to build a transistorized computer. So they quit?

Kamp: Norris and Cray decided to quit and start a new company.

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Burniece: Which was Control Data. And that was 1957.

Kamp: That was when CDC started.

Burniece: Now, why did he buy Cedar? What was the reason he bought Cedar?

Kamp: He had money and looked at Cedar and said, we could turn that into a manufacturing operation

Burniece: Didn't you tell me once that he actually bought Cedar because he needed a manufacturing site in order to qualify for selling his first computer to the Navy in Monterey?

Kamp: Yes. he had to show that he had manufacturing capability

Burniece: So before buying Cedar he just had some computer designers at CDC.

Kamp: Yes

Burniece: How did you finally get him to stop checking up on you every day?

Kamp: <laughs> He never stopped.

Burniece: <laughs> He never stopped?

Kamp: <laughs> He did it regularly. There were numerous things that happened, like we were going to go to computer show in San Francisco to show the first tape drives. We were very proud of them and they were doing very well but all the lights failed. We were the only product that was still running.…

Burniece: Wow.

Kamp: It was an amazing experience, when he turned around to his other people and said, "man, it has a future!"

Burniece: <laughs>

Kamp: "It's going to collapse." He looked at me and he said, "Tom, you know how it goes. You have your neck on a rope attached to an anchor. You're going to be out of here."

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Burniece: Tell me a little bit more about the early days at Control Data. You're now running Cedar and the company decided they needed peripherals. I believe the first peripheral you developed for them was a paper tape reader. Is that correct?

Kamp: That's true.

Burniece: And that would've been 1959 or so.

Kamp: Yes, that was the first product. IBM had tied up the market with paper tapes that only their machine could read, and nobody else could get them but IBM. We were stopped cold. One shipment a month is all we could do.

Burniece: That's because you were limited by the supply - IBM had taken all the supply?

Kamp: That's it. IBM took it all. So Norris said, "What are we going to do?" And I said, "give me one. We'll get it to Cedar, tear it apart and build our own."

Burniece: It's my understanding that the company that was making that paper tape reader was Ferranti. And they basically told you they were sold out for a year, right?

Kamp: Yes, that's true.

Burniece: So that's how you got started in peripherals. It is my understanding that in ~1960, the Control Data Systems Group needed a tape drive and the only tape drives out there that they could get a hold of, besides IBM's, which were very expensive, were not rugged enough. So you decided to develop a tape drive. Tell me about that.

Kamp: Well, that was a problem, but we discovered the tape transports didn't have a lot of cost in them. They had $4,000 or $5,000 worth of parts, and the rest was just waste. We said why are we paying IBM this huge sum of money they're asking for each tape drive? They're getting ten times the amount of cost. That's what they were charging us.

Burniece: You are a manufacturing guy. You're now making a tape drive that's finally rugged enough and I think had some uniqueness, like a vacuum tape column. And you took it to a computer show in San Francisco in 1962.

Kamp: Yes, we did.

Burniece: That's where you talk about the lights going out.

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Kamp: That's where it was.

Burniece: But what else happened that day? Did you have a customer walk up to you and say, "we want to buy this from you"?

Kamp: Yes.

Burniece: And that was NCR?

Kamp: NCR walked up and said, "we need that. We need to get that product. IBM's got the whole world tied up." They couldn't get any. Nobody in the industry could get any. Honeywell, NCR, ICL, Japan, every company, everybody was blocked out. So we sold to them all, tons of product.

Burniece: So did you basically make a sale that day at the Spring Joint Computer Conference to NCR?

Kamp: Well, almost that day.

Burniece: Pretty close?

Kamp: Within a week.

Burniece: And I understand that a couple of your engineers had to go back and make it compatible to the NCR system…

Kamp: Yes, they did.

Burniece: … Do you remember who they were?

Kamp: No, I don't.

Burniece: Were Lloyd Thorndyke and Jack Fasching two of them?

Kamp: Yes, Thorndyke and Fasching were two of them. They were the two best engineers we had, good people.

Burniece: So you developed that tape drive and ended up selling thousands of these to NCR and also to Honeywell, correct?

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Kamp: Everybody.

Burniece: Did IBM actually buy some tape drives from you?

Kamp: No, but the people in China did.

Burniece: So that was the first actual peripheral that you developed and then sold to other system OEMs. So that was kind of the beginning of the CDC peripheral business, right?

Kamp: Yes. We sold it to NCR, Honeywell, and ICL. We also sold to Siemens in Germany and Cii in France. We sold to all of them.

Burniece: Now, at some point in that process, Control Data turned you into a peripherals division.

Kamp: That's correct.

Burniece: So you went and built a building, which has always been called Normandale because it was on Normandale Boulevard in Edina.

Kamp: That was it.

Burniece: And when would that have been?

Kamp: Oh, gosh.

Burniece: 1961?

Kamp: Yes

Burniece: So you moved into Normandale and at some point, you also started a disk-drive development program, because the Bryant 404 disk drive was not rugged or fast enough for the CDC 6600 computer

Kamp: We started a disk-drive project because we thought we could exceed IBM's product - the same thing we did with tape drives. They were charging us 10,000-some dollars per unit and we could build them for $5,000 or $7,000 per unit, which was huge savings for us. We sold them to other companies. Everybody bought them - Honeywell, NCR, Siemens, ICL - everyone So we started from zero and ended up with $10 million very fast, then boom, $100 million, just in disk drives!

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Burniece: So how many years would you say it took you to get to $100 million of peripheral sales?

Kamp: I have a book here that shows we reached that i**n** the ‘60s.

Burniece: So tell me a little bit about the culture and the key people, in Normandale, in those early days, when you’re developing your first tape drives and first disk drives. Who were some of the key people? We already mentioned Jack Fasching and Lloyd Thorndyke. Who were some others?

Kamp: The philosophy I had was “you’ve got to do it with your people” I have a copy here of a paper that I wrote down for my son, when he was starting another company after he got out of graduate school. I said with all of the people I had working for me, everyone had a specific task. They had to grow their business at a certain rate, in a certain time. Everything else I left up to them. And, boy, they ended up doing it. That was a miracle. I had a plane at that time, a twin-engine, and I flew it all over the United States - 700 hours corporate time. Three days a month I’d visit all the plants. I knew all the people. I knew them by their name.

Burniece: You’re jumping a little ahead of me, Tom. I’m still back in the ‘60s. You started out with Cedar, a motor manufacturing plant, and now Normandale was a computer peripheral plant with both engineering and manufacturing,, right?

Kamp: Yes.

Burniece: So that’s where Cedar was moved and became the peripheral division?

Kamp: No, Cedar stayed where it was as a separate entity.

Burniece: Did they? Okay.

Kamp: The peripheral division was a separate part of Control Data and it was later folded into the CDC Peripheral Company

Burniece: What was the reaction of the CDC systems people to you being in the business of selling peripherals you initially developed for them to their competition? How did they feel about that?

Kamp: I don’t think they liked it.

Burniece: <laughs>

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Kamp: <laughs> That's a true statement. As a general rule, they were always frustrated with me. When Seymour Cray bought a new plant in Chippewa Falls, Wisconsin, I said, "What are you going to do in Chippewa Falls, Wisconsin? That's in the middle of nowhere…"

Burniece: <laughs>

Kamp: …90 miles away." I said, "You don't want that." He looked around the room and he said, "Somebody's going to do it."

Burniece: <laughs>

Kamp: Bill Norris sat at the table and said, "We can't let that happen. We can't let him go. We have to keep him."

Burniece: Bill didn't win that one, though. Seymour did go to Chippewa Falls.

Kamp: He had no business…

Burniece: <laughs>

Kamp: …winning that one.

Burniece: Was Norris a backer of this? Was Norris one of those guys who basically told the systems guys to fend for themselves and let you build peripherals.

Kamp: No. Seymour Cray was from Chippewa Falls. His home was there and he was going to build the plant there. He also wanted to make peripheral equipment.

Burniece: Oh, he wanted to make his own peripherals?

Kamp: Yeah.

Burniece: Oh, I didn't realize that.

Kamp: But how was he going to do that? He didn't have the people to do that and couldn't get people to move to this little dumpy town, Chippewa Falls, Wisconsin. You're not going to find engineers to go there.

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Burniece: So you had the peripheral division in Minneapolis and Seymour ended up moving to Chippewa Falls with the super computer division.

Kamp: Yes and every day I drove down the freeway to downtown Minneapolis, to the big office building Bill Norris had with Seymour Cray. Seymour would show up at noon. He would work until ten o'clock at night. Crazy. You never knew where he would be.

Burniece: What was Seymour like from a personality standpoint?

Kamp: He was an interesting person. He loved to go to the town meetings in Chippewa Falls, Wisconsin. He would come in and address the group a little. He'd say, "Well, there was some conversation with Tom Kamp about this, but we decided we could probably do better than that." That was his typical answer but he became a friend later and ended up liking the peripheral division. As you'll see from the chart, the peripheral business grew to be much larger than Control Data's computer business.

Burniece: Oh, absolutely. It sounds like Seymour was a very consummate engineer who thought he could do anything.

Kamp: Yes, he did.

Burniece: He had a lot of self-confidence, so it took a while to win his confidence in you.

Kamp: He thought he could do everything with his confidence.

Burniece: Tell me about some of your customers. You had OEM customers like ICL, Siemens, Nixdorf, NCR, Honeywell and so forth, and I know you knew these people personally. Tell me about some of those people and the relationships you had, with people like Clancy Spangle and Heinz Nixdorf.

Kamp: Bill Norris had started with some deal at Honeywell, so I also started to work with them and sold them disk drives but they also wanted to build their own peripherals. Clancy Spangle was the head of Honeywell's computer operation and was a good friend. I wrote a letter to him that said "Why do you want to keep designing your own disk drives when you still end up buying them from me? Let's form a joint venture, where you own part of the company and can get high volume disk drives for cost." He wrote a letter back from his secretary that said, "That's a good idea. We should do that."

Burniece: That was 1975, when you formed Magnetic Peripherals Incorporated (MPI).

Kamp: Yes, that's what we did.

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Burniece: Going back into the '60s, NCR was making their own disk drives, plus other peripherals, so you put another joint venture together with them called, Computer Peripherals Incorporated (CPI), which preceded MPI.

Kamp: Yes, we did.

Burniece: Tell me a little bit about that one. I know you were not totally happy with the way CPI was organized from an ownership standpoint, but tell me a little bit about how that happened and what that resulted in.

Kamp: Well, we were selling disk drives to them. We said, "Why would you make your own drives when you get ours for one-third the price? That's crazy. You should get our drives." And they tested our drives and they said, "Geez, they are pretty good. We like your drives." So I said, "Well, I'll take over your plant in California."

Burniece: Which was in Hawthorne, California?

Kamp: Yes, Hawthorne. "We'll take over your plant in Hawthorne, and we'll do something with it." I forget, but I think we farmed it out to somebody.

Burniece: Well if I remember right, that was in 1971 and the Hawthorne Facility produced the first cartridge disk drive product for Control Data, called the "Hawk"

Kamp: Yes, it did.

Burniece: This was a removable single-disk, IBM 5440-type cartridge disk drive and when you put MPI together in 1975, some of those people moved to Oklahoma City, so basically the Hawthorne group was later merged into MPI…

Kamp: Yes, they were.

Burniece: The Oklahoma City facility came from Honeywell.

Kamp: Yes, we took over their Oklahoma City plant, as part of MPI.

Burniece: But you also had facilities in Rochester, Michigan and Philadelphia for CPI, correct?

Kamp: Yes, we did printers in Rochester, Michigan and tape drives in Philadelphia.

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Burniece: And that was all part of Computer Peripherals also?

Kamp: Yes, that was all part of CPI.

Burniece: So, the joint venture with NCR resulted in CPI, which was focused on tape drives and printers, while the disk drive piece of NCR was pulled into what was then Normandale and later into MPI. Correct?

Kamp: Yes**.** But the problem at the time we had was Bill Norris always had this queasy feeling about these operations we were doing around the world and each time he talked to his other people he'd say "What do you think about this?" Then he'd say "Geez, we don't think it's a good idea." and say to me "Tom, you know what the rule is - if you screw up, you're gone." He was always unequivocal about that. I don't know if you knew Bill Norris but he was a farm boy and loved to do ventures in poor areas, growing plants and food. …

Burniece: I never met Bill but knew he was from Nebraska and did a number of things around energy and food, etc…

Kamp: He would have visitors and say Tom, there's a doctor coming from my home town and he wants to see your company." So I would take them around and he would say "Geez, that's a pretty good plant."

Burniece: Now, in that timeframe, the late '60s, early '70s, as you're putting together what was now a growing peripheral division within Control Data, you started moving some of the manufacturing stuff out of Minneapolis into Rapid City, South Dakota, Omaha, Nebraska, Portugal, and so forth…

Kamp: Yes, we did.

Burniece: How many plants did you have all together at the peak? Any idea?

Kamp: I think it was about thirty.

Burniece: And they were all over the world?

Kamp: Yes, around the world. We had them in China. We had them in Korea. And we even had one in Australia…

Burniece: Okay.

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Kamp: …but we also had lots of plants in the United States and also in Europe – England, Germany and Portugal. I even have a tie from the Queen of England…

Burniece: and that's for putting a plant in England?

Kamp: That's right.

Burniece: Now, when you look back on it Tom, what do you think was the magic that your operation had that created such a successful peripheral business? Why did the other systems manufacturers buy peripherals from you? Did they feel you have the highest quality, the best technology? Were you the only game in town? What were the reasons?

Kamp: I think the bottom line is it was price. You know, they could pay IBM ten or twelve thousand per unit or get them from us for thirty-five hundred or five thousand a unit. It was a marvelous deal; they wanted to do that. They came to me and I would say "We've got them. We'll sell you disk drives. You try them." And they would said "Boy they're wonderful"

Burniece: Now, I know you're a great believer in the learning curve…

Kamp: Very much.

Burniece: …and that was one of the keys to this success, right?

Kamp: Very important, very important. Every person that worked for me-- Peter Bailey, John Titsworth, all these people - they all had specific things they had to do. The disk drive people had to sell products to get down the learning curve and they did -- boy, they were going all over. Every place in the world people were making computers, they could sell them, except for IBM.

Burniece: Up to about 1975 or so, you were growing a successful hundred million dollar plus business selling peripherals to basically the other large systems guys…

Kamp: Yes.

Burniece: …like Honeywell, NCR, and Siemens…

Kamp: Every other large computer company in the industry, but IBM, was buying from us.

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Burniece: Now, at some point in the early 70s, you and your staff decided that you were going to go after a whole new part of the computer world called the "mini computer" and you needed some special products to do that. Can you tell me about that decision process and what you went after?

Kamp: We went after smaller, less expensive disk drives that met the mini computer market requirements.

Burniece: How you did this?

Kamp: I don't remember the exact timeframe, but someone came to me with an idea and said "If we do a rack-mounted disk drive, and there are ways we can do that, we think it will cheaper than the IBM type drives and fit what the mini computer market needs"

Burniece: Okay.

Kamp: So, we went through that process and it looked like a good idea. We could build those drives for a lot less money than anyone could get them in the marketplace.

Burniece: Right, now the first of those mini computer drives that was built by Control Data for the mini computer world was actually the Hawk…

Kamp: Yes, the Hawk…

Burniece: …which came out of Hawthorne in 1971…

Kamp: Yeah.

Burniece: …but the one that really made it was the Storage Module Drive, the SMD, which came out of Normandale in 1974…

Kamp: Yes, it was a miracle. It really was.

Burniece: Right. Tell me about that and how that decision was finally made. I know you had a little bit of nervousness trying to get some revenue out of that investment for awhile. Tell me the story about how the SMD evolved.

Kamp: Well, there were a lot of people in the corporation that said "That peripheral company isn't going to make it" and I said "We are doing it and we think we are going to make it." We just keep going down the learning curve and had passed over a hundred million dollars in outside sales. We passed the whole

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corporation with that number and said we can do it, if we go after the whole disk drive market. We can also make disk drives for the mini computer market, which was really important. That was the future. The computer world was turning to the mini computer, which had to have disk drives and Control Data also needed them. We found within our own operations they also wanted smaller, less expensive disk drives.

Burniece: Now, in that evolution from selling disk drives to basically just large systems manufacturers, like Honeywell, et cetera, to selling into the mini computer market, you went from a half a dozen customers to a hundred or more, right?

Kamp: Oh, yeah.

Burniece: It exploded in terms of the number of customers.

Kamp: Yes, and we also went to over twelve thousand employees from two or three hundred, that's a long ways.

Burniece: And by 1980 you had the peripheral business up to a billion dollars?

Kamp: We were all the way over.

Burniece: Right and that was basically driven by the SMD and a few other products.

Kamp: Yes, it was. And we sold most of it to other people.

Burniece: Right.

Kamp: Not to Control Data, as a primary customer

Burniece: So you literally were selling SMDs to just about every computer manufacturer in the world at that point. There were very few that weren't buying SMDs.

Kamp: Yeah, I can't think of any major name that we didn't sell to.

Burniece: You even captured Digital Equipment Corporation…

Kamp: Yes.

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Burniece: …which was a big deal because they were the biggest consumer of disk drives.

Kamp: Yes they were.

Burniece: Now, sometime in that same timeframe, the early '70s, you also made a decision to go in the IBM plug compatible business.

Burniece: What was the impetus of doing that? You created a whole new division around that.

Kamp: Well, you know how these things operate in a corporation. People would say "We should get in the IBM plug compatible business." And I would say "Now, why would we want to do that?" Pretty soon you can become convinced that there was some money in that and we could sell a lot of drives in that business. We always wanted to sell more drives.

Burniece: So by the end of the '70s, you are now selling disk drives to Control Data, to all of Control Data's competitors, including all the mini computer guys, and also into the IBM plug world?

Kamp: Yes.

Burniece: As a result, you were the biggest single disk drive operation in the world at that point.

Kamp: I have a newspaper article that shows that title.

Burniece: So, what happened? In the '80s, things changed and you were no longer the king of the entire hill; what happened in the '80s?

Kamp: Well, I was getting a little older, number one. Number two, I'd been at Control Data for a very long period of time. It was what, almost 30 years? Third, my son Tom was out of college with an engineering degree and was going to a graduate school at Northwestern University to get a Master's Degree in Financial Management. I said "What are you gonna do after that?" He said "Well, I suppose I should find a business." I said "We make but don't repair disk drives; maybe you could repair them." He thought that was a good idea, so I retired and we started a company together, called Premier Computer, with a plant in Oklahoma City..

Burniece: Now, you're a little ahead of me because I was talking about the early '80s, when CDC went from selling disk drives to just about every computer manufacturer in the world to having a significant amount of competition come in from Japan, plus all the start-ups in the United States. As a result, it became a little bit more difficult to stay on top of the hill, I guess. When did you leave the peripheral operation?

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Kamp: 1984.

Burniece: You left the position of President of the Peripheral Products Company in 1984 and became Vice Chairman of Control Data for a short while, right?

Kamp: Yes, but I was actually appointed Vice Chairman of Joint Ventures in 1983 and acquired Centronics Data Computer Corporation in Hudson, New Hampshire in a joint venture, where I became Chairman.

Burniece: Then you resigned from CDC in 1985 to help your son go in business.

Kamp: I actually retired from Control Data in December, 1984 but continued on as Chairman of the Centronics operation in New Hampshire**,** so I traveled there every week with my plane on Tuesday-Thursday and ran the company. I then came back to Minneapolis to help my son form his company, Premier Computer Company, during the rest of the week.

Burniece: Now what was Centronics building in those days, was it printers?

Kamp: They were trying to build printers but the technology was shifting to laser printing and we couldn't compete, so we sold the company to one of our competitors.

Burniece: So, you look back on that, you were at CDC from 1957 until 1984

Kamp: Yes.

Burniece: What are the highlights of your career? What accomplishments do you really feel the most proud about?

Kamp: I think my proudest accomplishment was building the number one peripheral company in the world. "We were it." I really enjoyed that, when it was growing rapidly - by leaps and bounds. I didn't do that alone. I had great people working for me and gave them complete control of what they were doing. I didn't keep track of all the individual products that people were coming up with. When Thorndyke and these people developed a new product, they didn't tell me all the details. They would just say "You gotta see this work." That's what they would say.

Burniece: They were that good?

Kamp: Yes. Later when my son was running Premier Computing, he asked me about my management philosophy, so I wrote this memo [shows it], which specifically spelled out to him how to manage the people that worked for him..

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Burniece: So, what have you done since helping your son? Have you continued on boards and have been involved with other companies and foundations and so forth?

Kamp: I also became Chairman of Rodime in Scotland in 1989, largely because they couldn't raise financing and owed my son's company ~$400,000. It became a real problem, because Premier was purchased by Hollis PLC, a British company headed by Robert Maxwell. He was an entrepreneur with a lot of money sitting in the bank but had spent money to buy a company in Florida and then was discovered drown off the coast of Spain. Rodime received notice from the Bank in England that said Hollis needed to be sold and "you've got thirty days to pay."

Burniece: Wow I think I remember when that happened didn't remember the details.

Kamp: Anyway, my son was getting stuck. So at this point he went to an investment firm in Minneapolis for 10 years and now he is Vice President of Marketing and CFO of Cornerstone Financials.

Burniece: Okay. And that's Tom Kamp, Jr?

Kamp: That's him.

Burniece: Okay. Now, I know you want to show us some things, so let's take a quick break while we get your artifacts over here

<break>

Kamp: The thing I was most proud of was accomplishing something with the peripheral business when the rest of the Control Data said "It ain't gonna work." I was convinced it would work with the management structure we had. Every person had an objective to accomplish and they always had to move up the learning curve; everything had to go up.

Burniece: Okay, what other things would you say were key accomplishments?…

Kamp: We had sixteen thousand people and there weren't any union problems, none. Everyone was dedicated. They were all young people.

Burniece: So how would you describe the culture of CDC in those days?

Kamp: It was a young dynamic company and it was growing fast.

Burniece: And most of the people were from the Midwest, right?

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Kamp: Yes.

Burniece: So they had the Midwest work ethic.

Kamp: Yes, they did.

Burniece: Okay.

Kamp: I wrote a letter to all the employees that said "If you have any idea what we can do to improve our profit, give them to me - write them in a memo."

Burniece: Okay, and did you get a lot?

Kamp: I got letters galore. They were wonderful ideas. Wonderful ideas.

Burniece: Okay.

Kamp: For every one we adopted, the people who suggested it got a free ticket to a conference in Florida, we called the President's Forum..

Burniece: Okay.

Kamp: And they were so excited about that, because many had never flown on an airplane before.

Burniece: How many years did you do that conference in Florida?

Kamp: Probably ten years. They loved it and when I walked the halls, they knew me. I knew their names.

Burniece: So, what have you been doing for the last twenty years or so since you retired? Are you on some boards, doing some charity work?

Kamp: Well, I have worked with my son and also with a daughter who is a lawyer in California and a daughter in Chicago who's the Vice President of a bank. I also served on the Boards of Bantec Inc and of Kuyper College in Grand Rapids, Michigan for several years, plus I have done a lot of community and church projects, since retiring

Burniece: Tell us about the award that Colin Powell gave you. When was that and what was it for?

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Kamp: That was May 1998 and was from the Center of the American Experience at their annual dinner. He was the guest speaker and I said to him afterwards "That's the most wonderful thing you've said to this audience and I've got to say to you right now, you've got to run for president." He said "no, no, I'm not gonna do that." But he was a good man.

Burniece: Well Tom, we're at the end of the tape. I want to thank you very much. It's been a delight talking to you. And I hope you will enjoy the rest of your time out here.

END OF INTERVIEW

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