Oral History of Jim McCoy

Interviewed by:
Jim Porter

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Jim Porter: OK. The reason that we are here today basically is to have an interesting discussion, I am sure it will be interesting, between McCoy and myself about the things that Jim has done in this industry, the activities which he has been involved in which have been significant in the industry, and why he has done some of the things he has done. Perhaps we could start, Jim, with going over a brief review of your background, and we will then get into more detail as we move through time, I think. But how did you ever get started in a business like data storage?

Jim McCoy: Good question, because it was not my initial intent. I was headed for a career in aviation. I actually got started in storage in 1964, right out of high school at an IBM supplier called Santa Clara Metal Craft in Ampex territory in Redwood City. I was a machinist assembler type character, running a milling machine, a punch press, grinding machine, equipment like that, making components for what I later learned was the IBM 1301, 1311 head disk assembly. They were fascinating little parts to me. I was on the track to become an engineer ideally in aviation, but some years later I cycled back and went to work for IBM in the magnetic head operation in San Jose, and it just grew from there.

Porter: So I understand you actually went to work for IBM in what was it, 1967?

McCoy: '67. Yes. Yeah.

Porter: And you were there for two or three years?

McCoy: About three years, and it was really while I was finishing my education at San Jose State. I am a manufacturing engineer by education and thought processes really, is where I come back to in analyzing things. And I started as a junior, junior, junior manufacturing engineer at IBM.

Porter: In the disk drive operation in San Jose.

McCoy: In San Jose, in heads, in magnetic heads specifically. And it was a great job because I got all the old junk. Well, today we would call them cash cows, but then it was because I was the greenest engineer on the block. I had the 1301 and 1311 heads. 2311 was towards end of life right then. I had the 2301 and 2303, which were drum heads. I had part of the ferrite process when we moved ferrite fabrication out of Poughkeepsie to San Jose. You could not pay for the breadth of education that I got in that job working with the people there. It was great. And I did some studying on magnetic recording out of a book by C. D. Mee. It was the first textbook I ever bought with my own money that was not a part of a class. And I thought this guy was a great explainer of the technology and I come along here through the computer history museum and I meet Denis Mee. I thought that was fascinating.

Porter: Denis, of course, has been a member of our oral history committee for storage from the very beginning. And you are active in that group now, too. So, yes, you will see more of Denis, who has written and edited many of the books on the industry. So when and why did you leave IBM?

McCoy: I graduated from San Jose State after doing my Air Force service, and I was drawn to a little company in Southern California that was a short lived position to make magnetic heads, IBM compatible magnetic heads, and found within a matter of weeks that I was seeing drawings that looked way too familiar to me, including ultimately some that had my name on them. And I realized that this was not the way to start a career. And my wife and I had invested more than our savings at that point in the deposit on a house, and we just said this is not how we are going to live our lives. And we left and told them clearly why we were leaving and came back to the Bay Area where I had grown up. And well, I ended up going into a company called Cartridge Television, which you know very well.

Porter: But this house you were investing in, was that down south or up here?

McCoy: Yes. It was in Manhattan Beach area, I think, is where we were going to move. I mean, it was a serious move. It was a great opportunity for a young guy fresh out of school when your boss comes back who has left to go to a red hot startup company, you know. I was proud and really looking forward to some, you know, growth. But you just do not start a career in that kind of environment.

Porter: And your mentioned your wife. When did the two of you get together?

McCoy: We got married in 1967, yeah, 38 years ago. She has been my partner and supporter through all of my storage industry background.

Porter: So in ’70 you went to work for Cartridge Television.

McCoy: Yes.

Porter: The first manufacturer of the home video recorder, the Cartrivision.

McCoy: Um hm.

Porter: And by way of a footnote here, you and I both worked for Cartridge Television. I was director of marketing planning, and you were the guy in charge of making all those video heads, as I recall.

McCoy: That is right. That is right. I had come out of a background. I had come out of a manufacturing engineering training background. Done my time at IBM, and I could not believe that you could not do the crazy objectives that Cartridge Television had for video heads, where the rest of the world said it was impossible. And so we just took it on and did it. Set up a manufacturing operation in Singapore, which in 1970 was a very interesting place to go. The whole country was just five years old.

Porter: I think you were one of the first magnetic recording people to offshore a manufacturing operation, weren't you?

McCoy: Certainly one of the first. I do not recall if we were absolutely first, but we grew a great operation there, and I got very confident with what you can do in Asia, certainly Singapore specifically in those days. Again, great experience.

Porter: Well, as I recall that operation, it got to be quite large and it was not part of the problems at Cartridge Television. You produced heads. It seemed to be there when they were ready to make the drives.

McCoy: Yeah. Yeah. Well, the lowest cost heads that could be procured to make what was targeted to be the first real successful consumer video tape recorder, the general industry was producing heads that we could sell. Excuse me, that we could buy for $50 a head. And the target cost that we needed were $3 a head. And all the wizards said not possible. Not possible. And we just dove in and we did it. Within about six months of actually starting volume production, we achieved those costs, and it really enabled putting the machines out. But the history of how consumer video tape recording technology slipped from the hands of the United States and moved much farther west, could be the subject of another complete history. But it was an interesting three or four years that we had there in being a part of what is now dusty history on the shelves.

Porter: Well it was a fascinating area to start up. I could mention, I guess, the difficulty of getting the right kind of content to put in the cartridges which were being created. The president of the company and I used to visit the Hollywood movie moguls in Los Angeles to try to get the rights to include first run movies in this thing. And the movie moguls would say "Rent a movie? Are you out of your mind?" Now today, of course, here in 2005, they get more than half their total revenues from the rental of the various tapes and disks after the theatrical phase of their movie releases. But in those days it was very hard. We finally set up a joint venture with Columbia Pictures to get the first movies to put into those cartridges you were making it possible to make.

McCoy: Yep.

Porter: However, the company that had really funded it, Avco, went off in a different direction in '73. I remember one day when the board of directors, the control of the board, fell to the other side of the company that was doing financial type activities instead of technology, and they decided to close down this startup technology thing at Cartridge Television, and all of a sudden on one day you and I were out of work.

McCoy: That is right. That is right. Luck has a lot to do with anybody's career, you know. And I will take the good luck that I have gotten along the way. In that case, Avco was experiencing the reality of the bankruptcy of Rolls Royce making engines for the Lockheed L1011, where Lockheed was getting the wing assembly from Avco. And when that business caved in, the whole pet project of the CEO, which is what Avco -- I am sorry, what Cartridge Television was, became a very vulnerable operation. And so it does not exist anymore.

Porter: But you stayed in magnetic heads for awhile.

McCoy: Oh, yeah. Oh, yeah. I went on to Infomag, Information Magnetics, to make video heads for the RCA recorder.

Porter: In Santa Barbara?

McCoy: Yeah. That is right. They were in Santa Barbara, the RCA recorder that was supposedly killing the Cartridge Television recorder in Indianapolis. We later learned did not exist, kind of a classic, consumer electronics political.

Porter: They put on a good show. I visited there to see the show, and it was a good show.

McCoy: It was a good show. Six total machines, three of which worked, none of which interchanged. So it was interesting. Again, this country shooting ourselves in the foot and sending the technology across the Pacific Ocean gave them that.

Porter: Well I guess we might mention that Mr. Morita, the founder of Sony, did come around to visit us at one point in Cartridge Television. And I and another fellow showed Mr. Morita around the facility in San Jose and apparently we inspired him to go home and do the Beta drive, which came out a few years later.

McCoy: Yeah. Yeah. Well, when the consumer video world completely left the U.S., and I was at Infomag, I inherited what was called the Mini Peripherals Head Group. We made heads for the digital

cassette, the floppy disk, the card readers, some other tape products. I had done some work in floppy disk heads at IBM back earlier. We made the first ferrite floppy disk heads there. Again, a fascinating place to learn what was going on in the real world and to produce a lot of innovative products. That then led to me coming back to Information Terminals, which was a media company, oddly enough, that we ultimately ended up renaming Verbatim. Carl Holder was my boss there, where I transitioned from the manufacturing side to the marketing side, because nobody else could talk about my product to the customers.

Porter: Carl was an interesting character. I had originally hired Carl at Memorex some years before and moved him to California. And then when Memorex when off into other areas, he moved over to ITC, and I think was one of the key people that helped name it Verbatim, as I recall.

McCoy: Oh, absolutely.

Porter: Yeah.

McCoy: Absolutely. Carl created a great environment for me and a number of others to grow. The products that I made there were media products, primarily the quarter inch data cartridge, the 3M cartridge. We were the first licensee of 3M, that later became the Quick Cartridge and then the Trevan Cartridge. And I do not know if it even exists anymore. But it was a media device that had a very long life, if we go back, at least two decades. And there are not many media products that have that kind of life.

Porter: ITC was a leading company in that kind of product area, in several areas, including actually floppy diskettes after awhile, and a good place to do all of that if you are going to introduce a new product.

McCoy: Um hm. Um hm.

Porter: You were there, what a year or two?

McCoy: Oh, no. Four years, I think.

Porter: Oh, OK.

McCoy: And then moved to a neighbor company that was just rising like a rocket, Shugart Associates, making floppy disk drives. I went in in a product marketing position that very quickly became a manufacturing engineering program management kind of role with the recording heads that were a real gating component in the production of the double sided floppy disk drive, the eight inch floppy disk drive.

Porter: I think we should note that by that time Shugart Associates had become a world leader in making diskettes.

McCoy: Um hm.

Porter: And they had a year or two before that, been the innovators of the five and a quarter inch diskette.

McCoy: Um hm.

Porter: So you moved into a very hot area. And of course, wasn't it at that time also that Xerox had already bought the company?

McCoy: Yes. Yeah. Yeah. The innovative spirit within Shugart Associates was bleeding out. But the company was still a terrific winner and actually the people in that company at that time went on to become the launch characters of a lot of businesses later, a lot of businesses. The first one, of course, that I relate to is Quantum, which I moved- I was co-founder there. I moved out of Shugart Associates to start Quantum as the VP of marketing, making really one of the first higher capacity five and a quarter inch Winchester disk drives. Excuse me, eight inch Winchester disk drives. <laughs>

Porter: I was going to mention eight inch, yeah.

McCoy: Yes. Yes. That was the next company. Anyway.

Porter: Well, they had become one of the first early independent manufacturers of eight inch. IBM built the first eight inch hard drive. And Quantum became one of the follow-ons with a very interesting group of people, you and the other guys had got together a Shugart Associates. As I recall, didn't you have to go outside that group to get somebody to be CEO? The VC's…

McCoy: Yeah.

Porter: …wanted somebody with more of a bigger title in their background before they would fund you?

McCoy: Yeah. Yeah. And it worked, yeah. The company launched- Well, I wrote the business plan, put together the initial strategy and off we went. And I realized through that experience that my sense of markets and technology and where opportunities lie, took continuing acceleration of your aggression and your view of creating value for users. And pretty quickly I was pushing harder than the rest of the crew at Quantum was comfortable with the strategy, with the evolution of the strategy. And out of that came the creation of Maxtor, the five and a quarter inch part of my career.

Porter: Well, I remember that vividly as we both recall. I got a call one day from Jim Patterson, who was your

McCoy: Yeah.

Porter: CEO and co-founder, could I come over right away? I said, OK, I had known Jim in the past. And I said when I got there, "What is the matter?" He said "Well, I had to fire McCoy." I said "Well, why? What is the matter?" He said "Well, he was just driving me crazy and wanted to go on to doing a five and a quarter inch, and we are not ready to do that. And finally I just got tired of all of that and fired him." And he wanted my suggestions on who he might possibly replace you with to run marketing for the company. He said "Do you have any ideas?" And my response to Jim was "Well, McCoy was right. You were wrong. You ought to hire him back." And out came a series of four letter words that I found rather interesting at the time. And I finally gave him a suggestion or two, and I believe he eventually used one of my suggestions for the guy he hired actually. But as I recall, I had a few overflow consulting projects and got you to do a few of those while you were putting together your new company, didn't you.

McCoy: That is right. That is right. And I will always appreciate that, Jim. Now, I believe everybody did the best they could at that time, you know. And as you and I worked together in the interregnum, in between Quantum and Maxtor, on my part, you had some great projects. We went out and did a lot of interesting things for a lot of companies, one of which was looking at the viability of metal media, thin film media.

Porter: Yes. One of the consulting clients on a project that you took over was for Ampex.

McCoy: Um hm.

Porter: And they had been making a -- I guess they were the early pioneer on plated disks for disk drives. And the problem was to determine whether they ought to continue doing it and how they ought to do it, and that was your project.

McCoy: Yeah. Yeah.

Porter: So you did go out and talk to all the disk drive manufacturers in the course of coming up with that solution, didn't you?

McCoy: Yes, I did. I talked to all of them. And I read a recognition of the inevitability of the technology moving into the mainstream in hard disk drives, but also a real resistance to be the pioneer to take the first steps, which clearly came to define to me an opportunity. And that meant the starting of another company, which was Maxtor, which was based upon the application of thin film media, which initially was plated. We also took a total of seven simultaneous technology risks that the rest of the industry was convinced we were crazy to take more than one. But today everyone of those risk elements has become a standard part of every disk drive made. So it was an interesting time. We made some stumbles.

Porter: So Ampex started, or Maxtor started in '82. And you became the first company to use this smaller, at that time, the smallest disk.

McCoy: Um hm.

Porter: The five and a quarter inch. And you made a high performance drive for higher end applications, not for PCs specifically, but for higher end applications at that time. What did you think was the market for those?

McCoy: Well, we really enabled the creation of what became the engineering workstation marketplace, which was really a powerhouse computer on a desktop for use in engineering applications. And it need a 100 megabyte plus drive of more performance than the floppy based, floppy technology based drives down in the 10 and 20 megabyte range. And that market just took off very strongly based upon, again, the enabler of the storage technology that we provided.

Porter: And you suddenly had a dynamic growth company.

McCoy: Um hm.

Porter: And you had all the problems associated with putting an organization together and making it work.

McCoy: Um hm.

Porter: How did you approach that?

McCoy: We had a great organization. I am a great believer in the effectiveness of good teams. And we had a great team. We put together a great team, and we did some amazing things. I mentioned we had some stumbles along the way. A good story, I believe, that is not likely to be repeated because the market realities have evolved. We were a pure OEM supplier at that time. And it is not broadly known that we ended up bringing back the first 10,000 drives that we built. OK? Every single drive came back for us to replace the media in it. It was basically a recall that we made when we realized that those first disks, it was really the lubricant, the lubricating material on the surface of the disks that was a super secret sauce from Ampex.

Porter: So you were using those Ampex plated disks.

McCoy: Yeah.

Porter: In those first 10,000 drives.

McCoy: Yep. Yep. And they simply did -- they did not have the long term reliability that the customers needed. And when we realized it ahead of when the disk suppliers realized it, we engineered our way around it. Got some other sources up, and felt we had to bring back all those other drives and put media in them that would last the life of what was intended. And we did do that. And we were very upfront with our customers. We managed it well, cycling them through a rework process, and grew beyond that to be an extremely successful company.

Porter: What kind of disk did you go to?

McCoy: You know, well, I believe what we went to was a sputtered disk from Domain, if you remember Domain technology?

Porter: Sure.

McCoy: Yeah. And we worked with all of the metal disk suppliers as they came on board. It was one of those significant transitions in the storage world going from the oxide disk to the thin film disk, and it was not without some bumps along the way, so to speak. But today you cannot find an oxide disk in the storage world, period. And thin film disk has, like every other technology in storage, has become massively refined from those early days 20 plus years ago.

Porter: But you also pioneered with the use of an in-hub motor.

McCoy: Yes.

Porter: An idea which your co-founder came along with, isn't it.

McCoy: Um hm. Um hm. Well, as I said, we took seven simultaneous risks, none of which were totally new, but the combination of them was wholly new. It was thin film disk. It was the embedded spindle motor. It was new technology heads, which was several different kinds, an advanced ferrite head, then a composite head, then a thin film head. We jumped directly into those as we saw them reach the threshold of maturity, if you will. We got eight disks into a standard height drive when the rest of the world was putting three or a maximum of four in those drives. We used surface mount technology for the electronics on the board, which was an exotic military technology, but again, ready for use in commercial products, and today's absolute standard. And we saw that happening. What were some of the other things that we? We brought all these risks together in a way that would produce a whole new value equation for the OEM marketplace. And that was really the difference, was focusing on the marketplace and what the marketplace needed. The embedded spindle motor, rotary actuator, was another one that had come from other drives, but never into a five and a quarter inch drive before. So we just made a step function in horse power, if you will, that was available to computer manufacturers with that drive. Rest of the world was delivering- the rest of the competitors were delivering 20 megabyte drives going into 30 megabytes, and we delivered a 140 megabytes with more than twice the performance. Those are market changer kind of capabilities. And we grew from there. The 140 was even a detune of the initial drive architecture, which was a 190 megabyte drive, which we soon followed. And then we grew from there.

Porter: Where did you do all this manufacturing?

McCoy: We started in San Jose. We moved the manufacturing off to a familiar terrain, to Singapore, very effectively. It was a higher technology drive than was being built in Singapore at the time. Again, that was another risk that was not to be taken by the conventional wisdom, certainly not a servo drive, a servoed positioning drive. I think we were the first ones to take a servo drive to Singapore. But it worked very, very well. And we had over 10,000 employees in Singapore at one point in time, over 12,000 employees total in Maxtor, got it to a billion dollar plus per year run rate. It really drove the high end of the marketplace in five and a quarter for many years, and established a very good market position, moved into three and a half inch drives. And the company is still around, which is quite something in the storage world.

Porter: Well, I wanted to ask you about the transition in the company. It went through a lot of changes over time.

McCoy: Um hm.

Porter: Now, you stayed on as CEO up through about ’87?

McCoy: About right.

Porter: Yeah. And then you stayed on as chairman of the board, but not as the executive officer for

McCoy: Right.

Porter: A number of years after that.

McCoy: Yeah. Then I came back in ’90, or ’91, early ’91. Yeah.

Porter: Yeah. OK. But why did you leave executive management when you left?

McCoy: That was my first retirement that I flunked, is the bottom line. OK? And the company basically harvested its initial position for a couple of years, which you cannot do in the storage industry. You got to keep fighting. You got to keep growing. And when it became clear to the board that the company was not keeping up the pace of change.

Porter: It had gone public by then.

McCoy: Oh, yes. Oh, yes, it had gone public before any of this happened, before any of the sideways slide began. I came back in and brought in, held the company together for a time while bringing in a new CEO out of the semiconductor industry.

Porter: Yes. You had two semi-conductor oriented CEOs in a series.

McCoy: Yeah, yeah. Which I said was either the smartest thing I had ever done, or the dumbest I had ever done. And in reality looking back it had elements of both in it. Larry Hootnick did a terrific job of turning around the company in ’91 or ’92, whenever he started, an outstanding job. But the storage industry, the disk drive industry, is not a clone or even a close parallel to the semiconductor industry.

Porter: The product life cycles tend to be shorter.

McCoy: Yeah.

Porter: And you have to keep up with the pack.

McCoy: Yeah. Yeah. In all technology areas.

Porter: See, by that time you had had quite a number of competitors that had observed your model.

McCoy: Um hm.

Porter: Of doing a high performance drive. And you were the head of the pack, but you had a lot of competitors, didn't you?

McCoy: Oh, yeah. Oh, yeah.

Porter: And could you comment on which of those were the most effective that you were most worried about?

McCoy: You know, right off to a question like that, we were worried about all of them. OK? When you are running a company, you have got to treat every competitor like they are going to be able to pull off a major coup.

Porter: Because within a year or two after you came out with that initial drive, there were a number of other five and a quarter inch high performance drives, weren't there?

McCoy: Yes. Yes. The whole game at that stage in the storage business, and I know it has not change fundamentally, the game is moving faster than the other guys. A six-month lead in the disk drive industry was golden, absolutely golden. If you were right on the market, you could survive. If you were six months behind the market in the development of new technologies, you were dead. You would just drain your balance sheet in an afternoon and the ballgame was over. And what was not broadly recognized then, and it is probably the same today, the disk drive companies that had a dozen products, there is a general sense, or there was a general sense, that those dozen products each of them provided their proportional part of the profit to the bottom line. Not the case. Absolutely not the case. Say a dozen products, two or three of those products produced a 150% of the profits of the company. And at any give time, you did not know which product was going to be the winner, OK? You obviously developed every one to be the winner. OK? And sometimes you won and sometimes you did not.

Porter: Each individual product aimed at some kind of a specific market opportunity.

McCoy: Yes.

Porter: And you problem being not being able to really forecast authoritatively which of those markets was going to expand enough to really take your production.

McCoy: Sometimes it was the market, but more frequently it was our ability, or any competitor's ability, to execute the technologies needed to produce the next generation product. OK? There were products that were early, but far more frequently it was products that were not boomers, that were not great successes, because we did not develop the technology fast enough to get the product in the market.

Porter: And somebody else did.

McCoy: That is right. That is right, and somebody else did. It was a Darwinian game that was ruthless and all the way through that stage of my career I kept hearing that Japan was going to take over the disk drive industry. You know. You were there. And it did not really happen. And it still has not happened to nearly the degree that was predicted. OK. OK.

Porter: Well the product life cycles among the American companies was so short that the Japanese management style of consensus decision making really made it difficult for the companies in Japan to reach their conclusions as management quickly enough to do the things necessary to get those products out.

McCoy: Yes.

Porter: You would have to drink beer and sing Karaoke too many times to reach a conclusion, and the Americans could do it much more rapidly.

McCoy: That is right. That is right. It was management on horseback. We were making strategic decisions every day on the fly. And that is still the way, I am sure, that it has to be done to keep up the pace. And not all cultures can move at that pace. And the companies that have survived have developed those cultures. They have to. We also learned very much the importance of quality. OK? We were able to get away with quality levels that were not that good going back into the '70s for sure, when it was an IBM marketplace. IBM's own internal support was so strong that they could smother problems in the field. OK? Well, that is not the reality today, and learning along the way how to put out a product that was a million hour MTBF, and five nines kind of delivery quality, was not an easy exercise.

And the companies, even the Asian companies that were supposedly -- the Japanese companies that were the master of that, were not really able to do it at the rapid pace generation after generation that the surviving companies in the storage industry did, and the disk drive world did, and are doing today. It is one of the areas of American products where America is putting out the world's quality standards.

Porter: OK. But going back to when you retired as the active executive of the company, and then brought in first George Scalese as the CEO, and then Larry Hootnik, what did those management changes do to your core of key people in the industry that you relied upon to get all these things done? Were your key people generally staying on for these new managements?

McCoy: Some did, some didn't, is the simple answer. And the initial success of the company was created with a very tight team, with extremely low turnover, because it was a great place to work. OK? The culture went through a couple of evolutions along the way, with a lot of learning. And a lot of people left, a lot of people came back, interestingly enough. OK? It was a very interesting dynamic in the people side, because people are always the key to success. Well, I was observing here a year or so ago. There is not a single employee left that was in the early days. There are no more two digit, three digit employee numbers. There may not even be any four digit employee numbers active at Maxtor anymore. And I am sure that is the way with all of the major players today. If I would have bet that I would be looking back, sitting here doing an oral history 25 years later, that would have been hard to conceive at the time. So.

Porter: Jim, the company went through some very interesting changes in the management after you became a retired CEO even though you were still there as a chairman of the board, as I recall, but, eventually, the company got involved with a Korean company and it really eventually ended up being owned by them.

McCoy: Yeah.

Porter: We're talking about Hyundai.

McCoy: Yeah.

Porter: How did all that happen?

McCoy: I could make grand pronouncements about strategic synergy and such. The reality was the competitive environment went through the kinds of ups and downs that it always has and, in one of those, the company seriously needed capital and Hyundai was seriously interested in being a factor in the global disk drive market and Maxtor had a very strong presence in it. So we had, you know, shared objectives in that regard and it worked. It worked. They ended up taking a larger and larger piece of the company

and I see it in the light of all of the surviving disk drive players have gone through deaths and rebirths multiple times, some more visible than others but every player out there has gone through crucifixion and resurrection, if you will.

Porter: Of those that had still survived.

McCoy: Of those that still survive, yes. Absolutely. Multiple times in every company's case. It's not been a smooth ride. And it won't be a smooth ride for even the continuing players.

Porter: Of course, Maxtor was the only one of those existing survivors that ended up being owned by a foreign company for awhile.

McCoy: Mm hm. Yeah.

Porter: So how did it get turned on to its own status as a U.S. company again?

McCoy: I'm not sure. I'm not sure of the specific dynamics of that but the company went private and then was brought public again and ultimately, I believe, Hyundai's part was sold out into the public market to where, again, it's a largely independent company today. My involvement with the company stopped more than ten years ago so I went off to do other things.

Porter: Yes. And Maxtor, of course, did eventually bring in a very sharp operations executive, Mike Cannon, out of IBM.

McCoy: Oh, he did a great job, yeah.

Porter: He did a great job of turning it around in that era.

McCoy: Yeah.

Porter: And they've since gone through other changes but it's, in that era, it was a big turnaround again.

McCoy: Mm hm.

Porter: OK. Going back a little bit on the Maxtor, there were some acquisitions, subsidiaries during that period, one you were there and during the earlier period. I recall U.S. Design, Storage Dimensions and Maxoptics, the optical company that started. Did you have a role in those?

McCoy: Yes. They were all logical acquisitions. They worked out about as well in total, as acquisitions do, which is about a 50/50 hit rate, if you will. Maxoptics was our step into optical storage, which is increasingly important and certainly, as the compact disk and the DVD have come into the consumer market, it's become a huge part of the overall storage world but Maxoptics was aimed at the computer side of recordable optical. It was a joint venture effectively with Kubota, a Japanese company. Actually started as a reselling entity of a Rico manufactured product. There was a very successful write once only WORM -- right once, read many -- optical disk drive in the early days so it was an attempt to broaden the company that I think was very appropriate for the time. Storage Dimensions was a marketing exercise, bringing in some marketing horsepower, some marketing talent beyond what the company was growing internally and that worked quite well. U.S. Design's capabilities were pretty quickly diluted in terms of their value that we could get the rubber to the road. So we didn't make too many acquisitions. By far, the most strategic acquisition in the company's history was the acquisition of Miniscribe that brought the low end, the 3 1/2" drives into the company that were -- rapidly became the core of the company's growth. If you don't keep up with the ferocious pace of the high end of the marketplace, you'd better do a good job with the low end of the marketplace and that shift sort of took place with the acquisition of Miniscribe. And, today, Maxtor's dominance is -- I don't know that the word dominance would fit any more. Interesting dynamics occurred, Quantum's disk drive operation was acquired back in or reconnected or connected.

Porter: Of all the people who could understand the irony of Quantum's HDD business being acquired by Maxtor, it has to be you.

McCoy: Yes, yes, yes. I smiled a lot when that happened. <laughter> And it made good sense. It did make good sense and it still makes good sense and, indeed, they've gotten back a high end element of the business that is doing OK today, I understand. So that's good.

Porter: And with all of the consolidation in the industry, if we go back to the '80s, at the peak, there were something like 77 companies in the world making hard disk drives and now there's nine if you count very carefully, including a couple doing just one inch drives. And the consolidation has been one of the things that has probably helped the industry be a bit more profitable here and there and one of the things about the Quantum HDD acquisition by Maxtor is it eliminated, as a separate entity, one of the companies that had done a lot of price cutting in the years before it was acquired, which made it very difficult for the other companies to make a profit when they had to meet those prices competitively.

McCoy: Perhaps. I wasn't in an active role at the time that that all took place. I would also observe that the role of price slasher was a baton that was passed among all of the players <laughs> and still is, almost week by week, transaction by transaction. It's a brutally competitive business, which is not bad. It's not bad. The customers get terrific value out of the storage industry, out of the hard disk drive industry specifically as a result of ferocious competition. It's much more of an oligopoly today, an oligopoly kind of behavior in the marketplace than when, as you say, it was 70 plus companies. It's perhaps a little less efficient in pricing than it was but the consequences are huge now. Billion dollar swings in revenue and profits can take place in the blink of an eye.

Porter: So the customers get a better deal than the shareholders do? <laughter>

McCoy: That's a whole 'nother subject. <laughter> Capital formation in this country is a fascinating question and how it's evolved, just over the course of my career, OK? Yes, in total, the disk drive industry, if you take it from time zero to today, has not made money for shareholders. However, shareholders that have timed their entry and pull-backs in investing in the storage industry well have made extraordinary returns, which is just a reality of the American public markets.

Porter: Well, we should observe that you didn't drop out of the disk drive industry, you kept involved in doing the new things, the name Terastor comes up as a company from the mid-'90s that you and a few other interesting characters in the industry actually started. What was it all about?

McCoy: I wasn't interested in getting back into storage for any kind of me, too, purpose. The mission of Terastor was truly a dislocation in storage. We called ourselves a decade ahead and, indeed, we were, as time is showing. It's a technology based on a hybrid of optical technology and magnetic recording technology, basically bringing heat into the equation, which is still the next step in hard drive technology today. Terra Store developed some terrific technology that was truly dislocative in concept. The timing, and timing means a lot, timing can mean everything in the real world. We had come into some basic technology challenges that we were working our way through that simply needed more cash at a time when the dot com implosion, the dot bomb, was occurring, OK? Along with my learning of the realities of litigation as a competitive weapon in the marketplace, when one threatens multi-billion dollar players, came together to pinch off the financing of the company but, even now, years later, Terastor is a licensing entity and the technology is, as we speak, showing up in multiple new products. So the story of Terastor is not over is the bottom line there.

Porter: Has there been success in licensing other companies now?

McCoy: There are already some licenses, some important licenses and there could very likely be some extremely important ones in the future.

Porter: So your hope is that the industry will progress quickly enough so that you'll be able to sell those licenses before the patents expire?

McCoy: Would be nice. <laughter>

Porter: The organization still exists on paper?

McCoy: Yes.

Porter: As a licensing entity?

McCoy: Yes.

Porter: Good. Any of your colleagues involved in that or any of them still involved?

McCoy: Oh, yeah. Oh, yeah. Amyl Ahola and Bill Dobbin are still very much engaged in that whole process of the licensing.

Porter: Very good. And you're active on other boards, as I understand it?

McCoy: Much less than I was. I'm actually currently on a biotech board, which is fascinating, a world that I've had nothing to do with until involvement with this company but the realities of building a team and focusing on strategies and markets where you're, you know, you can bring unique value, those aspects are the same. So it's very interesting.

Porter: You're probably able to warn them about very interesting things to look out for?

McCoy: Well, you know, I had an observation by a sage venture capital guy that stuck in my head here that success in venture capital is, to a large degree, about pattern recognition, and it's true. It's true. <laughs> Those who do not study history are doomed to repeat it is another way of saying the same thing. It's interesting when one can observe things going on around them and say, “You know, this is analogous to what happened at this point in time and, from that, I learned…”, and you pass on your advice. The advice and mentoring of upcoming entrepreneurs is something I really enjoy these days, you know? So it's not a bad place to be.

Porter: Well, perhaps to wind up, Jim, if you look back on your varied and very exploratory background in all these areas, what do you think are the most important and significant things you've learned from all of these years of starting companies and participating in them?

McCoy: Well, the first principle is focus on value and value to the customers, OK? Value to shareholders will follow the creation of value to customers. And there is no substitute for leadership in a technology area, a business area, for being the leader. I know others have made reasonable successes being harvesters of technology or later arrivals. That's not me, never has been me and I love the process of being out there on the bleeding edge, delivering unique value to customers. Another very strong sense, for me, is the importance of the team. A team of good people can do great things, well managed and well motivated. A team of great people, reasonably managed and motivated and guided in strategic directions, can do spectacular things. So, for me, I've really, really learned to focus on the team and the development of the team and the culture of the company. How people work together and actualize themselves, along with meeting the needs of customers is where magic comes from, it really does. And that's where a CEO can make a huge difference in a company.

Porter: Acting as a referee among all those aggressive people you'd hired to get all those things done.

McCoy: You know, I've heard others describe it as referee. That's rare in my experience, okay? When you get people with resonant objectives, OK, parallel objectives, where they get working together, you know, finishing each other's sentences, if you will, that's when you've got a truly winning team. On occasion, you have to referee and we've certainly known a lot of companies like that. I don't think that's the most productive environment. I'll go many steps beyond to get a group of people that will all see a parallel mission and all go for it and all support each other going for it.

Porter: Well, there's a certain leadership style that recruits people that are able to work together.

McCoy: Mm hm.

Porter: That's one of the things that you've shown in all these areas, I think, isn't it?

McCoy: Yeah. And I'm very happy with that. It's one of those life rewards that goes beyond money, if you will. I really like to see the success in the people that I've helped in their careers. They're as gratifying to me as anything else that I've gotten out of the career in -- yeah, in this technology or in this marketplace is great people and the growth in their lives.

Porter: Excellent. Probably a good place to close this and very much appreciate taking your time to do it, Jim.

McCoy: Thank you and thank you for doing this whole program of getting your oral histories done. You are absolutely the right guy to be doing it. You were not only an observer, you were a part of many of the stages of this history so thank you very much.

Porter: Thank you, the feeling's mutual.

END OF TRANSCRIPT

