



Oral History of Martin A. Goetz

Interviewed by:
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Martin A. (Marty) Goetz

Conducted by Luanne Johnson

Abstract: In this interview, Marty Goetz, one of the founder of ADR (Applied Data Research), discusses his background prior to ADR, the transition of ADR from a professional services company to a software products company, and the challenges of selling software products in an era when IBM bundled software with the price of the hardware. He describes the challenge of selling ADR's initial products where it was necessary to create a market for products the customers didn't know they needed and how that changed with the acquisition of Datacomm/DB in the 1970s which put ADR into competition with other vendors selling database management systems. Intellectual property protection issues for software companies and the reason that ADR chose to lease and license their products is also covered.

Background Prior to ADR

Luanne Johnson: What I'd like to do in this interview is cover some of your background prior to the forming of ADR. Did you have a technical background? Where did you grow up and what kind of schooling did you have and how did you end up in the position to be invited to join this new venture?

Marty Goetz: I majored in business statistics and got a B.S. and then a Masters in business administration. I've got a B.B.A and an M.B.A, and got out of college in 1953. And worked for a year and a half doing market research for an advertising agency.

Johnson: Okay.

Goetz: And then went into the computer field in 1954. When I went to ADR, which was 1959, I had had five years of experience, and that five years was basically programming. The first four years were at Sperry Rand, where I worked with customers. They sold a large-scale computer which was the Univac I and then the Univac II and they'd send a bunch of people out to help build the first application, because very often they wouldn't get paid until they got applications on the air. So that was all sort of bundled. This whole group of people went out,

and I went to several sites. One was Con Edison in New York. Another was Parke Davis. Another was John Hancock. Another was the Philadelphia Navy Yard.

In between working with these customers and helping them design their applications, I started building my own... Early on I somehow had time between assignments and there was a generalized sort program that was being distributed by Sperry Rand. What happened was each of the manufacturers built some basic software. Sort programs, assemblers, report generators, and just gave them out with the hardware. But there was a particularly inefficient sort that they were giving out, and I started building some specialized sorts, specialized in terms of machine. It was a word machine, so I built a four-word sort, a two-word sort, a ten-word sort, and each of them was optimized, as opposed to a generalized sort, and went very fast.

So I started building some sorting programs early on. But I also built some programming tools, programming debugging aids for my own use. Those were sort of like field-developed programs at IBM. These were programs developed internally that they started giving out.

Johnson: Okay.

Goetz: So in my first four years, besides working on applications, I was building some generalized software that got distributed within Sperry Rand. Then I left Sperry Rand, being very frustrated with them, as having good hardware but very poor sales techniques, and starting to lose share to IBM which was coming out with their early computers, the 702 and 704.

I went to IBM and went to their systems programming group in New York. I was there for about a year, working on an Autocoder assembler that they were building for the 7070. However, I knew various people at Sperry Rand, and became aware that several people had left Sperry Rand and had formed a company in Princeton, New Jersey, and I had a great desire to be in my own company. I almost went to Computer Sciences that had just formed a couple months before ADR.

But they were in California and these people were in Princeton, so I contacted them. I knew some of them, and they welcomed me aboard. There were six other founders, plus myself. I became the seventh founder, and they gave me a founder's share. It turned out some of these people couldn't leave [their current jobs] as quickly as I could. I gave IBM two weeks notice and ended up being the first employee of ADR. I was not, per se, a founder but I got a founder's share. So there were seven of us, all with somewhat different skills but basically all programmers, which is what I was.

Johnson: Where did you learn to program? Did you learn that in college as part of your business statistics?

Goetz: No. At that point, it was not being taught in college.

Johnson: I didn't think so.

Goetz: When I started in 1954, Met Life had gotten a Univac I and was in the process of getting a Univac II. The very large insurance companies, the very, very large banks, the government... I think they sold maybe 30 Univac I's. They started selling those about 1952, so they were about two years into getting some commercial users. GE was a user of the Univac I, as was the Census Bureau.

Sperry Rand was hiring people with basically no experience, but training them for 12 weeks—six weeks of programming and six weeks of learning the internals of the Univac. There were very, very few programmers around. It was a whole bundled environment.

Johnson: When you were working at the ad agency, did you answer an advertisement for programmers? What led you to decide that you wanted to become a programmer?

Goetz: Well, what happened was I got disillusioned and decided to look for a job. And I guess I answered an ad in the paper. I didn't want to be in advertising, didn't really want to be doing statistical work. At the time, I was 24 years old, having gone for a one-year enlistment in the service between high school and college. So I got out of college at 23, and really didn't know what I wanted, but didn't think I really wanted to do statistical analysis. This market research was really more media research.

So I answered an ad. And they were looking for people with just a college education and they really didn't know what criteria. In fact, what happened was my brother who was a little older than me was an engineer... I had no feeling for computers. I was aware of the punched card equipment world, but had no concept of a stored program or how computers work.

My brother said, "Well, you really are not qualified. You don't have a math background." He thought it required people who were mathematicians. As you know, many, many IBM surveys have showed that people with music backgrounds make the best programmers.

Johnson: Right, yes.

Goetz: So I just sort of fell into it, and went through more training than the average user goes through, because at that point, Cobol wasn't available. When Cobol came into being, later on, you know, you'd go to two or three weeks of training to be a Cobol programmer and you'd be out building applications. So we went through 12 weeks of formalized training and learned how to program the Univac I. Didn't really learn how to design applications. You sort of got that more on the job.

My first job was at Con Edison, but within a year they sold a system to Parke Davis and they shipped me out to be in charge of designing the application with a group of Parke Davis people who they had trained.

So at that point they were hiring people, you know, as long as they thought they were bright people. But you really couldn't hire experienced programmers in 1954, there were no training grounds. There were absolutely none. Most colleges didn't have computers. If they were large, they may have had punched cards to do their administration.

And so I was there for four years, and worked my way up to heading a few installations, sort of becoming a troubleshooter, and getting very disillusioned with Sperry Rand, as being an ineffective marketing company, which proved to be true over the years. So I went to IBM but really having the feeling that I didn't want to work for a large corporation.

Johnson: Were there entrepreneurs in your background, in your family? Did you have role models?

Goetz: No. What I did have was a father who was... I was a product of the Depression, born in 1930 and growing up in the Depression and seeing my father struggle. But certainly not having a role model. In fact, my father, couldn't find work. He was really struggling and never quite recovered from the Depression. He had a problem working for his brother and so I think the one thing I might have learned was that I didn't want to work for someone else.

Johnson: That's interesting that, with that kind of background, instead of looking for the kind of security that IBM would offer, you had more confidence in getting into a situation where you had more control over the fate of the company. That's an interesting reaction to that.

Initial Focus of ADR

Goetz: I did somehow evolve, even prior to ADR, to programming tools. When I went to IBM in 1958, it was still all bundled. I was with IBM from 1958 through 1959. They had a systems programming group in New York City that eventually became the Poughkeepsie group, and they were building sorting programs, assemblers, RPGs, simulators and all this software. So I did have that interest in generalized software, as opposed to application software.

And then when ADR was formed in 1959, we were building software products under contract to RCA, Sperry, the government, which had some special purpose computers, to Bendix, I think even to IBM. These were fixed-price, competitively-bid programs that the manufacturers then gave away.

Johnson: OK.

Goetz: So we had no proprietary interest, but we were building these generalized programs. In fact, we built, with RCA, the first Cobol compiler, which they ended up giving out free in 1962.

Johnson: Was ADR formed with the idea of building that kind of generalized software as opposed to some of the other companies like CSC, which was much more focused on more applications.

Goetz: Actually, in the early years they were competing with us.

Johnson: Oh, were they?

Goetz: We had some time-and-materials contracts for programming applications, body shop contracts where we would do work at various corporations. But most of it was building software for the manufacturers. I don't know that that was our intent. I think our intent was just to sort of look for business.

Johnson: Okay.

Goetz: In fact, one of the founders, who came about a year later, was doing work for, I think it was called Libra Scope. They were doing work for the FAA and they were building hardware and had to deliver software. They knew some of the founders and we got a big subcontract to build some of the basic software for one of the first computers that was trying to do air traffic control. But it turned out that what we were building were, you know, assemblers, debugging tools. I think a little mini operating system, a sorting program. So we kind of moved slowly to software products, but it was just that there seemed to be some good business there. As opposed to a plan.

Johnson: Okay.

Goetz: We were not the first software company. We were the first ones to sell products, but there was an earlier company called Computer Usage Company.

Johnson: Right.

Goetz: Computer Usage, I think, was formed about 1955 or 1956, about three or four years before us.

Johnson: Okay.

Getting Into the Software Products Business

Goetz: So anyway, we just started, you know, bidding on these fixed-price contracts and trying to stay alive. And, then, RCA was in New Jersey. We knew them, we had built some software for them under contract and that's how we got involved with Autoflow, and that's how we got into the products business.

Johnson: How did you figure out how to go about marketing that as a product?

Goetz: Well, I really wasn't the marketer. At that point, I was supervising different development efforts including Autoflow. But we were doing services and we had some marketing people. The CEO was a marketing person and was not a founder. By that time, by 1965, we had ousted one of the founders, who was really more of a technical person. So we had people that were marketing-oriented. We had a few programming offices. We had one on the West Coast, we had one in Washington, and we had a few salespeople. And, actually, most of it was direct mail.

Johnson: Okay.

Goetz: It was just sending out literature to the RCA 501 users. It was really when we got into the 1401 and the 360 that we really had some type of organized and planned effort in terms of marketing. And then we started hiring salespeople. We had a sales manager. It wasn't until about 1970 or 1971 that I became responsible for a P&L center, and I was responsible for sales and marketing.

Johnson: Okay.

Goetz: In the mid-1960's, I was really more worrying about building it. But I did go out with salespeople, and one of the reasons we were successful was that it was a very, very easily demonstrated program. We could take a company's Cobol programs or Assembly programs and draw two-dimensional flow charts and also find out all kinds of logic errors. You know, a set of code that because we couldn't draw a line to it, we knew there was no way to execute it.

Johnson: OK.

Goetz: So besides drawing logic charts, which managers required for documentation, it produced some good diagnostics. So it was a very highly demonstrable program. You took the program, usually it was on punched cards, and you put it into the feeder and a few minutes later you watched the printer draw these nice flow charts. And so we sold quite a number of those, and that was all through the 1967 through 1970 period.

Johnson: And this was through using a sales force, people that were actually going out and calling on the customers?

Goetz: The CEO of the company, who we ousted in 1970, was very good at expanding the sales force. We had 30 offices, with one person each office.

Johnson: OK.

Goetz: We were selling a lot of Autoflows. We had another public offering in 1968 and we started building additional products. So by 1969, 1970, we had the other products being built and we had Autoflow doing very well and we had a lot of offices. We thought nothing could stop us.

Competing Against Bundled Software From IBM

Except we were capitalizing a lot of software, so even though our P& L's were looking good, our cash flow was not good. And we were feeling the pressure of IBM, of bundled software, and that was one of the reasons we started talking to the Justice Department back in 1967, 1968. We got resistance from customers who hoped they could get a comparable product from IBM. They were getting a poor product for free and had this hope that IBM would come out with something new.

Johnson: Right.

Goetz: So it was a very difficult environment. Plus, we were a public company. We were building the LIBRARIAN and ROSCOE and MetaCOBOL and had all these dreams of doing well.

It was sort of obvious that we were trying to build a business and we were competing against bundled software. So we became very aggressive and then IBM unbundled. What happened to us happened to a lot of other companies from 1970 to 1972. Even though there was unbundling, there was also a recession.

Johnson: Right.

Goetz: And companies weren't buying. So we didn't do well between 1970 and 1972. But after that, when companies started buying software and our products got a little bit more mature, we started doing very well from 1973 on.

Johnson: Did ADR become, then, strictly a products company?

Goetz: Well, it's interesting because I wanted it to be purely a products company and I was running the products division. We ousted the second CEO in 1970 because his criteria for having profits was to sell more as opposed to spend less.

Expansion of ADR in the 1970s

So John Bennett came in as our third CEO. The first CEO was one of the founders, the second person whose name was Dick Jones, came in about 1963 through 1970, and then John Bennett, who stayed the next 20 years. We had acquired a small company called Massachusetts Computer Associates in the mid-1960's. John Bennett, who was running our Washington office, where we were in the service bureau business and the programming services business, came to Princeton and we made him CEO. I didn't want to be CEO. I was happy running the products.

But about 30 or 40 percent of our business in 1970 was services. We had a Washington office. We had an L.A. office and we had the Boston subsidiary. So John Bennett basically ran those other operations, which ended up being never more than five percent of our revenues.

Johnson: Oh, okay.

Goetz: And he let me run the products division and we got along very well, and there was no reason to try to oust him. The company did very well. He brought in some good people to help. He brought in a CFO, and, he managed all our corporate services, plus he managed the small services division that we had, which I don't think ever collectively went over \$10 million even at our height, when we were at about \$170 or \$180 million.

So we basically were a products company, but we had a couple of small divisions and John was happy spending time running those. He had come from the Washington office, and, you know, felt a certain loyalty to them. But my own interest was purely products.

Johnson: And it sounds like that was by far and away the bulk of the revenues.

Goetz: That's where we made our reputation and where we made most of our profits. So that was the core of the company, and John was very good. We were a public company and the analysts followed us very closely. Our stock came out at \$5 in 1965 and in 1968 we had an offering at \$25 and sold some more stock.

The stock peaked at beginning of 1969 at \$40 and we were followed very closely by the analysts. In 1973, the stock had gone down to about \$1. It went from \$5 to \$40 to \$1.

Then over the next 15 years it recovered nicely, and I guess in the mid-1970's, the analysts started following us again, and John Bennett spent a lot of time with the analysts. He spent a lot of time with some of our larger customers, especially when we got into the database area where we were competing with Cullinet. They had lots of dog and pony shows. We would do what they were doing, invite customers to come for the day and hear about our technical directions. And John Bennett would spend a lot of time with big customers. At that point, a lot of our sales were in the \$300,000, \$400,000, \$500,000 per sale range if there was a database sale involved.

Johnson: Oh, okay.

Goetz: So we complemented each other well. He spent a lot of time with customers and with Wall Street and I spent my time running the software products division.

Johnson: You said that 30 to 40 percent of your revenues were still from services in 1970, but if it was down that low, it sounds like the shift really occurred with the success of Autoflow.

Goetz: Well, right. Autoflow starting bringing in revenue starting about 1966, but we had these other operations. So by 1970, I don't think we were more than a \$10, \$12 million per year company, of which maybe about 50 or 60 percent may have been Autoflow and the other half, \$3 or \$4 million, might have been services. But the \$3 or \$4 million of services never became more than \$10 million.

Johnson: Right.

Goetz: And when we sold out to CA [Computer Associates], we were close to \$200 million.

Johnson: I think it's an interesting contrast to Informatics because they built the professional services side too.

Goetz: Right. They did a very good job of having several divisions that did very well. They had their services business and their government business and then they had their products, and each of them did well. I can't say why we didn't do better in services, but somehow John Bennett never, for one reason or another, was able to build that up.

Acquisition of Datacomm/DB

But we were successful building the products business, and there we went through a couple of acquisitions. Do you know Ken Parker?

Johnson: Yes, sure.

Goetz: We acquired his company Insyte in 1979 and that's how we got into the database business.

Johnson: Was that spelled I-N-S-Y-T-E? Is that how they spelled that?

Goetz: Yes. So we were growing at 30, 40 percent a year, and doing really quite well for a good number of years. But I'd say it all started about 1973, that's when we really took off. The 1970 to 1972 period was a very tough period.

Johnson: Yes, it was for everybody. Yes.

Goetz: It was for everybody, plus we had expanded a lot on the basis that we were going to sell all these products, and we weren't. Plus there were some other products that never even saw the light of day, that Dick Jones had built in Washington, and one in Boston. So those we cut out. The ones that I had, the Princeton-based products, for the most part, survived. So it was a nice ride up, but we had – we were on a roller coaster at times.

Johnson: Yes.

Goetz: Especially from 1969 through 1972, it was mostly down, and that was the time we were also pressing IBM very, very hard, because we thought part of our problem was the bundling.

Johnson: Sure.

Goetz: Which was true, but I'd say the other part was getting people to think about buying products. Anyhow, we sort of fell into it. I can't say that there was ever a grandiose plan, except we certainly were always worrying about surviving. We were always in a very, very competitive environment, and we could never sort of sit back and relax even when we got larger. When you're small, you're worried about competition and you're struggling, and when you're big, you could be struggling just as hard.

Johnson: Yes.

Goetz: In fact it's even in a certain sense tougher because it's harder to get your hands around everything.

Johnson: Right.

Goetz: For me, I'd say the fun probably stopped when we got over \$100 million. Then we had all these departments. We had a whole marketing department. I was coordinating all of these things, and I had to really work to get a consensus, cause everybody had their own view. The programmers had their view, the salespeople, the marketing people, but it was – you know, it was very exciting.

In the early period, I did get very involved in marketing. I was the marketing department in the 1960's and early 1970's. So in that sense, I didn't kind of sit back, but I was not the salesman.

Johnson: Yes, okay.

Goetz: I really didn't have the sales background, but I did develop a lot of the marketing materials. I was always responsible for PR. I also always wrote a lot about issues that were related to our products and to our business. So I took a very active part in the marketing of the products all the time. I was very much a hands-on guy right until the very end.

Challenge of Creating a New Market

Johnson: In the copy of your recent speech which you sent me, you talked about the difference between creating a market and just going out to get a piece of one that's already there. Clearly you were in the position of creating a market.

Goetz: Right.

Johnson: Elaborate a little bit on what you see some of the differences are.

Goetz: Well, one of the differences is that, you know, people generally don't know they need something. It's not like you're trying to take a piece of an existing market away from someone. So I think part of it was writing articles about the need. Not why your product is better, but why you need it at all. LIBRARIAN was a good example. One of the salespeople, for instance, took a lot of punched cards and put them in the oven and burned them and would give them to people and, say, "What would happen if your building burned down, what would happen to all your assets?"

We were in *Business Week* when we put out a marketing piece called Unplanned Demonstration. In 1969, a plane hit our building, and our building was burned to a crisp. And we said we survived because we had all our programs on the LIBRARIAN. We pulled the tapes and ran out of the building. Had they been punched cards, we might have been out of business.

Johnson: Yes.

Goetz: The marketing piece had this big picture of the building up in flames, and said Unplanned Demonstration, and how we saved the company through LIBRARIAN because we had the source program and we could re-create the logic through Autoflow. Which was all bull because we never drew flow charts.

Johnson: Yes.

Goetz: But we could have. So I took an active role in the marketing and I think most of it is that I sort of felt that business. I was a programmer and we were building programming tools.

Johnson: OK.

Goetz: And, you know, we'd do what we could to get people to realize that there are better ways of doing things. But it was different when we entered the database market. Cullinet was there, and Software AG, and our story was we had a better mousetrap as opposed to here's why you should think about buying something like this.

So I'd say the challenge was that people weren't used to buying software. We were trying to sell software where there was no such thing. There were source program management systems for the RCA and for Sperry Rand, but not for IBM, cause IBM was very punched card oriented.

With Autoflow it was selling a way to do it automatically, as opposed to manually, and save labor costs.. With ROSCOE it was online programming, as opposed to waiting five, six, seven hours for turnaround.

Johnson: Just to get your compile back.

Goetz: So it was common sense. But I did have a feel for it, having been a programmer, why these tools made sense. And also, you know, a lot of people have ideas, and I was a reasonably good listener. And I did take a very direct role in marketing.

Johnson: It sounds like one of your main strengths was being able to relate to the customer and what the customer really needed. You know, it's hard to beat that in any kind of sales situation.

Intellectual Property Protection Issues

Goetz: The other was area I got into was the intellectual property area and that was mostly because IBM was giving the stuff away, and so how do you get a foothold. I got involved with patenting because, you know, how do you protect yourself?

Johnson: Is that what led to the licensing concept that you used?

Goetz: Licensing was recommended by our lawyer who said that you never want to sell software.

Johnson: So you were able to find a lawyer who had some concept of what that meant?

Goetz: Yes. In fact, the lawyer who worked on patenting, was strong on intellectual property: copyright, patents and trademarks. He explained that if you sell the software, they own it and that allows them to give copies away. He said, "Lease it. If you lease software, they'll never have ownership. Never sell it to them." And then we moved eventually to permanent licensing with maintenance.

Johnson: OK.

Goetz: But we started off with three-year lease agreements. That's all we had. You couldn't buy it; you could only lease it for perhaps one to three years. But no way that you could buy it. And then we went to permanent licensing, but you still didn't own it.

Johnson: Yes. I just think it's interesting because that really became the model that was used throughout the industry.

Goetz: So that's way it started. He said, "Never sell anything because if you sell it, no matter what you say [they can't do with it], it doesn't have any weight."

So we went from leasing, where traditionally they have no ownership, to licensing. We continued to use leasing where if the lease runs out, they have to renew. And that's a good concept, but some people wanted to license it and not have to decide whether they wanted to have maintenance. So we kind of migrated to licensing and leasing, but still no ownership.

Johnson: That's an issue that's become so difficult to manage with PC software.

Goetz: Well, you know, now with shrink-wrap, people don't sign anything, but supposedly have to follow the rules. But, we were dealing with large corporations and we'd always have a signature.

In fact, one of the things that people used to worry about was: how do you stop these corporations from making copies? And that never became much of a factor, and I never thought it would, because corporations aren't necessarily going to do something illegitimate. An MIS director is not going to make copies and jeopardize his job, because the agreements were very

clear. So when you're dealing in the corporate world, you're reasonably safe, but when you're dealing in the private world with low-priced software, it's all over the place.

Johnson: My focus has been on the companies that started before 1969, before the unbundling and how the unbundling affected them. But what I really want to try to get across is the innovation that was involved in coming up with business models that made it possible to run a business selling software, and how that in and of itself created more demand for more computers. That the people that came up with useful things to do with the computers through developing software products contributed to the expansion of the hardware market as well.

Are there parallels that you can think of to draw between that and what's going on today? People are struggling to understand how to make a real business out of the interconnectedness of computers. It's really hard to know where the real business models are going to be.

Goetz: It's hard to know what the business model is with the Internet because most of these companies are making money by selling advertising. And that's never been a model for the computer industry.

Early Software Companies

By the way, I have an old... IDC used to put out a newsletter, since the mid-1960's, written by [Pat] McGovern of *Computerworld*. I have one from about 1967 that shows the software product companies that were in the business. There were about 10 to 15 of them.

Johnson: Oh, great. I would love to have that list.

Goetz: A lot of them aren't around any more.

Johnson: Right.

Goetz: Someone else you might want to talk to from Informatics is Werner Frank.

Johnson: Right. I talked to Walter Bauer and to John Postley. I haven't talked to Werner Frank.

Goetz: He stayed with it longer than they did.

Johnson: Well, he's still with Sterling [Software], isn't he?

Goetz: Yes, I think he's starting to phase out a little bit. But he was very active in with Sterling.

The other company that was there fairly early is Boole and Babbage. Bruce Coleman, came in there a little bit later on, but I'm trying to think of the name of the founder.

Johnson: Ken Kolence. He's around some place out in California. I haven't talked to him yet, but he's still around.

Goetz: Another early person is Lee Keet. His company [Turnkey Systems] turned out to do okay over time, but he had a CICS competitor, Task/Master, and he was always very negative that he could succeed against IBM, and he was probably right. But he saw the handwriting on the wall. But I don't think his company was formed until the 1970s.

Johnson: No, he started about 1967. He was another one of those that started originally with the idea it was going to be a professional services company but he had a product out there very quickly. Task/Master was actually out there before 1969 because he was trying to sell Task/Master before IBM unbundled. They might have actually formed Turnkey Systems even before 1967 because they initially were going to provide professional services, to fill the demand for all the programming need that was out there.

Goetz: Yes, this particular issue [of the McGovern newsletter] I have, from I think was 1967, has about 10 to 15 software product companies. It was a monthly publication and this whole issue was on software products..

By the way, I think Pat McGovern might be a guy to talk to.

Anyway, that issue was purely on the software products business and asking if it is really an industry. There are these companies which each have about a million or less in sales.

Johnson: I did some research in Larry Welke's archives. He's got all of his old ICP directories, and he started publishing in 1966.

Goetz: Oh, yes. He was there very, very early.

Johnson: Right. But the problem is that it's not a complete list because the ones that are listed in there are the ones that chose to use that as an advertising medium, and not everybody did.

Goetz: No, but it was free. You could run advertising but I think the short listing was free. So I think they got most of the ones that were around.

Johnson: Right. They were subscriber based, so the listing was free, but I've run across a couple of companies that I could not find listed in the early ICP directories.

Goetz: A lot of what happened in the early industry has to do with IBM because they controlled the commercial hardware market. They normally were the leaders and they were bundled until 1969. Larry Welke came out with the ICP Directories in 1965 or 1966 and for three or four years [before unbundling] there were software companies being formed. There was Informatics with MARK IV and ADR and Boole and Babbage and a few others. And there was good old IBM saying, "Hey, this is just a service. It's not something you really want to buy."

Johnson: Philip Hansen at PHI was another one.

Goetz: IBM was a significant part of the story because they had conditioned market and one of the problems was reconditioning the market to buy. It was one thing to have products to sell, but the biggest problem was the mental attitude of the people buying. "So what is this thing I'm buying?"

Johnson: I think that's what makes it an interesting story. It's not really a technology issue. I mean, technology was critical to it, but it was really, in your term, creating a new market for something that people didn't know they needed.

Goetz: The thing that I had covered when I spoke for the Justice Department, was it's really true, you know, if you sit back and you're comfortable, and you're the only one that has something, and nobody's out there taking away the market you're not really going to innovate. You're really not going to worry about improving anything.

For that 10 year period, from 1963 when IBM came out with the 360 series, and said, "Here's all the software we're going to have," there was really nobody but IBM, except for these few little independents and IBM had no motivation to build more products. They weren't necessarily going to sell more computers.

So I think what happened was it really stimulated the use of computers by having, you know, more products and more tools. So I think IBM is really a part of the story.

Johnson: Oh, I agree. Yes.

Goetz: They're not going to come out as good guys, but that – that's the real world. They controlled everything and they wanted to continue to control it.

OK, well, good luck with the project. I'll drop this off in the mail the next couple of days.

Johnson: Great. Thanks for your help.

Goetz: Okay. You're welcome.

Johnson: Talk to you later, Marty. Bye.

Goetz: Bye.

Addendum (added in March 2008)

Johnson: Could you bring me up to date since you gave me your last interview back in March 1996?

Goetz: Well that's a tall order, but I'll try. Actually, most of what I was involved in since 1996 and up to 2001 is covered in my memoirs which were published in two issues of the IEEE Annals of the History of Computing back 2002^[1].

Also, since 1996 I continued to actively follow and comment on two Software Industry issues that I first became involved with back in the 1960's. They are Antitrust issues and Intellectual Property issues. In my memoirs I covered my involvement with those issues and how they related to the growth and success of Applied Data Research (ADR).

Those two issues have not changed since the late 1960's, except the players have changed. Back in the 70's and 80's we had IBM trying to monopolize the software industry and in the 90's and 2000's we have Microsoft. Microsoft is still fighting the Justice Department and trying to get out of their current Consent Decree. And the European Union is currently fining Microsoft for their previous illegal behavior and actively trying to restrict Microsoft because of their current anti-competitive behavior.

Software patents, as I cover in my memoirs, were deemed patentable subject matter back in 1981 with the famous Supreme Court *Diamond v. Diehr* decision. But starting in 1988 with the *State Street Bank v. Signature* decision, Business Method Patents (BMP's) were allowed. Unfortunately, BMP's have really muddied the waters relative to software inventions and whether software contains patentable subject matter. The "Is software Patentable" debate has gone on for well over 40 years.

In the last several years I've also published some articles^[2] and had some interviews^[3] covering Microsoft's monopolistic behavior and my position on BMP's.

Also, back in 1999, I became involved with the Charles Babbage Institute (CBI) and I donated my papers to CBI in early 2002. The archives^[4] cover my 29 years at ADR and my 20 plus year involvement with ADAPSO (currently renamed ITAA) on Software Industry issues.

It's now been 54 years since I entered the computer field back in 1954 as a programmer. Although much has changed, the need for programmers is still there along with the need for new and better software.

¹ The first half of my memoirs "Memoirs of a Software Pioneer: Part 1" was published in the IEEE Annals of the History of Computing, Jan-March 2002 (<http://adr9.home.comcast.net/MG/MG1.pdf>). The second half was published in the Oct-Dec 2002 issue (<http://adr9.home.comcast.net/MG/MG2.pdf>)

² My 2001 article "Unmasking Microsoft's Innovation Scam" can be found at <http://www.computerworld.com/softwaretopics/os/story/0,10801,65470,00.html> and my 2006 article Patents: Where's the Invention? can be found at <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=109169&pageNumber=1>.

³ See two recent interviews I've had in 2007 and 2008. Click on <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9046646> for my interview "Unsung innovators: Marty Goetz, holder of first software patent" and (<http://www.sap.info/public/INT/int/index/Category-12603c61b2d8e182c-int/0/articlesVersions-2496747823f91e4ffa>) for my interview "You Have to Make Sure Your IP Assets Don't Walk out the Door".

⁴ The listing of my archived materials from 1956 thru 1991 can be found at <http://special.lib.umn.edu/findaid/xml/cbi00159.xml>. Abstract of archived materials: The collection documents Martin Goetz's major professional interests; including the software industry, patent and copyright protections for software, separate pricing for software and hardware, bundling, anti-trust issues and IBM.