Oral History of Martin A. Goetz

Interviewed by:
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Martin A. (Marty) Goetz

Conducted by Burt Grad and Luanne Johnson

Abstract: In this interview, Marty Goetz, a founder of ADR (Applied Data Research) discusses the suit ADR brought against IBM in 1969 because of the unfair competitive environment created because IBM bundled software with their hardware. He describes the difficulty of convincing customers to pay for software as long as they believed that IBM would provide it to them at no cost and how the risk of ending up in a competitive situation with IBM made it difficult to decide to invest in the development of new software products. He discusses the difference between competing with IBM on applications products, where they were not strong, and competing with them on systems software and utilities. He describes ADR's financial ups and downs resulting from the competitive environment and the recession in 1970-71 and their success in the 1970s and 1980s resulting from the expansion of their product line.

ADR's Lawsuit Against IBM

Burt Grad: Luanne [Johnson] and I are talking about doing some articles about some of the stories I was involved in. It's a very informal partnership. I gave her almost a half dozen things where I felt I had some knowledge that I wanted to write about. One of them was the unbundling task force at IBM in 1969 and the effect that it has had, good and bad, in the shaping of the industry. So we talked to *Datamation*. I don't know whether we'll publish there or not. But they are certainly interested in a one- or two- part article on that subject. And it's in that context that we would like to talk to you.

Marty Goetz: You're writing a book?

Grad: Just a couple of articles. I was on the unbundling task force for six months. And, of course, I was involved on the IBM program development side for some number of years. But I have my own points of view and, as she has found, my point of view is not necessarily the same point of view that other people express.

Goetz: Well, I just happened to talk with some people from *Computerworld* about ADR's early history and talked about the unbundling era. And I also wrote something for the *Annals of Computing*, my perspective of 1965 to 1970 which has not been published.

Grad: Does the Charles Babbage Institute have that in their files?

Goetz: I have it. But it has not been accepted for publication.

Luanne Johnson: That would be valuable.

Goetz: It covers how ADR got into the software products business and some of the difficulties we had in terms of being able to sell software in the 1965 through 1970 period and why we brought suit against IBM to protect the future plans that we had in terms of new products coming out.

Grad: When did you actually sue? Was in 1968?

Goetz: We sued in April of 1969. And the Justice Department suit was in December, 1968.

Grad: It was actually January 1969. Because it was the last day that the Johnson administration was in office. Was that January 14th or 15th? Something like that.

Goetz: And Control Data sued about two months later. I think they were later.

Grad: Was that after the government suit or before?

Goetz: I don't know. But I know that ours was in April of 1969.

Grad: I thought your settlement was in April of 1969.

Goetz: No, our settlement was in August of 1970.

Grad: That's 18 months.

Goetz: Yes, when we brought suit we did not go for a preliminary injunction. Although we did go for a preliminary injunction with Programmatics which was a company we had acquired, but we lost.

Grad: They had already sued hadn't they? Before you acquired them?

Goetz: No, we amended our original suit.

Johnson: Why did you bring the suit after the decision to separately price software had already been announced?

Goetz: No, it wasn't announced. We sued in April of 1969; they announced in July of 1969.

Johnson: But they made an announcement in December of 1968 that they were going to separately price. Were you hoping to influence how that came out?

Goetz: I wasn't aware of that. I would say that when the Justice Department suit came out, IBM had made no announcement.

Grad: They actually had, and that's what puzzling. In December, 1968 Tom Watson announced that IBM was going to unbundle. They didn't say what specifically, just that they were going to unbundle various products and services. They said they were creating a task force to work on it and that they would announce the results at the end of June 1969.

Goetz: Well, they did announce at the end of June. That was the formal announcement, as I said, of what was going to happen.

Grad: That's right. But you were not aware of it before that?

Goetz: I really don't recall that. By the time we filed in April, we probably had started the process six months before.

Grad: Had you had discussions with IBM before filing?

Goetz: Well, we had discussions with IBM, generally about our difficulty in marketing Autoflow. But we mostly had discussions with the Justice Department about the difficulties of competing against free software and the fact that we were making major investments in new products. We had gone public in 1965. And then had reasonable success with Autoflow and had another public offering in 1968. So in 1968 we raised a considerable amount of money and put it into new product development. In other words, from 1968 we were developing ROSCOE, MetaCOBOL and LIBRARIAN. And e were expecting to complete them in about a year. Life was simpler then. And we didn't know whether IBM would have similar products that would be free. Our assumption was that IBM might be working on similar types of products.

So it was difficult to base your business on the fact that your software is priced and is perhaps better than IBM's free software since you certainly couldn't win on price. We thought we would be protecting our future investments. We were probably investing two, three, four million dollars at that time. I think we raised about five. So we went to the Justice Department and spoke in public forums about the fact that what we faced was bundled or tied-in software. And we thought it was illegal. And the Justice Department did, too, because they included it in their suit. For about a year to a year and a half before they filed, they had talked to lots of people in the industry including ADR. Various groups had gone down to the Justice Department, in particular myself and Larry Welke. It wasn't a contingent from ADAPSO since we were not members.

ADAPSO and Early Software Companies

Grad: You were not members of ADAPSO. What was the group? Was there a formal group?

Goetz: Yes, there was a group called AISC, Association of Independent Software Companies. Informatics was a member. ADR was a member. Planning Research was a member. Computer Sciences, I believe, was a member.

Johnson: Did that become SIA [Software Industry Association]? And then SIA joined ADAPSO?

Goetz: No, ADAPSO was looking to have a software section. And they approached Larry Welke in 1972 and formed a software products association. I don't recall the name. It may have been SIA. And shortly thereafter they invited us to join. There were about seven or eight companies. We joined in 1972.

Johnson: And this organization sort of dissolved into that one.

Goetz: Yes, it got merged in. I became president in 1973 of SIA. I had just joined them. That's why I remember the year. In the 1960s there were other companies around, of course——Informatics with Mark IV, Boole and Babbage. There were a fair number of software products.

Grad: We were looking at the list to see who was there as software product companies in the 1960s. Because that was one of the interesting things to look at——what happened to the industry as a result of the unbundling announcement, what was the effect? There seemed to be some pretty good-sized professional services companies. But there really weren't any big software products companies at that point.

Goetz: No, the only ones that come to mind were Informatics and Boole and Babbage.

Grad: Were they public at that stage?

Goetz: Informatics was, and ADR.

Grad: There was no Pansophic. There was no Computer Associates. No Cullinane. They came after that.

Johnson: In the early 1970s, didn't they?

Goetz: Right. After unbundling, lots of software companies were formed.

Grad: There probably wasn't an MSA at that point.

Goetz: There was an MSA. Because they started in about 1966.

Grad: And they were in the process of getting ready to go bankrupt about that stage.

Goetz: Right.

Grad: So MSA was there. Was there an IBM product in direct competition to Autoflow?

Goetz: Yes, there was a product called the IBM Flowcharter which was basically a semiautomatic flow charting system. You'd have to logically draw your flowchart on sort of a

matrix and then punch cards that you would feed into the computer to draw the flowchart. It did not take the source program. So it really just automated a manual process as opposed to our system which used the source program. However, the problem was the user wasn't used to paying for software, he was used to getting it free. And he was also used to having IBM come out with new software that might meet his needs.

Johnson: You mean the customer was used to saying, "Gee, I really need this." And IBM would respond and say, "Okay."

Goetz: IBM would respond if there was enough pressure. So they just weren't conditioned to buying software. And secondly, there was an expectation that IBM, if there was enough interest or pressure, would provide what they needed. But they did have a flowcharting system. I think it was a field developed program. So the first thing you had to do was convince the customer that yours was better.

ADR's Entry Into the Software Products Business

Grad: Why did you go into the software business?

Goetz: What happened was that we were building system software under contract to different computer manufacturers or to the government or for special purpose computers.

Grad: Was Sperry a client of yours at that point?

Goetz: Sperry was, also RCA, Bendix, and Honeywell. We were building a variety of system software under fixed price contracts and competing against companies like Computer Sciences. RCA came to us and was interested in a flowcharting system that they thought they might want to give their customers free. We wrote a proposal and described how we would take RCA 501 code and do flowcharts. And they decided they didn't want to spend the $25,000.

We had access to an RCA 501 so we decided to build a prototype system just to see how feasible it was. After we built it, we started writing proposals to other hardware manufacturers. And no one seemed to want to have us build it. So we took this product and cleaned it up a little bit and tried to sell it to RCA 501 customers and sold a few. However, there were lots of 1401s around and not lots of 501s. So we built the identical system to accept Autocoder on the 1401 and sold a reasonable number.

It was just about that point that IBM announced the 360 so we decided we'd build a similar system for the 360 series. One of the reasons there was a lot of interest was that most companies had a requirement to have flowcharts. But it was more of a documentation requirement.

Johnson: Yes, they were done after the fact instead of part of the planning process.

Goetz: So there was a lot of interest on the part of DP managers that really were never producing these flowcharts. It wasn't a question of how useful it was but whether it could meet a requirement for the company. And especially if it would be done automatically. So it was a very, very demonstrable type of product. In fact, when you demonstrated it, you could take someone's program and within five or six minutes you'd be producing on a printer two-dimensional flowcharts, also showing syntax errors and lines of code you couldn't actually enter.

Johnson: Incidentally, the company that was a predecessor to Argonaut [Information Systems] used to use Autoflow as a sales tool for selling pre-written software, to show the customer how bad the software written in-house was. He'd produce a flowchart for one of their in-house programs and there'd be all these polka dots of code that wasn't being referenced at all.

Goetz: Right, just hanging around.

Johnson: Then he'd show a flowchart run from his company's code to show how well it was constructed. He used it as a way of selling his software as an outside vendor.

Goetz: So we had a reasonable amount of acceptance on the 1401, and 360s were coming in and popular. It was about 1966. About a year and a half had gone by from the 501 to the 1401 to the 360. And it was not that big a job to write the basic flowcharting system. We kept enhancing it. And at that point there were lots of COBOL programs that were not documented. So we recognized that we could flowchart COBOL. We started producing cross-reference listings which the COBOL compiler didn't produce. So it turned out to be a good debugging aid because of the limitations of the COBOL compiler. And we sold over 2,000 copies on the 1401 and the 360.

Grad: Is that right?

Goetz: Yes. And we opened 30 offices by 1970.

Grad: I didn't realize that; I just didn't know any better.

Impact of IBM Competition on New Product Development

Goetz: On the other hand we were getting competition from IBM in terms of resistance on the part of users that were expecting IBM to produce something like it. As we were getting more and more successful there was more and more demand and rumors that IBM was going to come out with something similar. But, in any event, having a reasonable amount of success on Autoflow, we decided that there was a need for lots of other programming aids. COBOL was very popular, so we decided we were going to build an online conversational system for COBOL development. There were free products called Pre-B and Pre-GCR which were equivalent. This online COBOL development system turned out, from a marketing point of view, to be two products. One was ROSCOE which we decided could do online development, not just for COBOL, but for any language. And the other was MetaCOBOL which was sort of a COBOL preprocessor.

Grad: Was TSO in existence at that point?

Goetz: No, at the point when we developed and conceived ROSCOE, TSO was not in existence, which I'll come to shortly. That was part of our suit against IBM. In 1968 when we started developing ROSCOE and MetaCOBOL, we had lots of programs we had developed, for instance, for Autoflow and that we kept on punched cards. So we built a library system, a source tape management system, that was available on the 501 on RCA equipment and Univac equipment. We built LIBRARIAN for our own use and realized quickly that all the users that were keeping all their programs on punched cards would buy a product like that. We rewrote LIBRARIAN in 1969 and were able to deliver in late 1969 initial versions of MetaCOBOL, ROSCOE and LIBRARIAN. We were making big investments.

Grad: Millions of dollars at that point.

Goetz: Millions of dollars were being invested. And then we were into 1969, having done a lot of development in 1968. And we were very uncomfortable. We were a public company. And having worked with Autoflow in the mid-'60s with the customers expecting free software, we asked how can you run a business competing against IBM? So we had many conversations with the Justice Department.

There was a task force that was investigating IBM and looking to talk to companies that had problems. There were the leasing companies. There were the peripheral companies. And then there were the software companies. There were the hardware companies which originally was

the reason they brought suit. Then they added software to the suit, the fact that the software was bundled. We had the discussions with the Justice Department and they included software issues in their suit.

And then we decided that to protect ourselves we would bring suit against IBM which we did in April of 1969. We did try, and failed, to get an injunction to stop the distribution of their sort. That was on behalf of the company we acquired called Programmatics. Then late in 1969 or early 1970 IBM announced unbundling.

Grad: June of 1969.

Goetz: Well, they announced it in June of 1969. But they did not announce TSO until, I think, the beginning of 1970.

Grad: Was that priced when it was announced or not?

Goetz: No, it wasn't. When IBM unbundled they said that operating system software would continue to be free, to be part of the hardware. And TSO was part of the MVT operating system.

Grad: MFT or MVT?

Goetz: MFT or MVT, I forget. In any event, they announced TSO for delivery about a year and a half later.

Johnson: So, they announced it in early 1970.

Goetz: Set for delivery in the middle of 1971 as best as I can recall. So we had CRJE being delivered and TSO being announced, both of them free. And we were finding it virtually impossible to sell ROSCOE. We had our salesmen write memos for the record on customers who said, "Why should I buy your product when I can get TSO free? I can get CRJE free." And we used that information from these customers to seek a preliminary injunction to stop the distribution of CRJE.

Johnson: And this was all part of that suit?

Goetz: That was all part of that suit. We got a temporary restraining order. IBM volunteered that it should be for 60 days, when normally it's for ten days. And during that 60-day period, we settled out of court. Part of the settlement was $1.4 million cash and $600,000 guaranteed revenue to ADR either through IBM buying some of our products for internal use or through their marketing of Autoflow in selected countries.

Grad: Japan was one of the countries?

Goetz: Japan was one of the countries. Brazil was one of the countries. They marketed our product for about three or four years on a non-exclusive basis. They bought lots of LIBRARIANS and Autoflows. I think some of them are still being used. And, basically, we made peace with IBM relative to that suit.

Grad: They still didn't price TSO though, did they?

Goetz: No.

Grad: You still were facing the same issues with ROSCOE that you faced before.

Goetz: Right. We still faced the problem of TSO being given away free. But what did happen was that they promoted the concept of online programming and got customers to buy lots of terminals. And it turned out that our product was a lot more efficient. Somewhat more restrictive——it didn't take applications and run them in a time sharing environment. But program development was very efficient.

Grad: TSO was very hard to use. You had to be a scientist or engineer to use it. ROSCOE was much friendlier.

Johnson: So the fact that they were pushing the terminals, pushing online, pushing the hardware that way was beneficial for you in that it provided a broader market for you.

Grad: Essentially $2 million was enough to feel that you had covered your investment. Was that really what it turned out to be? What did you feel you accomplished?

Goetz: One of the reasons we went for the preliminary injunction was loss of market and irreparable injury. And the basis for irreparable injury was that the company was in very bad financial straits.

Grad: You were cash short at that point.

Goetz: Yes. We were making lots of investments in products going into the recession.

Grad: The recession in 1970, 1971.

Goetz: Yes. Things started slowing down, so the $2 million wasn't very big. We accepted the fact that we would have to compete against TSO. Of course, there was a Justice Department suit, part of which was to have IBM unbundle parts of the operating system as well.

Grad: Apparently the unbundling announcement in 1969 really didn't affect you very much. Because where you were competing with your systems-type products, they really didn't unbundle very much.

Goetz: No, when IBM did unbundle it was more for future products than for existing products. They didn't have a LIBRARIAN-type product. They didn't have a MetaCOBOL-type product. And while we did have ROSCOE competing with TSO and online programming products, we had settled that suit out of court. No, it didn't have so much of an effect except it created legitimacy for the software products business. People started to get conditioned to buy software. That was the major benefit. And then we were selling products like LIBRARIAN.

Johnson: Which IBM didn't offer anyway.

Grad: They didn't have a competitive product at that point in time?

Goetz: They had a way to store on disk or tape.

Grad: That was free stuff. They didn't charge for that.

Goetz: Oh, it was free. But it really wasn't developed to maintain source programs.

Grad: The IBMers were very happy to get their hands on LIBRARIAN, as a matter of fact, because they wanted to use it inside the company. We unbundled some 17 products in June [1969] on the DP side. I don't know what they did on the product development side. Among ours that got unbundled were CICS and IMS. But you were in a fairly narrow area. You did not do any utilities.

Goetz: We had Sorts.

Grad: Sorts were over on the systems side.

Johnson: And sorts were not separately priced?

Grad: They were separately priced; the languages and sort utilities were separately priced.

Goetz: The sorts were separately priced. And COBOL compilers were. But they were priced so low that they precluded competition. With the sort, I want to take that back. The sort did have competition with Syncsort which came out about the same time. So competition did develop for the sort. There was really no competition for the compilers that ever developed. They were sold for about $50 a month as I recall.

Grad: Maybe even less than that.

Goetz: Very, very low price. It was very hard to compete. But a lot of companies were formed. And some did very well. Some didn't. However, ADR continued to aggressively pursue the fact that IBM still was giving the operating system away free, that TSO was still free. And we worked with the Justice Department. I was a witness in the Justice Department suit in 1976 or 1977.

Grad: That's what got you into trial.

Goetz: Yes.

Johnson: But most of your products were not competing directly against free software.

Goetz: No, we started out trying to find niches, windows where IBM was not, tools that IBM did not have. They had the traditional compilers and report generators, assemblers. They had CICS. They had IMS. We were looking primarily at programming tools, programming aids.

Grad: So that was in a sense the rock you were on, the programming aids rock, wasn't it? One of the comments that I made to Luanne was that each of the major companies, the big players today, seems to have had a sort of a rock that they built their business around, some foundation, a concept that they were built on. Yours was in the programmer aids area. Like Cullinet's was the database management system.

Goetz: Right. Well, they started out with a report generator.

Grad: I didn't remember that.

Goetz: Yes, they still have that. It's called Culprit. They had a source program maintenance system called something Plus [Plus-Sequential] which never sold well. But Culprit was their first product and I guess the only product that was doing reasonably well.

Grad: So you settled in August of 1970 which solved some of your cash problems. Giving you for the moment somewhat clear sailing in a couple of areas but still blocked up in others.

Goetz: Still blocked up in others, right.

Grad: Did anybody else sue at that point?

Goetz: Well, there were some other suits going on. There was Control Data.

Grad: I was thinking in the software products area. I did a deposition on one, I don't remember when, of an outfit that did a numeric control program.

Goetz: Yes, on the West Coast. Their suit was about three or four years later.

Johnson: There certainly was nothing mentioned in the research I did in the periodicals around that time.

Goetz: It was a time-sharing company that won that suit. They did a lot of word processing. It was like a word processing, time-sharing service located in Washington.

Grad: One of my thoughts when I was talking to Luanne was that, except for your suits in the software products area, I didn't remember any other software suits over the next four, five or six years. Except that numeric control one. What surprised me was, given that IBM really didn't unbundle its system software—it really didn't—that they were able to hold that line between what they call system control programs, SCPs, and the others for so long. When we did the work on the task force, we didn't think that line would hold for two years. We figured the first heavy suit would break it.

Goetz: You mean the operating system?

Grad: SCPs. SCP went a lot further than operating systems. It covered utilities, and that utility line was a very tricky line. The view was that the first strong suit would break it, but nothing happened. They settled with you guys. And that was the only real threat. No one else ever came after them. It just went away. And that line held until the late 1970s. It shifted. Pieces were knocked off. But essentially the line held.

Goetz: Well, there weren't very many large companies. It was considered very expensive. There weren't too many public companies. If you go for a preliminary injunction and try to show irreparable injury it can go on for years and years.

Grad: IBM by that point had honed its techniques in how to delay things pretty thoroughly.

Goetz: Right.

Grad: Was that an expensive suit for you?

Goetz: Well, I think it probably cost us about a half a million.

Grad: So you were investing a lot of money if you didn't make out.

Goetz: Oh, yes. At the time you start going into court the meter is ticking very fast. So it wasn't inexpensive. But it started out fairly low key. And then as we went in for the injunction, it started getting quite expensive.

Grad: It was a pretty heavy risk you were taking. If you had forced the ROSCOE/TSO issue you might have won but it would have cost a lot. If you stayed with the ROSCOE argument, ROSCOE was the thing that would have broken the line. The flowchart proram was never going to break the line. The library program was never going to break the line. Those things wouldn't have broken it.

Goetz: We started out with the public offering in 1968 getting a fair amount of cash and then having negative cash flow. At that time you could capitalize your software. So our profits weren't terribly bad. But our cash flow was very bad. And then when the products came out we were somewhat naive in thinking they would sell pretty quickly but the selling costs were a lot higher than we expected. We were in a recession. So ADR went from having a stock price

close to 40 [dollars] in 1968 to somewhere about three or four in 1970, 1971. In 1973 it was selling for one.

Grad: Is that how far down you went?

Goetz: Yes.

Grad: Of course, the bloom was off the rose in all the computer stocks, software stocks by then. A lot of them went bankrupt. You had staying power at least.

Goetz: We had staying power. I had just gotten married. So I remember the dates well. I wanted to buy some more stock. And everyone said that I was crazy to buy stock in this company that was valued at about $1.5 million. It had about a million and a half shares of stock. By that point we had lots and lots of software that wasn't capitalized and didn't reflect any book value.

Grad: No. People weren't capitalizing. It was one of the things that everybody stopped doing as a result of the recession and because the analysts wanted everyone to stop capitalizing during the 1972 time period. Except IBM was capitalizing all that time.

Goetz: Yes.

Licensing/Leasing Software

Grad: IBM was capitalizing literally from Day One. How were you pricing? Were you front-end pricing with the maintenance plan?

Goetz: I think in the early 1970s we went to permanent licensing which gave one year of maintenance. And then we started charging maintenance as opposed to requiring them to lease.

Grad: That's basically become the model for the bulk of the industry. Some people have stayed with the lease like Syncsort and some others, but this has been the basic model for everybody since then.

Goetz: Some companies have gone back to leasing so that the customer doesn't get permanent right to use it.

Johnson: I think the concern now is the protection issue, isn't it, more than the financial issue?

Goetz: No. I'd say it's really just a question of how a company wants to do business. Computer Associates is moving back towards three-year leasing and Syncsort has always done that.

Grad: There's another reason. It has a lot to do with cash flow. If you can afford to, you can set up some kind of a leasing plan. In the past, people didn't have the cash. They couldn't afford to wait for the returns. IBM at the extreme was charging a monthly rental. And nobody in this business felt they could afford that.

Goetz: Right.

Grad: A lot more has changed since then. I worked for Larry Schoenberg trying to identify which companies were still leasing, whether they were embedding the maintenance in the lease which I said I thought they invariably did.

Goetz: Some were. In particular Cincom was very big on leasing.

Grad: I'd forgotten that. He's looking for public companies who are still leasing their products. CA is doing that now?

Goetz: Computer Associates is doing more and more.

Grad: We want to mention that to Larry when we see him. He's trying to tie this in with the revenue recognition project he's working on for ADAPSO. And they had forgotten about leasing until I mentioned it.

Goetz: Yes.

Grad: So we're going to have to take a look at it. They're going to have to do some redefinition for the revenue recognition project re how they recognize revenue on leases. You have not been in the leasing business?

Goetz: We've always offered leases.

Grad: Have you?

Goetz: Yes, we've always had permanent licenses, one- to five-year leases and month-to-month.

Grad: Since how long ago?

Goetz: Oh, for the last five to eight years.

Grad: Since you've had a much better cash position? Has that been a factor or not?

Goetz: Well, on the leasing we recognize the value of the lease up front.

Grad: Oh, you do?

Goetz: Yes. I'm saying from P&L standpoint it really didn't matter. From a cash flow standpoint it does, although if one needs the money, it shows up as long-term receivables. If you need the money, you can sell the paper.

Grad: However, with the new revenue recognition rules, you would probably be precluded from taking the lease value up front. You would be required to credit it as you perform the services required under the lease including maintenance, enhancement, and whatever else you would do. Under the proposal that they were discussing, there would not be any up front recognition if there was any performance still required.

Product Line Expansion

You made decisions then in the early 1970s to go after some other products besides the ones you've already put out, LIBRARIAN and MetaCOBOL.

Goetz: Right. Our philosophy was that as long as the products provided a basic function we were going to continue to improve the products and keep the products up-to-date for competitive purposes and also insure that maintenance would continue, that customers would continue to use these products. So our number one strategy was not to come out with new products but to reinvest money in the existing product line to improve the products and keep them viable. And, as a matter of fact, I think most companies recognize today that software products have long lives. One of the things I was telling Booz Allen last week is that the life

cycle of software products is more like 20 or 30 years. And if one had said that 20 years ago, you never would have believed it. I used as examples a lot of IBM products starting from the operating systems to CICS to IMS.

Grad: We just pulled a list from ICP as part of the study I'm doing for ADAPSO on financial practices. It's a list of everything that's ever gotten one of their awards. He's got 14 years of experience. Using that as a base, we're going to select a sample, go back to the companies and find out when they started building a product and how much they've invested in it. You always get a better picture of what goes on in the real life of the product. It paints a very different picture than people have. They're looking at the micro products and the cycle that's going on there. That's not the way the mainframe marketplace has been. It has been very, very different. CICS is 16 years old and I see no sign of its aging.

Goetz: Well, look at MVSX8. They say it will go into the year 2000. And it's basically been around since 1965.

Grad: Of course, the interesting argument there is there's not a single line of code that's the same. I'm sure.

Goetz: No, but functionally it's similar.

Grad: It has the same basic function. They've added tons of stuff to it. It's much more complex. That's one of the arguments we're making is that one of the ways to define a product is like a construction. It's the street address. It's the facade of the building. I don't care what's behind that facade. That's just modernization and enhancement. The basic address is there for life.

Goetz: So we extended some products, some of which turned out successfully. We extended Autoflow initially to include text editing. That was sort of a documentation requirement and we also extended it to do system charts. The system charter, called the Automatic System Charter, was never that successful although it took JCL directly. The text compositor became a word processing system. We had fairly good success with a product called ETC, Extended Text Compositor, which was basically word processing on the mainframe. But it was mostly for manuals and not for secretarial use, for correspondence. We continued to have MetaCOBOL which had no competition. And then we developed a product that was not successful called SAM which was System Analysis Machine which had a competitor called SCERT.

Grad: SCERT was successful. They did well for a while.

Goetz: SCERT was a product of the 1960s, late 1960s, which would simulate software and hardware and would help you in forecasting machine levels.

Grad: IBM got very pissed off at SCERT. It would come up with numbers that indicated the IBM estimates on what you required in the way of hardware were inaccurate.

Johnson: And probably high, right? Inaccurate on the high side?

Grad: Well, it wasn't that consistent, just pure wrong which sort of ruined the view that the IBM'er knew it all and had control of the account. Account control was being lost because of SCERT. IBM didn't have a product in that area, didn't even make one.

Goetz: Yes.

Grad: It was some group in Washington.

Goetz: Yes. COMRESS.

Grad: Yes.

Goetz: In any event, we spent most of our money enhancing the existing products or adding options and going back and trying to resell options. And by the time we were into 1976, 1977, the database market started heating up and Cincom was doing very well. Cullinet was doing well. And we looked for new areas to get into and we felt we were very interested in data dictionaries. We experimented. We considered building our own database product and decided to acquire a small company called Insyte. I don't know if you want to go into the late 1970s or do you want to stay back in the 1960s?

Johnson: No, because I'm curious as to your statement earlier that the unbundling really didn't have that much effect on your business except as it changed the perception of customers in the sense that they were now becoming accustomed to the fact that they were going to pay for software.

Goetz: It legitimatized the business. And that I think was very, very important. In terms of competing against an IBM priced product, no, that was not the case.

Johnson: Did the situation continue to be the same in that none of the changes in IBM's pricing policies really had any major impact on your business?

Goetz: No, not on my business. But one of the things it did was it kept any other companies from developing operating systems. One of the arguments IBM made was that it was almost like a natural monopoly that the companies that developed the hardware are the only ones that developed the operating systems. They have this intimate knowledge.

Johnson: Somehow in the PCs that doesn't apply, right?

IBM Competition in the 1970s and 1980s

Grad: Two issues I seem to remember you focused on all through the 1970s in relation to IBM was, one, timing of their announcements to not block up the marketplace. And secondly, the amount of information available to software developers, and at what point in time? Those are the things you really kept hammering on and still are. IBM's actions there caused you grief. The things you kept focusing on were: did you get the information when you needed it? And that they would announce something early that would then tie up the market for 12 months or 18 months and nothing could be sold.

Goetz: Well, I think Lee Keet was more concerned with them freezing the market. My concern was not directly related to my products. It related more to the fact that the operating systems were not being unbundled. So I was really working with the Justice Department on the basis that a competitive environment was critical. And also that IBM in theory could have gone back to bundling at any point in time because they never proved that it was illegal. So I was mostly concerned that the Justice Department win out.

The time I spent primarily in the 1970s was not directly affecting our current products. It was more looking to the future if we ever wanted to build operating systems software, or if IBM ever decided to bundle again. So I was interested in the Justice Department winning their suit. Plus there were damages that companies could recover if the Justice Department won. And mostly when I testified for the Justice Department I talked about the effects of a bundled environment: all the operating systems were built by IBM; and [no matter] how poorly they worked, the user had no choice to get anyone else's operating system; that IBM was not heavily motivated to improve their products. But we didn't have any real problems competing with IBM in the 1970s except for TSO which continued to be a problem.

Johnson: [It competed] directly against ROSCOE.

Goetz: So that was part of the Justice Department suit. And we were looking to the Justice Department hopefully to get IBM to unbundle the operating systems and TSO.

Johnson: Do you still see that there's a possibility of IBM rebundling given the way they've handled the PCs? Do you still see that as a threat on the mainframe, on the larger systems?

Goetz: I don't see it as a threat that everything's going to be bundled. But Burt knows that I've been very concerned that at the low end of the line IBM is tending to bundle more and more things with other software, in particular with the operating system. So for instance on SSX and DOS VSE you get a lot more. You pay for it but you get lots of components that are sort of all integrated together.

Grad: They're pseudo-bundled.

Goetz: Right. But they're not bundled with the hardware.

Grad: You can theoretically get each piece separately. But they're making it convenient for you by delivering it all at once on a single bill, even though it's 12 components or 15 components.

Goetz: So CICS gets delivered. In fact, CICS is used during the installation process. So there is more and more bundling of software together but not bundling software and hardware which was the previous argument.

Johnson: So you see there's a possibility that they could incorporate things in direct competition to your DC/DB into that.

Goetz: Well, yes. For instance, there's always a threat that a year from now IBM will throw the database products into the bundle. And then you will really hear a cry from the independents. But there is one product that we have that has not done that well, which at one point was doing very well. That is VOLLIE, a program development tool similar to ROSCOE on DOS, which came out in 1975 and was very, very successful. And IBM didn't have a product to compete with it. When IBM came out with the 4300 series they included a product that was a field-developed program that was selling for about $350 a month——I've forgotten the name of it. They renamed that program to be called ICCF and priced it at $60 a month. And basically that hurt ADR. That became a very inexpensive program and VOLLIE never has done that well since. It [VOLLIE] hit about seven or eight million dollars a year back in about 1981 and was flat since

then because ICCF is part of twelve programs that get delivered and used during the installation of DOS VSE. So now we have to basically sell against a free product.

Johnson: Again.

Goetz: IBM really has bundled again. It's much more subtle. And they, I believe, precluded certain companies from coming out with products because it would just be impractical.

Grad: Stay with that point. Looking backward now and with 15 years of hindsight, is the industry and are you better off because there's been a single operating system to run under or would we have been better off having a wide open ballgame?

Goetz: I think in the area of operating systems you really need a fair amount of compatibility. Perhaps you might say transparency between operating systems. You don't necessarily have to buy it from the same manufacturer. It's almost like peripherals. You need compatibility. But you should be able to buy it from a variety of software manufacturers. So in the sense that IBM has DOS, OS, VM, they have three different operating systems. They were all developed by one manufacturer. Had IBM not had this 15-year lead to invest billions of dollars and basically preclude competition there might have been a compatible OS system, compatible DOS.

Johnson: Because we're seeing the other side of that argument now with networking. Everybody's saying, well, now that IBM's come out with a standard, everybody knows what they're targeting to. And now the independents can start interfacing with that and dealing with that.

Goetz: It's not a simple argument, because you don't want to have incompatible operating systems. But if the operating systems were priced, at least there would be a basis for coming in and even building, perhaps, a non-compatible operating system. But whether you come in with something either compatible or non-compatible, when you are competing against zero pricing, then why enter that market?

Grad: This totally blocked up that market, that's agreed. My question is, for the system software companies or the application software companies is that good news or bad news?

Goetz: Well, if you didn't want to enter that market, the fewer different operating systems you'd have the better. If you had only one that would be that much better.

Grad: That was my view. Looking backward, I think we have benefited. The contrast I've drawn is in the mini area. With a variety of operating systems, nobody ever got into the software business as a real business. Nobody ever developed a significant business operation. Micros would have been the same damn thing but CP/M came out as a standard.

Goetz: Right.

Grad: Apple DOS, in effect, was a standard. Then IBM with MS-DOS, PC-DOS. So we've always had standards to work against. That's made life, I think, much more reasonable. At the time, I couldn't see any rationale to hold the line that IBM had drawn in place. But the long run, it may have actually been good for the industry. The industry had some stability because it had that line in place. I don't know.

Goetz: Well, I agree. From that point of view right now we have more environments than we'd like to begin with, at least coming from one manufacturer on the mainframe.

Grad: In effect, the unbundling *per se* set an environment. But as far as your business is concerned the specific products that were unbundled didn't make any difference.

Goetz: They didn't have any products that we were competing against. The only product we were competing against...

Johnson: Was one which they did not separately price.

Goetz: They didn't price.

Grad: But ROSCOE continued to do some reasonable business over a long period of time in spite of that.

Goetz: Yes, right. Which is a credit to ROSCOE and a discredit to IBM.

IBM's Lack of Success in Applications

Grad: Let me go a step further. We were exploring this. Maybe you can help us interpret. IBM has not made it in the industry applications areas or in the cross-industry applications for mainframe. Very unsuccessful. You can hardly point to a product other than the scientific/technical stuff.

Goetz: Right.

Grad: They haven't really done anything there. Yet, those were fully unbundled from 1969 on. They never produced anything after that that wasn't charged for.

Goetz: There was DBOMP.

Grad: There were a whole bunch of programs. DBOMP actually was a database management system of a simplistic nature that was marketed for the manufacturing industries as a bill-of-materials processor. But it really was a simplistic database system.

Goetz: But separately priced.

Grad: Oh, yes. Everything from that point on was separately priced. IBM played no games from that point on. We had made a decision to try to make a business out of it. Our management above the DP Division didn't believe in it. But we did and we tried. Interestingly enough though that's an area where the InScis and the MSAs and all these others have made successful businesses. And IBM is not a significant factor in the applications market.

Goetz: Yes. I really don't know why. They certainly have industry specialists, you know, the insurance industry, the banking industry. I would have thought they would have thought it was a big enough market to go after. But I don't know why they never succeeded.

Grad: We [IBM] had hundreds of people, 500 or more people, writing those kinds of programs. And we never succeeded. And in contrast, the Comserves, the MSAs, developed good products.

Goetz: I always looked at the reason being the way IBM was organized. They were not organized either as separate independent units the way, say, a software company is a one product company like Comserve or Information Sciences. Their whole livelihood and success is based on this one product. So I never tried to look at the anatomy of why IBM either didn't go into it or, if they did and had programs, why they couldn't market them successfully.

Grad: They were too big, too expensive. Not responsive to being customized. There's a whole range of what they did wrong. The money was there. We were organized by industry. I was making the comment this morning that the key was to have people who felt it was their business and had the true entrepreneurial view. And that was not at that time cultivated in IBM. If you took a businessman's view, as I tried to do, I was really out of step with the rest of the

world. I was going to try and develop a concept. So here's an area in which IBM was pricing everything after the unbundling. Everything was priced. And yet, IBM did not succeed where a significant number of independent companies did succeed in the applications area.

IBM Competition on Systems Software

Now we move over to the systems area. IBM did not unbundle a big chunk of the systems programs. They held back a lot. But CICS was unbundled and CICS, I think, is still probably the most successful program ever written in terms of dollars of revenue. So there were some on which they did end up making a considerable amount. And yet, in that same area, a number of strong systems companies were created: ADR, CA, Pansophic, Cullinet, Software AG. We can go down the list of all these companies that became very substantial companies.

Goetz: Right. And the question is which of those companies were competing directly on sorts. Certainly CA was doing well with sorts on DOS.

Grad: Were you doing well because you found niches where they weren't? Or was it that you were able to compete with them head on?

Goetz: Well, with both. Some products, like LIBRARIAN, we were competing against the independents. And others were competing against IBM.

Grad: With priced programs.

Goetz: Well, VOLLIE was competing against a priced program. It was low price. But ROSCOE was competing against a program that was not priced. And then when we got the database, there we were competing against priced programs. But for the most part companies weren't winning on price. IBM's prices were still low and they were still selling on a month-to-month basis. I think the differentiation for the independents was functionality and not price. For instance, in the database marketplace the pricing of independent products prior to DB2 was that the prices were significantly higher than IBM's: IMS and DL1 were reasonably lower. And independents were winning based on the functionality, ease-of-use, performance. So the unbundling was more the legitimacy than the fact that IBM was charging.

Grad: For the application companies, I'm convinced that the pricing was critical to open that door. But with the systems companies, it's never been clear to me why the independent systems companies have been so successful. That's really been the guts of the software products business.

Goetz: Because they provided an alternative to IBM. And the alternative wasn't that it was less money, but that it was significantly better functionality and performance.

Grad: Performance and ease-of-use.

Goetz: Yes, and very dramatic. Because, to be successful, it had to be dramatically different. SHARE and GUIDE played a real role. In the 1960s they helped foster the concept of software not having any value and to be freely given away to some of the libraries and the sharing of software and the promoting of that.

Johnson: The kind of thing that you see coming back now with the bulletin boards on the micros.

Goetz: Right. But I think most companies today look at their software as being very strategic——not something they want to start sharing with competitors. But in that respect SHARE and GUIDE didn't necessarily help the independents because they kind of promoted this concept of software as a service. It's not a product. It doesn't have any value and should be freely exchanged. But other than that I'd say they sort of played a passive role relative to unbundling.

Grad: They weren't a factor later on to help, to encourage the use of things like IDMS or Datacom or things like that?

Goetz: No, in fact they were still controlled by IBM for a long time and it was very difficult for vendors to give presentations. I think IBM probably played a neutral role. But there was enough pressure apparently within GUIDE and SHARE not to let the independents have the same platform that IBM had. And I think it's also true about the plug-compatible hardware companies that were allowed to become members.

Grad: Of course, many of those member companies buy plug-compatible hardware. And, of course, all of them buy independent software today. I have tended to feel that the unbundling decision to separately price was a primary watershed that opened up the door for the software products business.

Goetz: It definitely opened the door.

Grad: But it was in a more indirect way maybe than I was thinking of.

Johnson: It changed the perceptions of people, that software wasn't something just to be exchanged.

Goetz: Right. It was the knowledge that if IBM did come out with the products, they would price it. But I think there was some early acceptance of software products. And I just think they looked at it as an untapped area. Of course, in 1970 because of the fact that it was a bundled environment and there weren't lots and lots of software around, there was at that point, I guess, a feeling that a great amount of software could be built. There were lots of companies forming both in applications and systems software. But they also found it was very expensive to both build and maintain.

Grad: And to market.

Software as a Growth Industry

Goetz: And to market. A lot of companies were unsuccessful. But it basically has been a growth industry. Probably one of the great success industries of the last 20 years. It's been growing at an average of between 30 and 35 percent for the last 15 years. We exclude 1985 in which growth was probably about 20 percent. The Input studies consistently show both expected growth and incurred growth between 30 and 35 percent.

Grad: What's fascinated me, though, is that the first example of a software company that had grown from a low number to a really big number rapidly was Lotus. The mainframe companies, not one of them, became an Apple. In the hardware business, you can go from zero to $150 million in one to two years. Compaq for example. And Lotus is the first time a software company's ever done that to my knowledge. I couldn't think of another one.

Goetz: There was none.

Grad: So we became tortoises rather than hares. Steady. Boy, that 30 percent a year was there. And we became tortoises. It has something to do with the nature of the software business versus the hardware business. I don't know what it is. But there's something inherent in it.

Goetz: Well, I think it's because of the distributors. In software, you really need direct sales people for the most part.

Grad: Do you do any telemarketing?

Goetz: Yes, we do telemarketing. But our products are basically high-priced. I think that's a very unusual phenomenon of the home computer and retail stores.

Grad: But, you introduce a new product. You've got a big channel already sitting there. You've got your marketing people. You've got whatever number of salesmen you have. But, you've never had a product that's gone from zero to $20 million in a year have you?

Goetz: We had IDEAL sell from zero when it came out in 1983 in about two years to about $20 million.

Grad: That's pretty successful.

Goetz: Over 600 copies were sold. But we had an existing user base. There was a pent-up demand for it, a void for it. But still companies don't buy things automatically if they're high-priced. You still have to go out and sell it.

Grad: I was wondering how you can get that multiplier, that afterburner going in the case of software. But it has been a nice solid growth. Larry Schoenberg's been talking to us about the professional services side. His view was that when IBM announced the pricing of education, the companies that had been getting it for free stopped using it for a period of time. He said that there was a big drop. That was the recession period also of 1970-'71.

Goetz: But they did separately price services, too, didn't they?

Grad: Yes. But it meant that the companies just weren't buying the training. And, therefore, when business picked up again two years later they didn't have a lot of people around in their shops already trained. So they had to go outside to the professional services firms to get the work done. So we'll chat with him some to see how that holds together. Now, I didn't see any effect in the mini area. IBM System 34, 36. IBM sold RPG2 at the same time that the other products were announced. They did announce RPG2. And they made a sale on RPG2 for every System 3 that was sold from that point on. It was a real money maker. But I didn't really see much happening.

Goetz: No, I haven't.

Grad: No business in the applications area. No business in the systems area. I never saw many people going after them. Just wasn't much of a business.

Goetz: We never had an interest but we never did market studies.

Grad: You never did. You never looked at it?

Goetz: Never looked closely at it. But I suspect there are some small companies that are still out there. I'm sure there are some products being sold.

Grad: I'm trying to think of the members of ADAPSO that were non-turnkey shops in the mini area and I couldn't think of any. There probably are a few. Now, you [Luanne] were doing business selling software to mini.

Johnson: Yes.

Grad: You were not turnkeying them?

Johnson: No, stand-alone software.

Grad: I think you were the exception. There weren't many of you around.

Goetz: You sold that business? Or you split it up.

Johnson: I sold it to the employees. I'm still working in an advisory capacity. But they take less and less of my advice all the time. They're discovering they can do it without me.

Goetz: What's the name of it?

Johnson: Argonaut Information Systems.

Goetz: They didn't change it.

Johnson: No, they didn't change the name.

Grad: Where do you see things heading at this point in the software products area?

Goetz: Well, one thing I think is changing at IBM is recognizing that a significant amount of their growth should be in software. They've targeted from going from eight percent of their revenues today to close to 18 percent of their revenues in 1990.

Grad: I haven't seen that figure. Where is it published?

Goetz: I can send it to you. It's in the Gartner Group report. So IBM is forecasting a 35 to 38 percent growth a year, going from 8 percent of their business to 18 percent of their business.

Johnson: And is that specifically in software products?

Goetz: Software products. Well, their category called software. And they're doing this by raising prices significantly. The Gartner Group predicts they won't get more than the 60 percent market share they have now. In fact, they're showing them losing one percent, 59 percent. So the feeling is they're going to do a lot of it by price increases. So I don't think IBM is going to necessarily get a bigger share of the market. But I think the cost of software is going to go up considerably as IBM increases the price. They've had two price increases this year.