Oral History of Gerald Cohen

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Gerald (Gerry) Cohen

Conducted by Luanne Johnson

Abstract: In this interview, Gerry Cohen, the founder of Information Builders, talks about his early career when he was responsible for developing RAMIS at Mathematica and how the growth of a software product business within that consulting firm led to his decision to leave Mathematica and form Information Builders to develop a competing product, FOCUS. He describes the importance of offering both of these products through time-sharing services such as NCSS and Tymshare and the significance of time-sharing services in creating the software products industry. He covers the impact of IBM competition on early software products industry and the extensive user group infrastructure which developed at Information Builders.

Career at Mathematica and the Development of RAMIS

Luanne Johnson: I'm interviewing people who started software companies in the 1960s and 1970s because I haven't found anyone else who is capturing the history of the beginnings of the software industry and I think it's important to preserve that history. I don't really have a sponsor at this point, but if I have enough material I might consider writing a book.

Gerry Cohen: It would be an interesting book.

Johnson: Oh, I think it'd be fascinating. Because it's the stories of the way people started these companies which are now huge, huge companies. But the beginning was just a lot of entrepreneurial drive. The thing that fascinates me is the intellectual leaps that people had to make to distinguish between programming and software products. As we all know who have been in the business, writing a program does not make it a product.

Cohen: There's a lot more.

Johnson: It seems like a self-evident idea now, but it was not in the 1960s. Walt Bauer told me that the people at Computer Usage Company were saying there will never be such a thing as a software product.

Cohen: They were the ones who wound up going bankrupt. Or Computer Applications, I always forget which one.

Johnson: So tell me about how you got into the software business.

Cohen: When I got out of college we didn't have computers. But I went to work for Mathematica in Princeton New Jersey. They were doing operations research which was applying computers to business problems. Applying mathematics to business problems. So I got into computers. Eventually I got more interested in the computers than the operations research.

In 1965 we had a project with Allied Chemicals, their market research department. They asked Mathematica to see what we could do about organizing all their information. Now, if I tell you the specs, you'd say that sounds like what someone could have told you today. The market research guy said, "Look. We're a little remote from corporate data processing. So we can't get too much assistance from them. We want to do something pretty much on our own. We've got lots of data thrown at us."

They were in the carpet yarn business in those days, they produced nylon. They'd go to trade shows and see all these different colors. And they'd see the fabrics and the prices and the weaves. They wanted to put it all together and see if there was a trend. That would be a typical application. They wanted their analysts to do it themselves. They wanted a quick response. Sounds just like a local decision support system today.

Allied had just gotten this new computer, a GE 625 computer which was a time-sharing computer. We were on 42nd Street and Allied Chemical had just bought the New York Times Tower which is a landmark in New York City -- the Times Tower that you see in 1920s photos with the lights going all around with the news. The Times had just sold it to Allied Chemical and it became the Allied Corporate Center. They located their fibers division in that building. Their computer was downtown on Rector Street which is where Allied's main headquarters was at the time. So he said, "We're going to dial into teletype machines. You dial in and you're hooked up remotely." So they wanted to know if we could build them a system. Just what we call serendipity. You know, things just happen by luck.

They said, "Now, we can't submit keypunch cards because we're going to be about a mile and a half, two miles, from downtown. So you've got to design a system that could work via these terminals. It has to be format free. You can't have fixed columns and stuff like that. And a lot of people are going to be using it for time-sharing."

The long and the short of it was we designed a system which we called RAMIS. Allied hired a guy to work with me named Jack Goldstone and he and I put together the specs. I programmed the system with one or two programmers that I had hired. In those days RAMIS stood for Random Access Marketing Information System.

Johnson: Oh, Marketing Information Systems. I often wondered.

Cohen: That's what RAMIS originally stood for. Well, by the end of the year, 1965, the GE computer just couldn't stay operational long enough to be worth anything.

RAMIS had all the specs of a modern system in incipient form. The user could describe a file externally from the data. Then we had a language where he could get the data into the file. Very primitive process to get it in. And we had a report writer. And I don't even think we had much calculation ability at all. Maybe we could add some columns together.

At the end of 1965, Allied said to us, "Well, we're getting rid of the GE computer. We're getting an IBM 360 Model 50." So I set to work right away making an IBM version of RAMIS.

Johnson: What year was this?

Cohen: In 1965 we had the GE version. In 1966 we got a follow-on contract because the GE machine went out. We went to an IBM 360 Model 50. So I had a version of RAMIS that could handle 64 data fields which is heavy duty stuff. And you've got to remember in those days the disk drive was the IBM 2311. That had seven million characters. So, you know, you didn't have to worry about a helluva lot of data in those days. The GE disk drive wasn't much bigger, actually, as I recollect.

So by the end of the year we had an early version of RAMIS working. We had beefed it up to do a little bit more work. And Mathematica being a consulting firm said, "Well, let's use this same program for a project we're doing at Nabisco." I had done a lot of work for Nabisco previously designing their production planning system. I was involved in what's called weekly scheduling of the bakeries. I became pretty knowledgeable about it. So I went back to Nabisco with RAMIS to work on a project for them that had to do with an antitrust suit that they were

fighting on cookie prices. They wanted a quick analysis of data, you know. And so we had to make changes to RAMIS. And they paid us to do changes to RAMIS. And at that point we changed the name from Random Access Marketing Information Systems to Rapid Access Management Information Systems. That's when I hired Peter Middleman who is with me even today. And we beefed up RAMIS.

RAMIS Offered by NCSS

And then around 1967, two things happened. We got a project from American Express to do some analysis on their cardholders. And National CSS came along.

I'll talk about service bureaus separately. It's a whole different thing.

National CSS was the first service bureau, NCSS it was called, that was on the new large-scale IBM computers. If you want to mount a tape, there was a message to the operator to mount the tape. Up until then if you wanted a tape mounted... The only other service bureaus were Applied Logic, which eventually went out of business, and GE. At GE you had to notify them a week in advance to mount the tape. So this was big scale stuff.

So we said to American Express, we'll put RAMIS up on time-sharing for you because, after all, it was originally designed for time-sharing. So it's an ideal fit. And so we beefed it up again and put in more facilities and we did the American Express project with it. And then suddenly we had a product on the NCSS network.

Well, in those days the major thing you sold on time-sharing was Cobol development because everything was batch processing. So they would go around saying to their customers, "Look, if you want to do Cobol real fast, do it on the time-sharing network. And then take your code and run it in-house." Because it's IBM compatible Cobol so that was what they sold.

So we went to NCSS and said, "Why don't you sell RAMIS to your customers so they can do other than just Cobol development? Eventually Cobol development will go away. People will start using tools like RAMIS." Which eventually it did, by the way. In a few years Cobol development disappeared. The influence of the service bureaus on the sale of software is not insignificant.

Johnson: Let me get this straight. You initiated that for Mathematica. It didn't come from NCSS. They didn't go out looking for products to sell to their customers.

Cohen: Not at all, not at all. Suddenly we were a very big customer of theirs and they said, "This is a real nice program." And we said, "Well, we'll start to sell it." So we started to look for other people who would use RAMIS on National CSS. In those days we had a very funny plan. We said, "Well, we'll charge something like $3,000 to get you going and $600 a month rental fee." And a lot of people said, "No, no, no. We don't want to pay that." We had a few customers -- five or six. Most of them came from the service bureau salesmen who dug them up in the course of their looking for business.

So NCSS then said to us, "Look, we're going to open up in California and we're going on a national network eventually." And we said, "Let's do an experiment in California. Let's charge the user as he uses the product, not a fixed price. Sort of a surcharge. So if you charge 30 cents a CPU second, charge them 36 cents for RAMIS." They said, "Will they do things like that? Who wants to pay extra for their computer time? They won't know what it is." We said, "We'll find out." In other words, it was not taken for granted that surcharging was something customers would want. And, of course, the long and the short of it was a tremendous success.

Johnson: That became a standard pricing policy then.

Cohen: Oh, obviously. But it was not immediately obvious to us in 1967 that you can add a few cents to a bill for computer usage and that would be an accepted way of selling software. Pay it as you use it. Coming out of a consulting environment we said, "We'll get you going. We'll charge you so much a month." It sounded reasonable. But with time-sharing, people said, "Well, if I use it more I'll pay more. Use it less, I'll use it less." So the pay as you go turned out to be spectacularly successful. We did it about six months in California and brought it back to New York.

Selling RAMIS to In-House Users

NCSS started to become a large service bureau and RAMIS started to become a large product. From about 1968 up until about 1974, I guess, that was the RAMIS era that I was at Mathematica. We decided to commercialize it and hired our first salesman. We said, "Let's sell the product in-house." About 1969, 1970 I guess it was we had our first salesman, Steve Jernak. I remember him very well. Suddenly I was running a software company.

Johnson: I assume at the same time Mathematica was still doing consulting contracts.

Cohen: Mathematica was strictly a consulting firm. This was a little sideline business that I was running. I was eventually vice president of the RAMIS operation, the software operation. And Jernak did pretty good. We sold a number of companies. We sold North and Company, I

remember. We sold Merrill Lynch. He would contact the managers of the large data processing operations. We were in the software business.

Johnson: How did you price it at that point?

Cohen: The in-house sale was a fixed price situation. We were at, I forget, x thousand dollars per year.

Johnson: Under $10,000?

Cohen: Oh, no. It was over a $10,000 sale. Always was. RAMIS even in those days was an expensive sale. It was around a $50,000 sale. We sort of developed all the things you needed to do to run a software business. I don't remember if we had opened offices then. Because what happened was Mathematica was still a consulting firm. This was under five percent of its business. In 1974 we came to a parting of the ways because we just didn't see the business the right way. They still saw it as an adjunct to their consulting business to a great extent. I saw it as a new business entirely. For example, in those days you had a problem if you wanted to pay commissions to the technical people or even the sales people. Well, okay, they can see a sales person gettiing a commission. But technical people no way. Or incentive. And they said, "Look. We have all Ph.D.s here. They sell projects. Basically they sell the total project. We don't pay them a commission in selling the total project. That's part of the job." I said, "Well, this guy did a super job helping the salesman sell an account. He also needs an incentive." So the whole structure of a sales-oriented, market-oriented business in a consulting environment was wrong.

Starting Information Builders

So I said, "We've got to split this thing off, separate companies, separate everything." And we had a big disagreement. So in 1974 I split. And in early 1975 I started Information Builders. I got funding from some of my early customers. American Can Company and RCA actually put up the money.

Johnson: Oh, that's interesting.

Cohen: American Can Company had a little service bureau called AIS, American Information Service. They thought they would have a big subsidiary information group eventually. And they actually did. They actually were fairly successful with several companies.

And then years later Arthur Anderson came in and did a study and said, "What's a can company doing in the information business?" They sold them all.

So they needed a product and they paid me to do a new product for them. And I had very good friends at RCA. RCA had bought the American Can operating system which was an upgrade. So I knew everybody there.

Relationship with Tymshare and Development of FOCUS

And then about a few months later Tymshare in Cupertino, California, came along. And they said, "Look, we want to go from the DEC service business to the IBM business and compete with NCSS." So, great. We put this new product up on their service bureau. They paid me and so I basically had funding from day one and we developed FOCUS.

We started FOCUS in 1975. By 1976 we had an early version. And it was an instant success on the Tymshare network. As RAMIS and NCSS were becoming big companies, FOCUS on Tymshare became a very big entity. Eventually Tymshare became, I don't know, a $200 million company out of nowhere. When I met them they were $45 million just merging with somebody for $60 million. And so FOCUS was a fantastic success.

When we were negotiating the original contract, we were talking about, "If we did $80,000 gross business in a month what would the royalties be?" Well, by the fourth or fifth month we started to offer the product, we were doing about $100,000 a month. And we said, "No one has ever done this." Unbelievable.

The guy in charge of that is President of ASK Systems today, Ron Braniff. I was out in California and I said to him, "What do you think we're going to be doing?" He said, "We're going to be doing a million dollars a month in FOCUS." I said, "Oh, come on. No one ever does stuff like that." About a year later they were doing a million dollars a month. And, of course, a few years later they were doing several million dollars a month. Numbers nobody had ever anticipated. We never believed a software product could do two million, three million dollars a month gross business. I mean, that is a flagship software product to get people into a service bureau which is another aspect of the software business.

Selling FOCUS to In-House Customers

So FOCUS was probably the most successful single service bureau product ever sold. I mean, to do $30 million or whatever we used to do in the heyday. Tymshare brought us business.

Hundreds of customers, thousands of login hours. And what it did was interesting. In 1979, 1980, IBM did us a favor. They introduced the 4300s.

And suddenly everybody said, "Well, we want to go in-house with this nice product called FOCUS." And we couldn't resist that. So by 1978 we had added our own first salesperson. By 1979, we started to build a sales force. And a lot of the early business came from the Tymshare customers who wanted to go in-house. You just couldn't resist them. If they didn't go FOCUS, they would do something else.

So we geared up and we opened an office in Chicago and in California and built the present day Information Builders. A great number of the early customers were truly FOCUS users on Tymshare that went in-house. And, of course, the Tymshare people used to say to me, "Gee, you're ruining our business. You're robbing our customers." But it wasn't true. I mean, I couldn't resist it. Because otherwise they would just do something else. They could always go back to my competitor RAMIS which at that time had done a lot of upgrades and was called RAMIS II. My major competitor for many years was RAMIS II.

FOCUS and RAMIS as Fourth-Generation Languages

Now, the thing that was significant about FOCUS, and also RAMIS, was we called them non-procedural languages. Around 1981 someone came up with the term fourth-generation language. That was a guy who did a consulting project for the Navy using FOCUS. He wrote an article for *Datamation* and in that article he used the term fourth-generation language and he described the FOCUS product. So then people started calling it a fourth-generation language. I used to use the word non-procedural. People say, "Well Gerry Cohen is the father of non-procedural languages." I say, "Well, that's great. Who's the mother?" I didn't like the term fourth-generation. Because there would always be a fifth and sure enough there was a fifth.

A little sidelight. The guys who invented the term fourth-generation language are embroiled in a dispute with people who said they used the word first. And they say, "No, no. We used it first." Just a little sideline on who invented the term first. But I never liked it.

But IBM really created the in-house market for us. Because we were from day one a remote time-sharing oriented product for an end user type of person. From 1965, you might say. So we had a tremendous leap on that marketplace. And, you know, over the years from 1980 when things took off until today, I guess Information Builders is probably the 15th largest independent software company in the country, something like that. A lot of them were absorbed by the bigger companies. So we've got five, six hundred people probably, twelve offices, maybe fifteen offices. We have a consulting business, consulting offices.

Johnson: You're saying you do have a consulting business as well as FOCUS.

Cohen: Yes.

Johnson: How does it break out, products and consulting?

Cohen: Most of our revenue is products. But we have to do the consulting. Because customers want it. We're very unusual that we do consulting. Very few firms will do consulting.

Influence of Time-Sharing on the Software Products Industry

I think sometimes the influence of the time-sharing business on the software industry is not understood. It was a very significant influence. At least in our group. There were several groups. You see, a lot of the people sold repetitive application products like general ledger. That was one sector of the business. Our sector of the business was end user tools. And that penetrated the market strictly through time-sharing. Now, of course, everyone has in-house timesharing: everybody's on line, everybody's an end user. So we came in through a completely different route. And all of the time-sharing people are now dispersed because that business has been decimated. Now, we're into minicomputer and microcomputer people and little software companies they populate. So we got a head start on that end user computer information center type thing via the time-sharing route.

Johnson: That was one of Barbara Brizdle's points when she and I discussed it, with her background in time-sharing.

Cohen: She was there during the heyday of Tymshare.

Johnson: Yes, and she said that it really isn't seen within the industry that that was another route into it.

Cohen: But you see what most of the time-sharing companies did was a mistake. They considered their software proprietary like Control Data, and the one that had the Univac software. They always considered their software proprietary because they didn't want you to get off their services. So what they would do, obviously, was make it so you couldn't buy it to use in-house. End result was that they went out of business. Whereas in our situation we were able to follow our customers in-house because we had the freedom to do that. All that software is now defunct. All that great time-sharing software they used to offer is gone. People did in fact say, "Well, if you won't give me the software I'll take an alternative."

But I do remember, when we did the Allied Chemical stuff in 1965 we were running on the GE computer which is a scientific model, so nobody cared very much. When we ran on the Model 50, which was more the corporate machine, everybody cared suddenly. In those days data center managers ran everything. There was very little software that anybody would put on his machine that he didn't control.

Johnson: Yes, right.

Cohen: We were really selling software to what I would call the adventurous type of company which will try anything and see if they can get an advantage out of it. And you could see who these companies were. In the Mathematica days, we sold about 20 systems by the time I had left. Many of them had been NCSS customers. When I think of our early FOCUS customers, it's like Coca Cola and Proctor & Gamble and Merrill Lynch. They had very progressive data processing organizations. It was really apparent who was into this kind of thing and who wouldn't touch it.

Selling to End Users Versus the Data Processing Department

Johnson: On the way over, you were talking about the difficulty of selling software in the 1960s and that even into the early 1970s there was a resistance to buying software products. Would you talk about that a little bit for the tape recorder? The reason for that and why the attitudes changed?

Cohen: Well, I didn't realize it until later. But when we were selling the early RAMIS, we were essentially selling just like the time-sharing companies were selling: what can't the data processing department do for you that you have to have done? We would sell something to the personnel department so they can do their personnel work or the marketing department or the sales department to get their job done. So the time-sharing salesmen would go and say the same kind of thing. Look, do it on our machines. And we would say, "Well, you do it on your own machine. You just need the software."

Now, part of the problem was to get a job done, the guy, let's say, who's head of the personnel department had to go to his counterpart in the data processing and say, "Will you do this thing for me?" and then negotiate this whole set of services. That was a pain in the neck. So we would sell the end user departments in the very early days. Very much a service-type sell. Although we would contact the data processing managers they were not receptive at all. We were the competition to them. They didn't understand us. But the end user departments by and large were the ones who were buying the software. That's a truism even today.

Johnson: And this was for use on in-house machines?

Cohen: Yes, on in-house machines. The kind of sale we made was to the personnel department or the sales department or the marketing department or some specialized group. And then, of course, data processing concurred. But the sale was to this other group. Eventually, as you know, a financial planning systems came along and they sold to end user groups also. It wasn't until the 1980s that we could sell these kinds of products to data processing directly. They were absolutely unresponsive to anything that ran on their machine that they didn't initiate and control.

I remember one of my major sales at RCA, that's how I made contact with them. RCA was across the road from us at Mathematica. It was the operations research department or something like that at RCA. And they were doing a lot of work for their corporate personnel system. They effectively used the early RAMIS that I had programmed and a lot of the early RAMIS features I programmed specifically to solve their problem. It was a very good test case of what end users really needed. I got to know the RCA people very well. They're still a big customer of mine to this day.

Competition from IBM and the Impact of Unbundling

Johnson: What kind of impact did you feel from IBM in terms of competition? Were they any kind of competition to you?

Cohen: Well, IBM always had competitive costs. In those days they had a product called GIS, General Information Systems. That was the competition. They would push it and sell it. And you never understood why would they compete against us. It was a relatively small ticket item for them. But they would push it. That was competition. You had to convince companies that had all IBM software that there were other people who write software in this world. That was the major obstacle in the early days.

I'd forgotten about that. Today we compete amongst ourselves in the industry. In the early days, it was not so much that IBM was competitive, it's just that the corporate mentality was, well, we have an IBM shop. We use IBM software. They couldn't imagine using software from anybody else.

Johnson: Do you think the unbundling changed that attitude? Or did it make it worse for awhile?

Cohen: Well, the unbundling didn't affect us that much. From 1965 to 1969, I was still selling RAMIS in consulting assignment situations. In 1969 when time-sharing came along and the unbundling, I guess it all came together. But we still had to convince people that you can buy software that you didn't write that would be valuable to you. Remember, we were selling end user software. That was an unheard of idea. I mean, end user on my machine? That would use up too much resource. We did it very early. The only people who could afford us were people who had substantial computer installations.

Educating End Users

Johnson: What about the process of trying to educate the end users so that they actually could, with your software, get the information themselves?

Cohen: Oh, the users loved it. We always had a situation with early RAMIS and even the early FOCUS before the concept of in-house time-sharing took hold. End users were always our major supporters. We used to say nobody loved us but our users. Because we did the job for them. This was very early end user computing. By end user, I'm talking about the departmental computing where they wanted to get their job done and didn't want the hassle of data processing where they said, "Well, this isn't payroll or accounts receivable or general ledger. What do we care about your marketing information system or your employee appraisal system. That's your job." So how else could they get it done? We came along and gave them a tool. Then, of course, in-house time-sharing with microcomputers helped a lot, too. Because that spurred the whole revolution for end user computing.

Johnson: One of the things that you hear still with the micros is all these people who say, "I can't do it. I can't touch that computer." Did you have that kind of resistance to overcome with people?

Cohen: No, because we were always selling ease of use. We've been in this market so long. We always said, "Look, we'll teach you how to do the whole thing yourself. You won't need your corporate DP support." I mean, later on when they got into the game, that was a little different. But we were always at the point of teaching people, what we called a new language, a non-procedural language. It was easy to use. They didn't have to be programmers. And remember, the corporate DP said, "Well, okay, you want to buy this software, you're responsible for it." Which meant that that department had to train somebody who was very good in that software.

Johnson: Did you include a certain amount of training in the price?

Cohen: Yes, yes. Usually it was about ten days of training, classes and training for some number of people.

Johnson: Ten days. As much as ten days.

Cohen: Well, because it's a myth to think that you can learn a product in one day. To write reports, that's easy. But it's harder to think about how you're going to organize your information, how you're going to get the information in and validate it, how you're going to update it all the time in different modes. And really run a controlled environment. A lot of subjects to be discussed. Mostly you suggest writing reports from the data. But there are people who are designing applications and they need more information. Even today we have a three-day training course which teaches you the basics which is file design, maintenance, and report writing. And you get that if you lease FOCUS, as an example. Then if you buy it, you get ten days in addition, so you could have several three day courses or upgrade courses.

Johnson: Back in the days when you were offering RAMIS on the time-sharing system, how did you deal with training people then? Did you have the responsibility for training the people that were using it on the time-sharing system?

Cohen: Well, it was dual. NCSS set up a training program which we participated in. Their customers could come to our training course. It was much more haphazard.

Information Builders' User Groups

Johnson: What about upgrades? I presume that you continued to improve and upgrade RAMIS when it was running. But did any of those upgrades require further education?

Cohen: Yes, yes. It was an incipient software business. We had to do all the same things people do today. New releases went out. We had to send them information about it. We would host seminars. An early user group formed to discuss common situations. The early RAMIS groups were just a spontaneous collection of customers. I think that occurred about in 1972. The first FOCUS user group I think occurred in 1979. To show you how important user groups are, today we have 36 chapters in our user groups in the United States alone.

Johnson: You're kidding.

Cohen: Thirty-six. New York, Philadelphia, Hartford, Boston, Atlanta, just all over the place. Then in regional subgroupings. We hold one national meeting a year. We just held it in

New Orleans. A big part of our operation is supporting user groups. They run their own not-for-profit corporation. They have two full time administrators who run the group all year long. We're just a member of it. They're like IBM SHARE was. It's independent from us. Another aspect of our business. But not always appreciated.

The users have a very big say in software today. I guess the first RAMIS meeting was called FORUM, I forgot what it stood for. The RUM stood for RAMIS User Meeting. And FO probably stood for For RAMIS Users or something like that. I remember the meeting. A guy from Bell Labs named Al Munich ran it. It was probably a one-day event. Our last FOCUS user meeting last month in April was five days in New Orleans.

Johnson: No kidding.

Cohen: Full scale quadruple sessions that you could go to.

Johnson: That's amazing. Are there any other software companies that have that level of user group involvement that you know of?

Cohen: I doubt it.

Johnson: Do you think it's because it's a language and there are such a variety of ways it can be used? Therefore there's much more need for user exchange?

Cohen: Most software companies have user organizations. But not independent. As far as I know, we're the only one where it's a not-for-profit corporation run by the users of which we're only a member. And I doubt if any of them have as many chapters. We have thousands of people involved in our user organization. It keeps us very close to customers. Because we're selling an end user product. So in a given company, we could have a thousand people involved with our product.

Johnson: Oh, I see. Sure.

Cohen: An average software product, like a general ledger system, maybe your accounting department uses it and some of your data processing staff knows about it. Maybe there's 25 users on one application doing general ledger and a few data processing people. But we can sell that same company FOCUS and you could have 300 applications and 1,000 people involved in that. So the amount of interest is fantastic. We'll ship out 80,000 user manuals this year just to upgrade people's manuals.

Pricing Policy

Johnson: In your present pricing do you take that into consideration? Or is it a site license that they can use for any number of people?

Cohen: We mostly lease FOCUS on a monthly basis. Very much like IBM leases hardware. You can lease their disk drives and CPUs. So we lease them software. We got into that mode.

Johnson: And is the price the same for all customers? Does it vary depending on hardware?

Cohen: In the IBM world it pretty much depends on the operating system. CMS or TSO is so much to lease a system. We're one of the very few people who have monthly leases. And most of our revenue is leased revenue, just recurring revenue. So in the sense of being an economic entity, we're a powerhouse. If we don't sell another system, we'll survive just dandy. Although we do sell systems. There are people who buy it outright. And we still do time-sharing revenues and we do consulting and education. So it's a full scale software operation.

Johnson: So when you're doing training you really don't know what kind of application those people are going to be using it for. It could be anything.

Cohen: Well, we have two levels of training. We have training for non-data processing people and then training for data processing people, two separate courses. We don't want to mix them. But in our kind of software they do their own applications. They could be writing a system to keep track of royalty reports to record artists or company medical claims, just everything that companies do. There's probably 250,000 FOCUS applications.

Expansion to the PC Market

We're a little different software company because now we've also made a personal computer version of FOCUS. So we also sell in the PC market. Very few mainframe people have made that transition. We're a fairly substantial PC vendor now. I don't think any of the mainframe vendors have made the transition to become a major vendor in the PC market. We're the only ones. Just think about it. ADR certainly isn't. Informatics certainly isn't. Cullinet isn't. Software AG isn't. MSA isn't.

Johnson: They sold off their PC business

Cohen: So we're in the top 20 in terms of PC software vendors. I mean, once you get from Lotus which is $200 million, Ashton Tate which is about $125 million, you start getting down to the people who sell $10 million. Well, we do more than that.

Johnson: Do you offer the same training for the PC?

Cohen: They buy their training. It's not bundled in. We have more tutorials. And we have more getting started books, all kinds of stuff to get them going. And we made it easier to use specifically for PC type users. So we're the only ones who have made the transition to PC. Now, they're all trying to do it. But we made it very successful. It's a whole separate business with us. Conversely, there's no PC vendor who's ever become a major entity in the mainframe software market.

Johnson: Are there any that have even tried?

Cohen: I don't know.

Johnson: A lot of people, like McCormack & Dodge, have been trying to blend the two as did Informatics. But they gave up.

Cohen: They all made links from their mainframe product to their PC product. We put the product in the PC. We sell a standalone PC product and a standalone mainframe product. They're functionally identical products. So if you know the mainframe product, you can use the PC product from day one. If you develop a PC application and move it to the mainframe, it runs right away. Or you can dial from the PC to the mainframe program, and do some special thing so they know they're talking the same program. So we're in two separate markets. We have all the trappings of a microcomputer business. We sell through distributors and we're in Computerland and all that kind of stuff.

Johnson: That's interesting. You maintain and run those as two separate businesses?

Cohen: Yes, they're closely coordinated, but they're two separate businesses. Different distribution channels.

Johnson: There's one other company that has kind of done that. But it's a totally different kind of product. It's a statistical analysis product called BMDPC. It was developed at UCLA and was originally provided on a not-for-profit basis out of UCLA to mainframe applications all over

the world. Statisticians are using it. The guy that started with it back in 1962 pulled it out of UCLA about three years ago and is now selling it with PCs.

Cohen: What's the name of it?

Johnson: BMD. It started out as biomedical statistical software but has been used for all kinds of statistical applications. I interviewed him and he tried to convince me that he was the only company that had done that. But he really wasn't a company until three years ago. He had a true product with all the characteristics of a product. But he didn't have a marketing strategy until he formed the company to sell it on the PCs.

Customer Resistance to Software Products

Let's go back to the discussion on unbundling. The people that were in the systems software business feel much more strongly about the impact that unbundling had, the competition that IBM provided.

Cohen: Well, that's true. There were products in those days that competed with things like CICS. Taskmaster, for example. They truly had IBM as competition. You're right. The systems products did. But the application and specialty products never had IBM competition.

Johnson: Yes, that's sort of been my perception too. I always took everybody's word for the fact that IBM was a serious competitor because it's a very strong myth. And people really do identify unbundling in 1969 as the beginning of the software industry.

Cohen: Did you talk to anybody from Cincom yet?

Cohen: Yes, I talked to Tom Nies.

Cohen: See, Cincom's a special case. They were selling the first wide scale database management system truly in competition with IBM. Remember IBM was selling IMS or DL1 in those days. And they had the ability to basically give it away. It wasn't an expensive product. Let's see, in 1970 IMS was $100 a month. What's the difference whether it was unbundled or not? I mean, Cincom had to sell in competition with inexpensive IBM products.

Johnson: So Tom Nies' view of the world is quite different from, say, Walt Bauer of Informatics.

Cohen: I don't see that. I don't think Mark IV... Well, let's say it competed with GIS, which I don't know if it did. That's like $200 a month from IBM. So what? It was unbundled. But it was nominally priced.

I think it was mostly education of data processing managers. As they had to get more and more stuff done, they couldn't hire enough programmers to do it. It was just necessity.

Johnson: One of the biggest problems that I faced starting in the software business in 1971 was certainly not IBM. In selling accounting application products, there was no significant competition from IBM although they were offering products, offering a payroll system at a couple hundred dollars a month. But its reputation was so bad that it didn't offer any real competition. However, the biggest problem was selling against people's beliefs that they had to do it themselves. I remember it was about 1973 or 1974 when I suddenly realized one day that I was selling against other vendors instead of against the customer's perception that they had to do it themselves. And I saw that as a real major breakthrough. Because then it's a matter comparing features and price per feature.

Cohen: Right.

Johnson: The belief that they can do it better themselves is real hard to sell against. But I'm talking about applications.

Cohen: Selling against do it yourself in-house was always the competition for many years. You rarely ran into a competitive vendor on a given project. In the early RAMIS days, 1966, 1967, 1968, we were selling very specialized consulting solutions with RAMIS. In 1969 it started to pick up. The salesmen started going out through the service bureaus, finding all kinds of different kind of businesses. And they were basically saying, "Look, you can't do it in house. You don't have the hardware. You don't have the people. You don't have the software. We have it and you can get it done." It was the identical sale that we have just today, end user solutions. And we didn't do too badly. We ferreted them out. Built incipient businesses. Nobody envisioned how big the business was going to be. We thought it was going to be big at $80,000 a month and we did $2 million a month eventually. We underestimated the market even in the in-house side of it.

But in the early days it was a fairly long selling cycle, a lot of demonstrations, bench marking on solving this problem before you can sell the software. Customers were a lot less confident that this is going to work until you show them how it's done.

Although there wasn't so much of that on the end user side. Users were basically of a mental framework that said, "Well, don't worry. Whatever's necessary we'll learn to do it as long as we can do it ourselves." I sometimes think that a lot of this ease of use stuff is a myth. It does pull in people on PCs and in miscellaneous applications, but it doesn't do significant things. It's sort of a way for them to get their feet wet. For the early user, ease of use to him meant he could get at the information and do it himself. And, of course, since it wasn't Cobol or something, all the tools controlled by data processing, that was acceptable. We had some very significant interesting applications in the early days. That's a lot of years now.

Bootstrapping Early Software Companies

Johnson: I think what's interesting to preserve is the situation in those days and the various challenges that people faced, including the challenge from IBM which for some people was a big competitive challenge. But there were a lot of other challenges as well. Overcoming the customer's reluctance was the biggest problem for the application software vendors.

Tom Nies talks about starting Cincom out of his 1968 Cadillac convertible because he didn't have an office. So he'd go pick up people and take them to a drive in for lunch in the car because he didn't have an office. Those kinds of stories are what are interesting.

Cohen: Yes, we all did that. It was the same with us. We had a little tiny three room suite here on the far west side for the FOCUS office the first year. But we had good corporate backing. We had American Can and RCA and eventually Tymshare. So every year we used to break the walls down and get more and more and more space. But even before we had an office we used to meet in a luncheonette. It's funny. We used to think that all the customers wanted solid corporate entities. But compared to IBM, nobody's a solid corporate entity. You'd be surprised how willing they were to buy from some small outfit.

Johnson: Joe Piscopo [of Pansophic Systems] said that, too. He talked about when it was just he and his brother and another guy. And they had a couple of people that they were hiring on a contract basis to do some programming for them. But mostly it was just the three of them. They wanted to make a sale to General Motors and they ended up sitting in the room with a couple of VPs of General Motors. And they thought, "What are we doing here? Well, we're here because we have something to offer them."

Cohen: Yes, I never found that just because we didn't have the corporate credentials people wouldn't deal with us. As long as they had confidence that we would deliver the end product. And then, of course, today it's also support. It's a little different because there's long-term support and that's why you need an organizational structure. Just somebody with a pencil to write software doesn't built a company. It only builds a product. I guess in those days it was

much more possible to build a product. People paid a lot of lip service to support, but either you bought from these little guys or you didn't buy.

Johnson: Yes, that's all that was out there.

Cohen: Plus people weren't that sophisticated and knowledgeable about the kind of support they needed. And neither were the vendors knowledgeable. I mean, today we have help lines and hot lines and all kinds of support apparatus for customers. In those days we had much more primitive things.

Johnson: A lot of people didn't charge anything for maintenance support because they didn't know people were going to ask for it. It wasn't until they realized they were spending a lot of time doing it that they saw the need for it. And until they began to see it as a revenue generator, it was a nuisance.

Cohen: Well, we knew that right away. Even in 1967 or 1968, the first RAMIS system we actually sold outright, we were actually charging annual maintenance per year.

Johnson: Oh, really?

Cohen: Yes, we knew that this development process would continually bring in new systems and something had to fund it over the long term. I don't think we rented RAMIS as much as we rented FOCUS. With FOCUS I had a great opportunity. I had a lot of revenue from the time-sharing companies. So if I rented to the in-house customers, it was easier for them to buy it and I didn't need big $100,000 sales to survive. So what helped me was a very unique niche in time. I don't think it could occur again. I doubt any other software company could come in and have inexpensive rental software and support a total sales operation. Just couldn't be done. I was just lucky. Just the right slice in time. When IBM came in with information centers we said, "Well, we're information center software. That's what have we been doing all these years."

Johnson: Fascinating business.

Cohen: Well, we were in Princeton, New Jersey. ADR was down the road in Princeton. We had Applied Logic also in Princeton. That was the first time-sharing company in the United States. The first one that tried to have a national network. They had an office in California, an office in New York. Oh, such hassles connecting New York and California to the machines here in Princeton. That was a joke. But that was probably an interesting company, Applied Logic. It

was mismanaged in some way. The economics were wrong. But it was the first truly private time-sharing company.

Then GE, of course, was in time-sharing in a small way. But then it got bigger and bigger. I sometimes think that the time-sharing companies were underrated, their influence. They did make a break in all these big companies and people started using outside services. They were important in getting people to think in terms of using outside services. So data processing managers were spending money outside and using foreign software. Is there anything else I could tell you about?

Johnson: Let's talk a little more about the different challenges of the systems software companies versus the applications software companies.

Cohen: What is systems software? The database products?

Johnson: Well, yes. Burt Grad, who used to be with IBM, defines systems software as operating systems, database management systems and communications systems. He was cutting it that way.

Cohen: Okay. Then you've got applications. What would you call things like FOCUS? I would call that systems software.

Johnson: But there are others who define systems software as operating systems period.

Cohen: Okay. Well, operating systems are the province of the manufacturer. But the application software growth was quite different from the system software growth. They're quite different kinds of companies even today. Where do you put a company like Syncsort that sold a sort program in competition with IBM?

Johnson: I've always put that under systems software because to me applications software was something that, whether it was filling out a form or pounding on a terminal, there was somebody down the line who was actually reading and using the results. Under that definition, I would classify FOCUS as applications software.

Cohen: Well, there's one difference, though, which is that we don't have any application expertise when we sell the product. If you're selling a general ledger, you have a lot of application expertise to sell that product. We basically sell a tool. I suppose we're more like a database manager who's also selling a tool.

Johnson: That's a distinction, yes.

Cohen: Different sectors of the business grew in different ways and developed in different ways.

Johnson: I guess part of the problem is it's still all-in-all such a small industry.

Cohen: Very small industry numbers wise. Sales wise who's the biggest guy in the industry? Cullinet? MSA?

Johnson: They're very close, I think.

Cohen: $175 million. Well, in terms of a corporate entity, that's nothing. But in terms of leverage it's tremendous. That is, the 1,800 people using IDMS are doing a lot of things. We figure we had 2,000 FOCUS sites with maybe 200,000 people using it. That's a lot of leverage and a lot of influence it's had.

You can argue that we help companies fill up their computers quickly. Therefore, it helps the hardware manufacturer sell a lot more hardware. I mean, we've sold a lot of hardware for IBM. I bet we're probably one of IBM's best salesman. I don't see why they compete with us even. I mean, people will fill up whole machines on FOCUS. Even if we try to make it efficient, that has nothing to do with it. You have 500 users and you give them a language that will make it possible for them to use the machines, you better get more machines for them.

Johnson: Yes, that's right.

Cohen: So I never understood why IBM got so competitive. They want to be dominant in every sector of the marketplace. That's unfortunate. So now they're introducing products in every sector.

Johnson: Well, I think our time's up. Thanks so much for taking the time to talk to me, Gerry. It's been fascinating.

Cohen: Thank you. Glad I could be of help.