

An Interview with

JOHN MAGUIRE

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Conducted by William Aspray

on

3 May 2002

ADAPSO Reunion Meeting  
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Charles Babbage Institute  
Center for the History of Information Technology  
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## John Maguire Interview

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### **Abstract**

John Norris Maguire is former founder and President of Software AG of North America, Inc., overseas distributor of the Adabas system. Adabas (from "adaptable database") is a commercial relational database management system (DBMS) originally developed by Software AG in the late 1960s. The database system was first developed for IBM 360 computers.

In this oral history Maguire recounts his early life and decision to go into the Navy as an electrician's apprentice. He then discusses his education in electrical engineering at the University of Rhode Island and in business at MIT's Sloan School--where he studied industrial dynamics with Jay Forrester. Upon graduation Maguire joined Lockheed Missiles and Space Company where he worked on software simulation problems between 1960 and 1966. He recounts his service at CACI on software products including Quick Query, and his decision to found Software AG of North America in 1972. The bulk of the interview relates the marketing of Adabas, sales strategies against IBM, pricing decisions, cash flow issues related to the business, and the role of ADAPSO. This oral history was sponsored by the Software History Center in conjunction with the Center's ADAPSO reunion (3 May 2002).

## Preface

As part of its preservation activities, the Software History Center (SHC) worked with Dr. David Allison of the Smithsonian Institution's National Museum of American History and Dr. Jeffrey Yost of the Charles Babbage Institute to plan and conduct a number of oral history interviews of early software company founders and other key industry contributors. On May 3, 2002, in conjunction with SHC's ADAPSO Reunion meeting held in Washington, DC, SHC arranged for 15 individual interviews by historians well qualified by their knowledge and interest in computing history.

The following people were interviewed together with the name of their interviewer:

Bruce Coleman, interviewed by William Aspray  
Richard Crandall, interviewed by Paul Ceruzzi  
Gary Durbin, interviewed by Philip Frana  
Martin Goetz, interviewed by Jeffrey R. Yost  
Bernard Goldstein, interviewed by David Allison  
John Keane, interviewed by Martin Campbell-Kelly  
Ernest E. Keet, interviewed by Philip Frana  
Frank Lautenberg, interviewed by Paul Ceruzzi  
John Maguire, interviewed by William Aspray  
Joseph Piscopo, interviewed by Thomas Haigh  
Lawrence Schoenberg, interviewed by Martin Campbell-Kelly  
Charles Wang, interviewed by David Allison  
Robert E. Weissman, interviewed by Paul Ceruzzi  
Lawrence Welke, interviewed by Thomas Haigh.  
Sam Wyly, interviewed by David Allison

Each interview was tape recorded, transcribed and edited by SHC, the interviewer and the interviewee to ensure clarity and readability without changing style or flow. The original tapes along with the edited transcripts were donated to CBI, which placed the edited transcripts on the CBI website.

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## ADAPSO History Program John Maguire Interview

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**William Aspray:** This interview is taking place at the Monarch Hotel in Washington, DC on May 3<sup>rd</sup>, 2002 with John Maguire. The interviewer is William Aspray. John, why don't you start by telling us when you were born, and where, and a little bit about your early family life.

### **BACKGROUND**

**John Maguire:** I was born in Brockton, Massachusetts, May 4<sup>th</sup>, 1930. I was lucky. My father was a go-go lawyer, the youngest city solicitor Brockton, Mass. ever had. Unfortunately, he was in an accident and when I was 10 he died. I had a younger brother and there was an insurance policy that kept us and my mother alive. But it was rough. I have worked since I was ten. I was setting up pins at the YMHA building in Brockton, Mass and saving my money and working very hard. I did all kinds of jobs: caddy master at 14 and worked in a shoe factory afternoons after school. I learned a lot; for example I knew I didn't want to work in a shoe factory the rest of my life. It was a great education. And then after high school, I'm not sure what I wanted to do, but the Korean War came along and I went to the post office, took a test for the Navy and killed it, a screening IQ test. They gave me another test which was sent to Boston. Three days later they called and said can you be in Boston on Saturday? This was early 1951 and I was an electrician's apprentice. I had a knack for electronics.

**Aspray:** Had you had building hobbies when you were a child?

**Maguire:** No, I worked most of the time. I remember when I was ten years old, putting up these huge old storm windows you put on the windows; this was in Brockton, Mass. in New England. And I had all I could do – my brother and my mother – to get those things on, the screws in the right places. It was tough. Anyway, we had just been through World War II. We remember that; we had been living on hot dogs and beans.

**Aspray:** Were you a good student?

**Maguire:** I was a bright student but not a good one. I didn't do my homework but I was able to get very good marks because I could listen in class and kill the test. I was not a diligent student. I didn't need to be. It was only after the service when I decided to try college on the GI bill and I'd grown up. I was 25 by the time I got to college and I discovered the secret – all you had to do was study.

### **COLLEGE**

**Aspray:** How did you choose where to go to school?

**Maguire:** The University of Rhode Island had the only accredited engineering school in New England that had a program for the Korean vets that started in January, and brought us through the summer, so I saved a year and I paid out-of-state fees. I got out of there in 3 years and 3 months with a BSEE, Magna Cum Laude.

**Aspray:** Did you feel like you got a good education?

**Maguire:** Yes, and I also became very active in lots of clubs and different activities because when I applied myself I could do well and still have time left over. I was very blessed. I was president of Tau Beta Phi, the engineering society, by the end of my junior year.

**Aspray:** So you were a senior in college thinking about your career. What did you consider doing after you graduated?

**Maguire:** My father died when I was ten but in the Navy I fortunately met an English fellow in San Juan, Puerto Rico at the Hilton Hotel; his wife came from England and then South Africa and to the States. They had just lost their only son, who was in the US Air Force and had been recently killed by a drunk driver in Texas. And I asked her to dance and I asked him if I could dance with her. One thing led to another and we became great friends; he was an engineer who became a successful businessman. And he became my father and I became his son, and I buried both of them as the decades rolled on. We were very, very close.

When I graduated from the University of Rhode Island I was the only one I knew of at U.R.I. that Bell Labs ever offered to put through school for a doctorate in E.E.. But I had a strong drive to combine technical interests with business, which I had shown a flair for even when I was a teenager. And my daughter, our second child, was born in 1958 on a Wall Street Journal in the center of a small apartment at the University of Rhode Island. I took business courses whenever I could. I took all the required engineering classes. I took the required English courses – there were two of them: speech and report writing. I loved them both. I killed them both. A+. And you know, engineers, standard engineers, would get up with their knees shaking when they had to give a five-minute speech, and I'd be sitting in the front row and I loved it. I heard some bizarre speeches. Anyway, to make a long story short, I ended up at MIT's Sloan School for their two-year Masters program; I had a scholarship, and my job was to get graduate students into business situations, particularly into factories. We wanted to see if they could, as part of a particular course, solve "real life" problems. I was a good salesman and no one had ever made a real job of that position before. They gave me a raise and extra bonuses. I had the whole program and I had a little teeny office outside the dean's office there and I just got very good at getting in with cold calls and setting up interesting projects, problems that were of interest to the owners and the managers, and they fit in academically with what the Sloan School was trying to teach. I graduated in 1960 and in 1985 I went to the 25<sup>th</sup> reunion. More than one-third of my classmates were then CEOs. Now they are pumping four or five hundred a year through there. They get a thousand very well-qualified applicants every year. I funded a chair there: the John Norris Maguire Professor of Information Technology.

## **SIMULATION**

**Aspray:** Were there people who were either fellow students or who were faculty members either at the college level or at the Sloan School who had a shaping influence on your own personal career?

**Maguire:** Jay Forester had a big influence. I had switched my thesis to Industrial Dynamics, and I had a friend whose father owned a shoe factory (Potvin Shoe Company) in Brockton, Mass, and I wrote about the 8<sup>th</sup> thesis in this particular aspect field of simulation[based on this company].

Simulation is very tricky, but it can provide an enormous amount of insight by experimenting with different variables. I built a logical model of that shoe factory, which allowed the management to test out various policies and decisions before actually implementing them. But the real work experience was the job I had. I had never done anything like that before. I was getting paid peanuts. They changed it by giving me a title and more compensation. You go into an organization cold and set up a deal that they would be happy with, that the school would be happy with, that the team would be happy with. It was very complicated, you know, doing that. I found that very challenging. It shaped my drive and honed my skills in doing the impossible. And I enjoyed it. Like climbing a mountain. That was probably the most significant thing.

The other significant thing was I went from MIT to the Lockheed Missiles and Space Company from 1960 through 1966 and got involved in all kinds of software problems. I would get thrown into where the people were screaming the most and try to straighten it out. Then I hooked up with this guy Roger Summit who had a management game. I had worked on it with him, and we both used it to teach some classes at local universities. It was a model of the aerospace industry. That was about 1962, and I think it was the first software product I came across: ABES – Aerospace Business Environment Simulator. As part-time professors we used it to train MBA students and we used it to train middle-management people coming up through the ranks, to understand the business at Lockheed Missiles and Space Company. Roger had done a beautiful job. He was studying for his PhD at Stanford, which he did get eventually. And because I had done some simulation work I fit in very, very quickly there.

About a year later, in 1963, there was a business transaction. Ironically, the buyer was IBM. They wanted to buy the rights to use this program with the manual and the instructions and everything and distribute it as a goodwill product to other aerospace companies. It was very generic. So it got to where most of the participants would understand why they won or why they lost the contract awards, and it became a very effective management tool for trying to understand the environment that these middle managers were in and the decisions that had to be made and the probable consequences of them. Anyway, this was 1963 and IBM offered \$6,000 and I said no, no. Pricing was one of my favorite subjects. I've had lots of arguments at ADAPSO meetings on pricing. You're selling your house – you want to get the most you can get for that – that's your valuable possession. And I felt the same with software. So I figured they could duplicate it with maybe six months effort and \$60,000 and so I said I wouldn't sell it for less than \$12,000 plus a maintenance fee and we had the rights to sell it to other people too. Maintenance was there. I think I invented it, in software anyway. But the deal went down and here's the transaction, here's the manual and here's the tape, here's a check for \$12,000. Roger and I didn't get anything. It went to Lockheed. But that was 1963 and I said, "This is what I want to do."

And I did lots of other things. I was a technical guru for lots of proposals that teams would be writing. I think I had close to an .800 batting average with unsolicited and solicited RFP's, by the time I left. In 1966, I was the project leader to develop a design for processing all of the test data that the AEC nuclear testing program at the Nevada desert was going to be undertaking because there was no more blowing them up out in the islands of the Pacific. They were going to dig holes. It was new technology and they needed to study it and to learn it, and the AEC wanted a massive computer system to be able to handle the anticipated workload for processing enormous amounts of data from the sensors down in the ground. [There were 22 bidders for the AEC contract. CSC assumed they would win it. CACI assumed they would win it. I won it for Lockheed.] CSC hired away the guy who wrote the RFP. Harry Markowitz and Herb Karr, the founders of CACI, were

kings of the simulation world. They developed SimScript at the Rand Corporation and then founded CACI. IBM had a simulation system but it was almost useless. SimScript was the most robust and powerful language. I was one of the first users. I brought it from the Rand Corporation to Lockheed, and I used it at Lockheed to analyze alternative hardware and software configurations. We did a lot of super work there, really helping you get your arms about whatever you were buying. You could see the bottlenecks easily and you could play with the various workloads and you could see where the crunch came; it just made it a much more efficient and methodical way to acquire hardware and software. [George Hutchinson was a PhD student at Stanford and we worked closely together at Lockheed. George and Roger were always “bugging” me to continue my schooling and get my “ticket” – a PhD. But I heard a different “drummer” – it was software products].

## **CACI**

**Aspray:** What was CACI?

**Maguire:** It was a company founded by Harry Markowitz and Herb Karr. Karr is dead now. Markowitz eventually won the Nobel Prize for economics. I worked with both of them. They had the market for SimScript. I was using it at Lockheed to solve Lockheed’s problems. But a lot of companies wanted to acquire that technical capability. It was the best of breed in the 1960s. So when I won that AEC contract for Lockheed, CACI had to have me. CACI came after me and recruited me to come run the operations and the Washington office. When I left CACI, we had about a 100 people, were profitable and had gone public in 1968. I learned a lot about going public. And I learned a lot of things not to do. Herb stretched the envelope of the accounting world. I’m just the opposite, very conservative. I paid for my wife’s dinner and plane ticket, even though it was all for the business, since I was going to a conference and talking to a thousand people. I went off to Washington in 1966 and learned a lot. My love again was software products. Herb Karr came from PRC in the project and consulting business and I could do that; but my first love was products so products started to flow out of CACI, a lot of good ones. I just loved it.

**Aspray:** Some examples?

**Maguire:** Quick Query, a program that was sold to lots of business organizations and government agencies, a few hundred copies at \$27,000 each. Easy to use. First just take the files, extract reports and data from some tapes, fill out simple forms which our software would translate and then produce reports; otherwise you had to hire programmers to get reports, dealing with obscure and ancient files and complicated data program-interdependent formats. This was a very generalized thing and it expanded even after I left. I left CACI to found software a.g. of North America in February, 1972, Herb Karr and Harry Markowitz still didn’t see the potential of the software products. It was crystal clear to me. I knew where we were going to go because the cost of labor for programmers was going up. The cost of computers and computing power was going down and the labor component was growing. In the early days it was the multi-million dollar computer, and people were cheap. Right in front of my eyes I could see the equations and the lines on the charts and so I started carrying the flag: the use of generalized software. I drove a lot of people crazy.

One of my favorite times was with John Cullinane. He had a database system. It was really better than IBM’s IMS, which was a nightmare and that’s what made the in-house employees so expert; everybody had to depend on them, the IMS experts. But John’s IDMS was still a designer package

and Adabas (thanks to Peter Schnell) was leading the parade for ease of use; it came from Germany. The technical guys constantly made it easier and easier by building envelopes around it so you were almost pushing a button by the time we got through. Then we built a fourth generation language (thanks to Peter Page) that in one or a few statements could do what would take a hundred statements in COBOL. I had a crystal clear image that this was the way it has to go. Money is driving this. People are getting more and more expensive. You have to save labor.

My wife, Ann, was once a telephone operator using plug boards that were going to all be automated, right? She found something else. She went into nursing.

## **EUROPEAN CONNECTION**

**Aspray:** So, let's come back to the founding of software a.g., and your involvement. Could you tell me that story?

**Maguire:** The software products I had then at CACI – I had a nice basketful. The sales force was selling them in the US, doing pretty good, making a profit, public company. I wanted to go to Europe and I did my homework and the Department of Commerce was very helpful. They had a show in Frankfurt and I met a lot of chairmen of companies that were viewed as potential distributors.

**Aspray:** Why did you want to go to Europe – just to expand your market?

**Maguire:** Sure. I had the US covered pretty well. We were doing fine, had a name brand, an ad in *ComputerWorld* every week. Europe was the next biggest market. Later when I founded software a.g., I was in Japan in no time. Then I just followed the IBM trail. IBM left the crumbs. I just followed their trail. I thanked them for their English manuals since when I got to Japan the guys were reading English because they hadn't translated the manuals to Japanese yet. That was the IBM market.

**Aspray:** So let me bring you back. You've gone off to look for a market in Europe and what did you find when you got there?

## **GETTING INTO ADABAS**

**Maguire:** I had inquiries from distributors from all over the world coming into my Reston offices. I had looked those through and I did all that myself while still selling and I'm trying to duplicate myself – tough job. I had some winners and losers in the US but the money was coming in. Then I had a distributor in Canada and then he took over and while I'm setting this meeting up for CACI I bump into Adabas. The Expo in Frankfurt was sponsored partially by the US Department of Commerce; they had a European section. And I met the developer for Adabas and we got along famously.

**Aspray:** And who was that?

**Maguire:** Peter Schnell.

**Aspray:** How did this come about? How did Adabas come about?

**Maguire:** Out of his head, his experience. One very, very bright guy and one woman [Jutta Richer] helped him. We were at a meeting one day [at Travelers Insurance in Hartford, CT] and one guy asked me how many hundred man-years did this take to write, and the truth was it was only five or six brilliant man-years. Man-years talent-wise goes from five hundred to one. [Not wanting to insult the questioner, Peter was evasive and I moved on to another question. No one seemed to mind.]

**Aspray:** Was Schnell working in a company?

**Maguire:** Yes, a very small company, a start-up that spun off from a consulting company in Germany. He was brilliant, and he and I got along personality wise. He knew what he didn't know how to do. He believed that I knew what to do what he didn't do. And we're still good friends. I went and did my thing and I kept writing postcards from where I was; I sent him copies and letters. He says, "John, you're a great communicator." Well, I just wanted him to know exactly what was happening. Cracking the IBM users was again the most difficult task ahead.

**Aspray:** Did you purchase Adabas?

**Maguire:** No, I got the rights to the North American market. And slowly but surely as he saw me operate, more and more decisions came my way: the pricing, different policies, DOS versus OS. I'd call him on the phone; I'd say, "Peter, we're not selling any copies. US DOS users have a smaller machine, a smaller budget, but they need the same technology." So instead of \$120,000 I recommend we charge \$80,000. He says, "Okay with me." There must have been four or five thousand DOS users. DOS users in the market just flooded in, because I lowered the price from \$120,000. I was always a value pricing guy and I had people balk at the \$120,000 price and so I got out my Grant's engineering book and a slide rule and I devised all of these lease plans and credits. It was a masterpiece. I did it in a weekend and that changed the business. I was using interest rates between 20- 23% and a guy that could approve \$2,500 a month in his budget said, "I want a five year lease." I took it, thinking I'll worry about it at the end of the five years. And they were selling – this was 1973-1975. It was a mini-recession and I devised the lease plan in a weekend at home. And it took off.

## **SELLING THE ADABAS PRODUCT**

**Aspray:** What happened in the European market? Did your colleague market there or did you market there eventually?

**Maguire:** He had just one user, a bank in Duesseldorf. I can't explain the whole culture there, but they joke about it. Once we began succeeding in the United States, it started to catch on in Europe even though that's where they were to start with. It had cost them a lot of marketing, and they made some mistakes with the wrong marketing people. I was doing free demos at PRC to gain credibility and people were flying in. I had the idea of a \$2,500 paid demo earlier. We would do a demo with your data at your site. I was selling a couple of those a week. It sure helped the cash flow and gave us enormous credibility. I used a guy at Travelers Insurance who was already pretty well committed to IMS. He was head of data processing. I used him [Bruce Wrigley] as a reference for three years. He loved Adabas, but he was locked into all these IMS programs and that was priceless on getting in the door and getting credibility. I would do four or five sales calls in one week:

Chicago, Milwaukee, Seattle, LA, and get back here early Saturday morning or late Friday night, go through the mail and get back on the plane Sunday. And then my wife Ann suggested I hire a guy who used to work for me at CACI. He [Mike Jakes] sat beside me on a plane for three weeks and became one of my best salesmen.

To set these up, you need to look into the subject matter. To build those inverted lists involves a lot of sorting of values and names and things. This is how Syncsort got in first. Most of the sites in the early days I went into had no off-the-shelf software packages – all of them were from IBM. But a number of them had Syncsort because sorting was a well-known problem and you expended 20 to 30 hours a week on the mainframe just for sorting applications. Syncsort came in and then it took only 13 hours. It was a no-brainer. But in an inverted file system, System 2000 was run like that, you had to sort all of the values of all your key descriptors, last name, age, salary, you name it. With the way Schnell designed Adabas, he would take the values in batches. It would read one tape and put out another tape and then it was a little better sorted and it would be going tape to tape all night. Depending on the size of the mainframe, he could do it all in memory and on an IBM 360/165 we could watch the meter. This was the first and only one in the industry that did this.

I would say to a prospect that the Adabas loaded the data and prepared it very, very rapidly, faster than any other system. And I would say that the database loading is linear; if on your computer you have 100,000 records and it took an hour, it's going to take two hours for 200,000 records. And the sharpies would turn white and look at me and say, "You're lying. You've got to be lying. You can't do that using the current technology." And I would say, "I'll bet you \$2,500 I can." I sold a lot of paid demos with that line and we would go and load 100,000 and then we'd load 200,000, at just twice as long. And then they'd say, "How the hell did it do that?" I'd say, "That's a secret." [Note: IBM sort programs consumed a lot of machine time. Syncsort did a better job. In both cases, the machine time rose exponentially as a function of the number of records and keys. For estimating expected machine times, IBM provided charts on logarithmic paper to make the exercise more palatable.]

**Aspray:** As your business grew and you developed in Europe, did your US company do the marketing there or did the German company do it? What was the relationship between them?

**Maguire:** It varied. For example, I found a good guy in Canada [Bob Nickel]. Someone [Bernie Litchdig] who had worked for me at CACI knew about this guy in Canada and so we made him an agent for 15% commission. I provided the technical support and the installation and the training. We were renegotiating the percentage to give to Germany; we were learning. He then found some technical people and within a year he could do it all. So we renegotiated and gave him 50% and it kind of evolved like that.

Imperial Chemical Industries (ICI) had five installations in England. They sent an RFP. When it arrived at my office I called them up and found that it was due yesterday. It was sent by boat by mistake. They liked Adabas and so they notified the other bidders, IBM, Cullinet, Cincom, and System 2000, that there had been a delay because of their mistake; they sent it to a vendor by surface mail, the mailroom screwed up; they were very sorry. If you want to go with the proposal you submitted it's okay or you can amend your proposal, but we're giving another company a time extension.

So I stayed up all night and wrote the proposal and sent it by DHL or whatever to England. And we made the finals. I don't know how many companies were in the finals. Maybe two, but these are all English executives. There are 25 executives, the top five executives in five divisions. We met at their training center in Manchester, England and it was absolutely beautiful. When I landed in Manchester they sent a chauffeured limousine even though I was just the salesman. They picked me up and drove me to stay overnight at a beautiful, gorgeous training center. By now Schnell had a couple of other guys, but they had a lot to learn, they were purely technical with the German culture. Schnell and I worked together over 20 years. Anyway, Peter Page and Schnell show up along with their lawyer, who later got fired, he was a jerk. It's an all day session and we had a nice lunch on them. And by now I'm getting pretty good at all of it.

At International Nickel in New York City, the vice president, after my presentation to twenty people, brought me into his office, shut the door and said, "John, how do I change my organization to take advantage of this new technology?" This happened to me dozens and dozens of times. I told him what to do and he said thank you very much and created a database administrator function and so on. The contract would then arrive. I had many of those private meetings. They had heard IBM pitches; they knew it was a new era, they knew that the old-fashioned programming, data program dependence couldn't continue to compete in the new era. So I closed a lot of them like that.

But back to the ICI thing in Manchester. I'm talking about how to write the data and Page interrupted me and he's a strong willed guy and said something like, you cannot make mistakes with your data. You have to define it precisely so Adabas can understand it. Well of course. We'll catch that on the first pass. Something's wrong, let's go, give me a dump and I'll look at the data. But Page gets red and he had to get his two cents in. So I walked over quietly, there were 25 executives, well-educated experienced people, watching the two of us, and I leaned over and whispered in his ear, real politely, "Shut up – this is my show." And you know, Schnell looked at me and nodded since Page was out of line. We got the contract – five sites. We opened up our business in England. Here we are, dear England, five sites. And then Schnell found an Englishman and he didn't work out, and then another one but, you know, these things gradually work out.

## **DATABASE SYSTEMS**

**Aspray:** Tell me about the changing nature of the database market in the early 1970s. Who were your competitors? How did your product compare with the others that were on the marketplace?

**Maguire:** There was a guy named Leo Cohen who was a professional consultant. I had dealt with him when I was at CACI. He was giving courses on simulation. Then the database parade came along and he became a database consultant. He wrote a book in 1974 which was an analysis of the four major database systems in depth. I gave him all the manuals and everything else for Adabas. It was IBM's IMS, it was MRI's System 2000, it was Cincom's Total, and it was Adabas from software a.g. He called me up and he says, "John, what should I charge for this book?" I said, "This is a once-in-a-lifetime opportunity." I helped him and he went through and analyzed everything. Database committees were popping up every day. That's why I'd leave Monday morning or Sunday night. I'd know where I'd be Monday and Tuesday but not know where I would be Wednesday, Thursday and Friday. It was an eight or ten hour sales call and I just flew at night and there's the 25 people waiting for me to arrive. I've got my slide sets. I'm ready to go, I'm ready to handle any tough question you can throw at me and I said, "I think you should charge \$500 a copy," and he nearly fainted. He had a

PhD in math or something. Anyway, he swallowed hard and he said, “Okay, John, let me try \$385 with modest discounts for multiple copies.” Couldn’t keep the presses going fast enough. He made a fortune. He owed me.

**Aspray:** So those were the four database systems?

**Maguire:** Yes. Then came an era of benchmarks. And here’s where IBM came out of the woodwork. Oh boy. That’s another story. No one wanted to be first. Everybody was afraid. I went into each of the countries and conducted seminars – major countries – Brazil, Argentina, Israel, Venezuela, Mexico, Philippines, Japan, South Korea, Singapore, South Africa, etc. I traveled a lot. They didn’t have any frequent flyer miles then. Here are some IBM stories.

## **SELLING AGAINST IBM**

**Aspray:** Before you go to those, it was easier if somebody has already laid the groundwork. So if IBM had gotten into the country, was it easier for you to follow in?

**Maguire:** Yes. They were always there first. They had 70% of the hardware business in the world. At first they didn’t immediately translate a lot of the manuals – they were in English and usually some people in management or senior technical people had studied English in college and could read the manuals and they would put in some technical people to make sure that they didn’t screw it up. IBM had paved the way, for which I am very grateful. So in a large sense I was on their coattails. But they fought like dogs. With Adabas you immediately cut the size of the hardware that you needed. IMS was a hog and just ate the machines alive. IBM had no motivation to make easy to use, efficient software. They would just stress functionality. Efficiency be damned because they are making more money the less efficient it was. IBM got paid for CP usage, so their fundamentals were screwy. My fundamentals were simple – I had to save people time and money.

**Aspray:** So, if you go in to sell your Adabas to a customer – how is it that you would differentiate it from your competitor’s products?

**Maguire:** Excellent question. First of all, if we were 10% better, I would never have had a chance. It had to be 100% to 500% better. It had to save enormous amounts of maintenance labor. It had to save enormous amounts of machine time so that you’d be in pain. Even though you had been a loyal IBM customer, I would make you feel the pain if you didn’t listen to me. But the IBM sales rep also had some allies working for the customer who loved IBM and IMS, because that was their bread and butter, their livelihood, because the peons in the organization would never learn how to use IMS properly. But they would learn how to handle Adabas because I had guys back in Reston wrapping layers of stuff around Adabas so they’d never see the complicated guts.

**Aspray:** To make it easy to use, right?

**Maguire:** Right. The first thing needed was a query language. [In Reston, that was Jim Addis’s first assignment. It took him less than two months. It was called ADASCRIPIT and it was very easy to use.]

**Aspray:** So Cullinet didn’t do this or IBM?

**Maguire:** Correct. Cullinet had a design package that was better than IMS. It was easier to use, but it was still a designer-oriented package. So IDMS was kind of in-between. System 2000 was a hybrid; it had hierarchy aspects to it that were similar to IMS but they added inverted file capability for processing queries to it. They tried to do too much and we'd be in benchmark after benchmark against them and they would lose miserably. The City of New York was no contest. There they ran up against the linearity of Adabas and they couldn't believe it. So they kind of drifted away. I was on a plane one night to Austin, Texas, where they were based, and their executive vice president boarded the bus at Dulles. [He didn't notice me. I sat beside him and gave him a gentle shove in the side. He practically yelled, "John! Why are you going to Austin??" I said, "Guess!" I didn't tell him who I was visiting. It was the Texas Department of Highways. I won the contract.]

They had snuck some people into presentations I had made and taped stuff that I had said. Of course I was driving them all crazy because I knew the MRI guy was going to be where I was the next day. So I'd write a note for him, "Welcome to St. Louis. John Maguire." So I had these little tidbits. But they faded. System 2000 just couldn't perform and they were busy taking it to other machines. At Andrews Air Force base one day they said, you know if you wanted machine independence, what would you buy? I said, buy System 2000. They are bringing it over to CDC and everything else. I'm not going to do it, period, end of discussion. You should go buy it from them. I gave them the business. People had never seen somebody like me saying go buy it. The County of Milwaukee had a hierarchical system, a DL1 system that they wanted to live with and yet the city had bought Adabas. I told the county to go with System 2000, you will have fewer problems – it will take in your hierarchical data structures and it won't be a problem.

A guy at CDC [Control Data Corporation] called me one day. He said, "How much would you want to convert Adabas?" Adabas was the big product, an adaptable database system. I told the guys at CDC that you don't have enough money. I said we're in a technological race and if you threw millions of dollars at me I would then have to take a lot of key technical people to study the structure of your hardware and try to duplicate it, which is a non-trivial problem, function by function for the Adabas system. First of all these guys were priceless. They were hard to find. Once we found them we held onto them. We had no turnover. We were right at the edge. Everybody was pushed right to the limit as I finally explained to them. Then we started selling to the government too. I gave them a 25% discount. They nearly fell over. I was an American citizen I said, why not? And then it spread through the government like lightning. The FBI got it, the CIA came on; they got me cleared for the CIA. There were incredible applications, beyond my dreams at that time.

**Aspray:** So you were willing to write off that 30% of the market that didn't use IBM machines and you stayed in that IBM niche?

**Maguire:** Correct again. It was one of the best decisions we ever made, because the IBM market was so huge and all you had to do was find a little crack in the door; and then in the city, in the county, in the state and you know, it just spreads. And by then we had hired sales and marketing people, but as you can imagine, in the early days, I was working a hundred hours a week and flying like a crazy man.

**Aspray:** I'll let you get back to your IBM stories in a minute but let me just ask one or two more questions. Companies that built plug-compatible devices for IBM hardware were tremendously susceptible to changes that IBM made in its product line, or companies that were building

mainframes that were plug-compatible like Amdahl or RCA at some point. How vulnerable were you to changes made in technologies by IBM, or to business decisions that IBM made?

**Maguire:** That's a very important question. At first we were afraid of it. Then we learned more and more and we learned tricks to get around it. So as the days and months and years went by, it didn't make any difference. The TSO operating system took us a month or two to figure out at Citibank. It was costing me a penalty of \$700 a day. We finally figured it out. IBM wouldn't answer the phone. And so there were glitches, but after a while they just went away and the plug-compatible people had the same problem. They were trying to make a living selling faster, cheaper machines, and IBM would pull every trick in the book. But they couldn't make major changes without screwing their customers, because their customers had built application programs and their information systems were running on this and depending on that. Pretty soon people like us were coming in under the tent and making everything work. The TSO interface cost me \$35,000 at Citibank. Jim Addis, one of my senior technical guys, got a nice "Attaboy" from me. I took care of him later on when I could afford it.

**Aspray:** I interrupted your stories about IBM.

**Maguire:** IBM. Let me give you some examples. A large insurance company in San Francisco [Fireman's Fund] did a big study. They bought Leo Cohen's book, modified the analysis with their own criteria and everything. It comes out Adabas. The vice president then looks at two of the criteria (the size of the company and the number of database technicians within a hundred miles) and changes the "weighting" factor. I had just one database technician in Oakland. IBM had a hundred in San Jose. And they do the calculations again and it comes up IBM. A large insurance company in Boston, [Commercial Union Assurance – their parent company in England purchased Adabas; but the Boston people (system programmers) were "in love" with IBM. The in-house technical people – this was a benchmark – conspired with the IBM team to pre-sort the allegedly random updates that the real world is going to bring into this major file so that IBM could zip through the database like greased lightning and win the update test. When Adabas was brought in they scrambled the updates. My guys were there. It was suspicious and eventually it leaked out and it was discovered what happened. We won that account, but we would have lost it if the decision had been based just on the result of that timing. But this is where the IBM salesman and the in-house technical people almost killed it. This was a common occurrence, and we lost these benchmarks more often than we won them.

At American Airlines they made it as difficult as possible. We were in two benchmarks in the New York offices and also had a couple of my technicians and myself out in Tulsa, Oklahoma for the weekend. They did a similar thing, juggling the criteria. I met the lady afterwards who was a principal architect of the study. She was in tears and she was looking for another job. At American Express in New York City, we did everything they wanted – huge benchmarks. I'm negotiating the contract with procurement. There was a guy who had been at CACI – we worked together for six years – Jim Berkson was a lawyer and head of administration and finance. I taught him about computers and he taught me about contracts – beautiful marriage. So I wrote the contract myself. The head legal guy at Chase Manhattan Bank said, "John, are you ready to go with a final version of the contract?" "No, I need another day with my lawyer. I'll get back to you." I didn't have a lawyer. Anyway, at American Express, I'm in procurement negotiating a contract for four sites. Two floors up in that building there is an IBM vice president meeting with the vice president of information processing. The procurement director that I'm meeting with gets a call from the American Express vice president.

The guy reached over and pulled the contract out of my hand. I also remember one day when I was at home before we had a really good office. I'd worked three years on Dupont and the study said Adabas, but then I got a call that said, no, management wants to go with IMS. I was always very professional. I said, "I understand the pressure you're under. I understand it. I come up against it every single day. I wish you well, but if it doesn't work out call me back."

I had a hundred companies with that scenario where they went with IBM to IMS, fell on their face, wasted millions of dollars and my phone rang. Three years later Dupont bought five sites. You can imagine the experience going over those rough bumps. In going overseas I just needed one or two sales in each country. I sold the first one or two. By then I got their people trained and tested and by then I had a much bigger staff. When I got out of there in 1992 I had 800 people plus distributors in every major country.

**Aspray:** Is there any reason that a customer might actually be better off with IBM's product as opposed to yours?

**Maguire:** That's an excellent question. Well, like the guy at Travelers. He already had 800 programs written in COBOL and IMS and they cost a fortune. And they worked- they got the bugs out of them. It eats the computer alive, but his job is safe. Another guy, Japanese insurance company – one of the largest – got my card with the Japanese on the other side and a little gift from America. "Frankness" was very unusual for the Japanese. We were having tea and he had his deputy and I had my local guy (Kazuro Fujimoto) [Cincom put an American in charge of their Japanese operation – I couldn't believe it!], just the four of us. And he looks me in the eye – I had done the presentation to their technical people – and in perfect English he leans over and says, "Mr. Maguire, if I go with IBM and it doesn't work out, no one can blame me." I said, "Okay, I understand." But the last time I looked we had 700 sites in Japan. Maybe not that insurance company but a hell of a lot of other sites.

## **EDUCATING THE MARKET AND THE MEDIA**

**Aspray:** So it sounds like at least in part it was the technical expertise that you had working for you that made your product successful. Tell me how you found your technical talent and how you kept them happy and kept your employees with your company?

**Maguire:** Prospects were a common source, but not solely. We were in a benchmark at a company (Associates) in South Bend, Indiana. At that time it was one of the few hotels in the United States that had a thirteenth floor. The guy's name was Paul Peterson and he was a key guy in doing the study that said Adabas was best. He was a very, very fine systems programmer. He saw right through IMS and he understood Adabas immediately. He was the key author of the report that went to the company's manager, saying the answer is that Adabas is clearly the preferred data base system. IBM got to their top management, and they cancelled the paid Adabas demo on Thursday at 10AM. I was in Reston and Paul Peterson called me at 2 o'clock and said that he was so annoyed with his management and so turned on by the Adabas technology, "John, can I have a job with you?" I said, "Can you be here Monday?" He said yes. That was not unusual. He was very bright.

[Early one morning, I picked up Paul at his home and we caught the 7 am shuttle to New York. We took a rental car to Bethpage, Long Island (Grumman). During my presentation (to a full house) there was a lot of interrupting and yelling – mostly from the system programmers who wanted IMS.

Most of the attendees (users) wanted Adabas. A fist fight broke out. That is a fact. Ask Paul. We sold them a paid demo. We did it but they went with IBM and never paid us the \$2,500.]

For ADAPSO I did some PR work and I went with John Imlay on the quarterly tours to the *Wall Street Journal*, *Fortune*, *Business Week* and the major papers in every region. We'd start with an early morning breakfast and go through dinner in New York. We were trying to educate folks about what's happening out there. IBM doesn't give them any information and that was a major problem for the credibility of the independent software products industry. Those of us in the early days got most of our publicity because *ComputerWorld* would print it; I'd meet with their writer somewhere once a week and give him the big news: somebody switched from IMS to Adabas and they were on it. This was big computing news. There was big money involved, big, big money.

So we did our best to try to educate the professional writers of the major publications. It was September of 1980 and it was a Saturday and I was at the office in the morning. When I came home there in the mail was my *Business Week*. There was the cover story about the independent software companies. There was software a.g. and Cullinet and MSA and all the others. And this was the front page cover. You know we had a zillion copies made of it. It gave us credibility. We had arrived.

In 1974 we had our first user's conference for software a.g. at the Dulles airport and business was just starting to click. I bought, but didn't pay for it all right away, a 450 SLC Mercedes, two door, dark blue. We had about fifty or sixty attendees – a lot of prospects that were interested and Schnell and I drive up in this car. It was across the street from the Marriott at the Dulles airport and there I am in my brand new Mercedes, worrying about how I'm going to make payroll next month. It was a lovely car.

### **FINANCIALS AT SOFTWARE a.g.**

**Aspray:** Why don't we talk about the economics of your company for a while – financing, cash flow issues, and that sort of thing.

**Maguire:** Good point. Cash flow was a nightmare. One of the worst was when we had won the benchmark against System 2000. There was an RFP that came out – City of New York, it was the controller's office – and so I went up and visited with them and met with the data processing people. I understood their system and I understood their problem. And I knew how to fix it. There was all these millions and millions of records on housing violations and rent control and it was in the controller's office. I took the shuttle up and back and we went to lunch and I'd seen enough systems so that all I needed was an hour or two. I went back home and typed a proposal on my old typewriter in my den. I think it was three or four pages single-spaced. Then I put in the manual and everything else. It was due that Monday at noontime. I took the 7am shuttle up. I didn't have access to a copier and they wanted six copies, so I found a copier in New York and went to where the RFP was supposed be submitted and I waited there. It was 11 o'clock. I waited till 12:00 so I could see who else was bidding. They sent messengers and IBM sent a whole bunch of IMS manuals in a big box. There were four of us: IMS, System 2000, Adabas and Cincom. I got an A+ on the basis of that three or four pages. I knew the problem. I understood exactly what they needed and I didn't need to submit a hundred pages: three or three and a half pages. IBM got eliminated – they just sent this box of IMS manuals and no response. The RFP was pretty specific - here's our problem, how do you solve it? MRI got a B- and Cincom and IBM got nothing. So two of us were in a benchmark and I won.

**Aspray:** This was 1973?

**Maguire:** Yes, June of 1973, and we got it right. They had some problems but we fixed the problems. They then bought another system, so I had the first system for \$120,000 and the second for \$60,000, plus a consulting contract for \$120,000, but they didn't pay me for a year. New York was going through some serious revenue troubles. The following June I'm dying. Talk about cash flow. My wife didn't buy a new stitch of clothing for six years, four kids. I used to write memos, private memos, to employees so they'd understand my problems. I got so tired of going up to New York City. I think I took the shuttle five days in a row and got home for a late dinner each night.

With my customers I went through that system, took me a week, and all the problems were solved. We got the systems running beautifully, but I didn't have any money. I finally walked away with a \$180,000 check after going through all their ancient procedures. A year earlier I had signed the contract, but I didn't have a corporate seal. New York City said we don't do business with anybody who doesn't have a corporate seal. Jesus! I came back to Washington, DC and got a corporate seal and it turned out that it had a misspelling in it so I signed my name in ink for the contract and put the seal in sideways so the ink would blur one of the little letters that got misspelled, and a year later I got paid.

With the cash flow problems, of course, I couldn't pay the royalties to Germany and then there were technical problems and there's always a new IBM operating system. We went through hell but we survived and our customers did great things, magic things they never could have done with the old technology. An oil company in Houston improved their productivity immensely because they could go through their databases of seismic data and find out what the magic elements were when they processed the data from new fields and looked for hits. At Ingram Steel in Chicago yields went from 60% to over 80%. There were really enormous benefits in computerizing and data processing. We had been automating payroll for eons but only when we got those magic software tools could we really do some interesting stuff. So I really loved to hear these stories. At our annual conference with sometimes 2,500 attendees, I'd tell some of these interesting stories about how our users were revolutionizing their organizations, by improving their efficiency and productivity with the tools that software a.g. was delivering.

**Aspray:** Did you have to go out and borrow money? Did you have a private banker?

**Maguire:** I tried. I finally had a nice home in Reston, Virginia and I got some equity out of that from a local bank. There was no venture capital – this was 1973-1974 when there was a recession. The *Business Week* article which gave us instant credibility was not going to come out until 1980. By then it was time to go public, so we were very restrictive: I flew coach, which didn't have any frequent flyer miles; stayed at Holiday Inns. There was no fat in the organization. Everybody worked their ass off and I lost a few people early on because I was late with a paycheck and their wives couldn't take it. But these were low-level people mostly. The high-level technical people, all of them stayed. It was tough then, as we were always a little bit behind financially.

In June 1974 the German company was in deep trouble and that's when I got the loan on the house. I also owed the IRS. I paid the IRS. I gave \$10,000 to my head of administration and said, okay, here, make the payroll and pay whoever is yelling the loudest. It was illegal to take more than \$10,000 out of the country. I was scared to death. But they needed \$22,000 in Germany to solve

their tax problems and I had it in cash and traveler's checks in my pocket. \$22,000. This was a day or two before our users conference at the Dulles Marriott Hotel. And I went with Peter Schnell to the bank and counted out \$22,000 dollars. So I bent the law there a little bit for survival. I'm an honest guy. I mean I would tell you to go buy IMS; if you can't change the specs, that's what you should do. I don't have any problem with that. I don't steal but I was caught in a serious jam with a lot of people depending on me, including customers, and I couldn't let them down. I nearly killed myself.

**Aspray:** Were you able to pretty much deliver to the customers?

**Maguire:** Yes, we cranked up the R&D effort. The major effort was building the fourth generation language. Computer Associates went down the street and bought everybody's products but we didn't do that. We didn't buy anything. But we had to have our own language. I invented a term. The guy at Datapro loved it. I can't remember the term. The term was some fancy English word for seamless. It had to do with Natural talking to all these other graphics programs and to all the other stuff. Now I remember the term: "linguistic integration." By the time I left we had 100 products, all integrated.

**Aspray:** A hundred products.

**Maguire:** All completely integrated. All complementary and available for all the different operating systems. It took twenty years but it worked. And then I went cruising on my boat.

**Aspray:** Were you a licensed ship captain?

**Maguire:** Yes. We had guests and so they wouldn't be spooked, I'd have my captain's license up there. I enjoyed the water. I was in the Navy, and then Ann and I started going on nice cruises and bought a boat and used it a lot.

## **MEDIA AND COMMUNICATIONS**

**Maguire:** When I first started in February 1972 putting ads in *Computer World* and elsewhere, I put together a package. I had the kids assemble this package on the dining room table. It talked about the features of the product, the terms of a paid demo, the terms of a free demo, and will you come see me. Everything was there, nice, a neat package. And so the "bingo lists" would come in from *Computer World* and *Datamation*. Since I'd be on the road typically, my wife would take the labels; the packages were all put together by the kids, and she would drive to Dulles airport with a stack of packages going everywhere. It was little known at that time that the major sort center for northern Virginia was Merrifield; there was a big facility there. But I found a hole in it. People would call in too. I wasn't even in an office yet – this was my home in Reston. These packages would go out. I remember one time in particular, she'd gone the back way to Dulles airport – there was a US Mail facility there in the cargo area that was open 24 hours a day. There was a clerk that you could hand it to and he had a machine to put postage on it and everything. It was on a guy's desk in Seattle at 10:30 am Seattle time the next day! He called me and I happened to be home. He said, "John, I just got your package!"

Another thing I did with postcards, thousands of postcards. Every night in the hotel, Tulsa, Oklahoma, San Francisco, wherever, I would write to many of my hot prospects, postcards with tidbits on them. Bruce Rigley. That's the name of the guy at Travelers. Bruce Rigley just bought a

paid demo of Adabas at Travelers Insurance Company in Hartford, Connecticut – here’s his telephone number; he’s going to stick with IMS because he has 800 production programs but he was really impressed with what he saw of Adabas. Sincerely, John Maguire. Ten thousand. My daughter tried to get me in the Guinness Book of Records but it wasn’t documented enough. Later on in years, one of my friends in Germany sent me a stack that I had sent him. And I had a widow friend in Florida. She sent me a stack of hundreds. I had some older relatives that are now dead and my mother, now dead, that I would send postcards to. Even from other countries too. These were little tidbits. The beauty of a postcard – it’s a restricted space and I chose my words carefully. When I hired other salesmen, the guy would be calling on Morgan Stanley, my new guy, and the prospect would open a drawer and pull out his postcards from John. Boy, you talk about cost effectiveness. I went to buy some postcards and a hamburger or a turkey sandwich or something and wrote postcards and went to sleep and started all over the next day.

**Aspray:** Boy, long hours though!

**Maguire:** Very, very long! And then if I had a management crisis, you had to see me Sunday morning at home. I didn’t have many, and the turnover was incredibly small.

**Aspray:** Personnel turnover?

**Maguire:** Yes. Hardly measurable.

**Aspray:** Did you pay your people particularly well?

**Maguire:** Better and better as time went on. I paid them what I could get away with because of the cash flow problems in the early years. Then I gave them stock options and we went public in June of 1981. I had gone public with CACI in 1968, so I knew the game. I knew how to do things very conservatively. I knew how not to screw around with accounting rules as my boss did at CACI. He’s dead now. God, he used every accounting trick in the book. He would have an ad in *Computer World* and depreciate it over twelve months assuming that the person who read the ad would remember it. I expensed all R&D clean as a whistle. Our margins were good, because of the financing that I did with the leases.

I had a meeting with all the Adabas employees at the Reston Sheraton hotel. By now we’re having visitors come to the company with one of our salesmen in a rental car. They fly in on the same plane – they stay at the same hotel, spend all day at the company. We have conferences. If I’m in town I’ll go there and make a little pitch. It’s moving along and I had a meeting with all employees. I said, “It’s 3 o’clock, anybody have to catch a bus? What time? 4:45? Okay, thank you.” And I tried to explain the businesses that we were now in. I would guess this would be 1978-1979 and we are helping organizations through our outstanding technical capabilities to improve the efficiency and productivity of their organization like never before. By now I have a hundred case stories. I said that when I started out in computing, writing a payroll program or something, you worked like a dog and the accountant said, “Oh yes, we get the same answer, thank you.”

You know, there was a feeling that I really had an impact. Psychologically I believed it, I knew it was true and I conveyed that to the employees. I used to work at a shoe factory. I knew what I could produce each day when I was fourteen. I didn’t like being in the shoe factory. I wanted to do something significant. I’d tell our development people and our instructors that this is the most

important mission we have: to communicate this information and make sure that the customer succeeds. I had a big operation in Denver that answered the phone all day as new customers started stumbling, and we would then put some people on site to help them. I explained to the employees what I did with the leases and I said, "Ladies and gentlemen, we are in the banking business. I didn't mean to be in the banking business, but we're getting twenty-one and a half percent on our money." And it was true and a guy would say, "Oh thank you, John." I still had a slide rule, not a calculator.

## **SALESMANSHIP**

For the visits to Reston, I had a 2-door Mercedes. We'd have lunch at a fine restaurant. The salesman would have the other 3 or 4 people in a regular rental car with four doors. I had the number one parking space out front of our Reston offices. The key decision-maker, mostly a man but sometimes a woman, would come with me in my car. It took about twelve to fifteen minutes to get to the restaurant, and I was their best customer and kept them alive for years and years. I did this vodka thing. They pour it so the surface tension would keep it on the top and you had to get up and drink it; anyway, it was fun. I would have that private time with the key decision-maker, just the two of us in my beautiful Mercedes and the same on the way back. And we had fun. My stories, their stories. We had a good time. I would often learn the real issue in that car, that 2-door car. It was no accident that it was a 2-door car. There would be a guy I never saw before, but I had a knack for establishing rapport very quickly. By now I'd have seen everything and all kinds of computers, all kinds of organizations and been asked how do I help solve this thing. We'd get along, and often the key issue that he was concerned about would come out and, guess what? I would take care of it so he went home happy and we'd get a contract.

One day, before I left, there were some people from the tobacco company [R.J. Reynolds] in Winston-Salem. They had been users for years and years. The committee was in town and they wanted to meet me. The head of the database study, now in his late 40s, could never figure out why his boss overrode his objection and bought Adabas. I told him the story. At Myrtle Beach I had bought an apartment, a three-bedroom split with one of the bedrooms for the two oldest boys to be together; it was a nice place. The guy who was the head of data processing at R.J. Reynolds bought 4C near us. His wife was a former nurse and my wife was a former nurse, and they got pretty close. We became friends. By then Ann and I had our first boat, in 1981. The boat was a 43-foot Hatteras motor yacht, and I took him for a cruise out around the Myrtle Beach area and the ocean. At first I hadn't met him but I'd met his wife. We were down at the beach and she said her husband was head of data processing for this company in Winston Salem. I told my wife, "Saliva is rolling down my cheek here on the beach." Anyway, the message to him was that if he bought Adabas, which is crucial, this is the software you're going to go with. Everything else runs off of it and you'll be the only data processing manager in the world where if you're not happy, you can walk three doors down the hall, knock on the door and you'll get the CEO of your supplier and he will respond, I guarantee you. And many, many years later, we now have our beautiful conference rooms in Reston, a kitchen in back and all that stuff, and there were about nine customer people plus two of my people at this big, huge table. I'm sitting opposite him, and he wanted to know the true story and I told him the true story. He said, "God, I recommended Cullinet." They are all long retired now. Anyway it was funny.

## **TECHNICAL DEVELOPMENTS**

**Aspray:** Did you do any of the technical development work in the early years of software a.g.?

**Maguire:** No, but I learned it all. Schnell would come over and visit in the den, and I'd take tape recordings. He would draw diagrams so I knew the internals very, very well. Then an interesting relationship occurred. He's back in Germany. I'm out dealing with people and they're seeing an existing database system and telling me what would be nice in the next version. Schnell used to say, we're going to do A, then we'll do B and then we'll do C. But he was not in touch with real customers. But we got along very well. To make a long story short, we jointly devised a user-driven approach, I forget the exact name, but Chase Manhattan would get the same number of votes as a rural user in Pierre, S.D. Okay? Then you could lobby at the user conference and fight among yourselves. Here were the candidates that had been reviewed by Schnell and his staff, and the technical people in Reston and the votes would be counted. So I wasn't the bad guy. It was those users out there, and Schnell and I got along fine. By then he had matured and had come a long way from what he was in 1972. [So, we had our users really driving our R&D – just what the “real” market needed next. Good deal.]

IBM had a poor record in responding to user requirements. I attended some GUIDE and SHARE meetings over the objection of IBM, because some of the users wanted to hear about Adabas. In fact, it must have been about 1973, at a GUIDE meeting in LA, and IBM put me on as the last presentation on Friday afternoon. The meeting lasted the whole week and they were astonished when 350 people showed up. There were 10 IBMers in there; I could tell who they were. I got two sales out of that presentation: West Publishing in Minnesota and someone else. They were ready to hit me with some zingers. Three hundred and fifty people. The official IBM guys at the meeting, of course, didn't realize that I was going to dinner every night with ten, eleven, twelve prospects. Talk about efficiency. I can't remember, since it was almost 30 years ago, but some IBMer started to poke at me, but by then it was a piece of cake. One of them got around to the linearity of the loading time and they said, “That's got to be non-linear.” And I said, “No.” “How do you do that?” “It's a secret. We'll show you for \$2,500 dollars.” And so they were really edgy. Then the rest of the people had lots of questions. I had two dozen people come up to me after the end of my presentation, two of whom I got contracts from in the coming weeks. And a lady, I forget who she was, fought like hell against the committee to get me on there. She said that we have IBM computers, but here's some new and interesting technology that I just found out about and I think our users should hear about it. And I remember it was the last session in downtown LA at a big hotel – 350 people.

## **USER GROUPS**

**Aspray:** Did software a.g. form its own users group or did the customers themselves form one?

**Maguire:** They formed it themselves. We had a newsletter and they had a functioning executive board. Peter and I would meet with the executive board at the users conference for some complaints or suggestions. I mean we had dozens of big companies running full production with huge volumes. We'd have a problem with some small user here or there, but we'd fix it. We had good feedback, and the people at the user conferences would fill out the responses. Users would submit papers on interesting applications – here's a program I have – making it available to other users. The last users conference where I gave a speech was around 1990 or 1991 and it was at the Coliseum in LA. They had a tent and we had half of it. We had three thousand attendees. By now,

Schnell and I, our faces are up on the huge screen behind us and we've got a little device with our slides popping up – we don't have to turn around and look at the stuff on the screen – pretty efficient. So a lot of prospects were welcome to come there. We charged for it, we made money, we didn't subsidize it. I can't remember exactly how much, but the attendees would fork out \$1,200 plus an airplane ticket plus hotel, 3,000 people.

## **INITIAL SALES**

**Aspray:** Can you give me a sense of the growth of your customer size over time?

**Maguire:** Yes, I had a planning document that I saw when I was recently moving and it's in a box in Myrtle Beach. I drew a plan for Peter in the fall of 1971 and I told him the problem was I couldn't tell when I'd land the first user. That was the most difficult thing in my life I had to do. Because once I get that first user, then it opens up. No one wants to be first. But I had this idea of paid demos and I drew a curve – it went like this and I think this is two years and I said, I think I can sell forty paid demos in two years. And then I plotted the actual number of paid demos and it almost tracked – little bit lucky. Then my first user came in which is an interesting story if we have time, Mass Mutual – sixteen months after I started.

**Aspray:** So just for the tape, you've drawn a line that was at first sort of linear growth and then it becomes more and more exponential.

**Maguire:** Mass Mutual – I sold them a paid demo and they loved it. They were going to go IMS but they saw Adabas and saw that IMS was not the way to go. But they were afraid to be the first one. I even went to a GUIDE program in Montreal and had dinner with a senior executive from Mass Mutual. He said, "We love Adabas, but we're going to go with Total as an interim." And I was always very professional. I said, "I wish you well but if it doesn't work out give me a call." I was old enough to realize, unlike some of my colleagues, I can't be an asshole. There have been some people in our industry that skipped some courses in college, okay? If you know what I mean. I told him that and we had a nice time – private dinner, it was at some hotel in Montreal, I can't think of the name, big tower. Anyway, I would guess that must have been May of whatever that second year was, 1973. [It was the Hotel Bonaventure and his name was Bob Blinn.]

**Aspray:** It says on the sheet that it was May of 1973 that you made your first sale.

**Maguire:** That's it – May of 1973. Mass Mutual. I get a call – it's a Friday afternoon, by now we've got a small office in a warehouse in Reston where I meet with the technical people and the ladies from the administration, a little hole in the wall. I got a call there and my desk was opposite hers and she answers the phone, "software a.g. North America, Mr. Maguire, just a moment please, I'll see." Anyway, it's Bob Blinn, and the Total sale was off. He said the Total salesman (a former IBM salesman) had made three mistakes. He said the salesman went over the heads of the technical people who wanted Adabas. The boss didn't want IMS but wasn't comfortable with Total. Then he went to see Dave McDonald, the senior VP of information processing for Mass Mutual. Insult two. Then he got into McDonald's office and tried to pressure him to sign the contract that day so he could make his quarterly quota (third mistake).

**Aspray:** Not the thing to do.

**Maguire:** It's unbelievable the courses some of these people skipped. And some ended up in pretty high positions. Anyway, those three events occurred and the technical people called me to say, "John, can you be here Monday morning?" I said, "Sure." I stayed in the Bay State Hotel that Sunday night. Pretty lights are out and everything, I got up in the morning and I opened the curtains and I'm looking at this dirty rotten river below. Anyway, I end up in the executive dining room with the big guy, the number two guy (Bob Blinn), and the two technical people – the four of us and the big boss. One did tell me privately what this Total jerk did, but the boss doesn't mention that. He said, "John, we'd like to try Adabas. I put it in the budget." He knew I knew about Total and the monthly rental for Total. So I took a piece of paper and wrote down the numbers. That gave me the idea for the lease I did later back at the office. I took whatever he was going to pay, like \$1,100 a month for two years and I think I made it a four-year deal. On the fly, I made it so that in three or four years at \$1,100 a month, he would accumulate enough credits that he could pay for part of the purchase price that I would guarantee for that four-year period. It would stay at \$120,000. I knew he had the \$1,100 in the budget for the next four years and I just did quick arithmetic. I don't know if it was 21.5% or what, but it was a good healthy interest rate, and that's exactly what they did. And that was all done at lunch.

I'm a lot older now, but when I was younger, just like Alex Trebeck says in Jeopardy, the younger people have the edge. But I was pretty quick when I was younger, on my feet and in my head. That was May, 1973. In June, bingo, we got the benchmark at the City of New York. In September I got Citibank; October, the first user in California, Pacific Mutual Life. I got a call from the database administrator there. He informed me that Model 204 (another database system from a company then located in Boston) had "won" their study. By their criteria, Model 204 got 80 out of 100 points and Adabas got 78. We were winning most of them, but everybody's got slightly different criteria – they probably put a heavy weighting on the retrieval capability. He called Boston where the headquarters was and they said they would support the company from Boston. But he wanted local support. Since I've got some paid demos going on in California, it's just a matter of timing. They asked if we'd put a technician there and I said sure. I then called my local headhunter, Harvey Ponack, and he found David Delrio, a senior systems programmer, an IBM expert in Germany on assignment not too far from where Schnell was. I called Schnell. I said interview this guy, check him out and we'll talk, and if he's got all the technical smarts, we'll hire him. I needed him in California and his home base was Los Angeles. I flew to California and he's going over the Pole reading the manual that I had translated that I had shipped back to Germany. At the Pacific Mutual headquarters there is a building in the shape of a "V" in Newport Beach. I've got acrophobia and this guy's office is on the fifth floor right near the glass. Anyway my heart is pounding. I still have it – my daughter has it too. And I pick up Delrio at the LA airport and we drive to Newport Beach. We meet and this guy's desk is near the overhang. To make a long story short, he became our first user in California. It was just unbelievable. I was keeping track of everybody. We had no trainees. Later on, when I got an education department, we hired trainees. Every one of my first ten employees was first class. Jim Addis, who I think still works there, was like 38, a senior systems programmer at PRC. I mean, I didn't care what they cost. I couldn't afford to hire any dopes. David Delrio was also very bright.

## **MANAGING GROWTH**

**Aspray:** So for a number of years your company was growing very rapidly, forty to fifty percent a year. How did you manage that? How difficult was that?

**Maguire:** Well, I had a lot of experience. I told Schnell one night when I was on a plane – we were doing a demo at Northwestern Mutual in Milwaukee or somewhere and I was 42. I'd been with CACI for six years, I ran a large technical shop at Lockheed for years, brought in big contracts, the AEC contract; I was the project leader. I was managing technical people much older than myself. I had a master's degree from MIT's Sloan School. I knew all about accounting and management and marketing and all that stuff. I turned down the PhD from Bell Labs because I didn't see myself as a technician and I wanted to be like my friend from England – a technical manager. I was 25 when I got out of the Navy, and I knew exactly where I wanted to be at 50. A gift. Once in a lifetime. It was a gift because I didn't know what I wanted to do until I was 25 and at some point, it must have been about 1977 or 1978, I met the DBA at International Nickel (INCO), Ralph Parlow. After I got their system running, I sent him to talk to Schnell in Germany. At that point practically everyone in the company was reporting to me. But I then spun off the technical side and gave him twenty technical people; I took the other fifteen, mostly sales and marketing. Earlier they all reported to me. But I reached a point where I just couldn't do it all.

**Aspray:** You probably just couldn't manage that many people...

**Maguire:** But I did it at the last possible moment – I waited as long as I could.

## **PRICING**

**Aspray:** As long as you could. Do you want to talk about pricing?

**Maguire:** Love to. Larry Welke had an article one time about pricing. It's in my boxes in Myrtle Beach somewhere. There was a guy, I forget what he called it, but he had a program at a service bureau; Larry might remember what it was, I can't remember the name of it [Bill Newcomer's DYLA KOR product.]. I forget what it did, but for a dollar a day you could use this program at your service bureau all you wanted. And I said, "No, no, I'm a value pricing guy. I want the most money that I can get." It's that simple. If I have a program that has value to a company, one that over years could save many millions of dollars for their company in time and labor and functionality, then they should be willing to pay for it. The early version of IMS, before they added utilities and bells and whistles was, way, way back, \$500 to \$600 a month. Total, I think, was around \$1,100 a month. If you bought everything that System 2000 was advertising, all the utilities and everything, it got up a little over \$100,000.

So in the first thing I wrote, in February, 1972, I said to Peter, you know, we can change it. We had to start with something. I went with something in *ComputerWorld* and some doors were closed on me and other doors would open up because of the price, because they wouldn't believe it. I opened the first version of it at \$120,000 a copy, which was unheard of in those days. And I was that way all the way. Of course, the only time I went the other way was for the DOS market. We hadn't sold any. Next year, I called Peter and I said, "Let's try \$80,000 and see what happens." We sold hundreds. So we set up pricing without gouging because I wanted the customer to be happy and they could see the value. RT French up in Rochester New York [Gordie Cochran was the key technical person] justified the \$120,000 simply on maintenance reductions. He could count the people there and he went to management and said, "You know I can pay for this because I won't have those crazy maintenance programs." You want to add a field, you want to change a field, you want to change your program without changing the record layout. All that stuff they couldn't do with the old-fashioned programs where the data and the programs were locked together. That's how we wrote

them in 1960 at the Sloan School. The professor [James Emery] became dean of the business school at the University of Pennsylvania – the Wharton School. We had a 704 and 7070 at the main campus library. This is 1958 – 1960. In the bowels of the Sloan School then we had an IBM 650, 2000 word drum, and this guy, who later became dean of the Wharton School, made us write our first programs in binary. And we did, for homework. He then let us use the powerful macro language (SOAP). It was a great education. Look what we can do now. There I was, years later, working with the next version of Natural, which was an order of magnitude above COBOL or FORTRAN.

## **THE RUSSIAN CONNECTION**

**Aspray:** Do you want to tell your Russian story?

**Maguire:** Jim Addis, my senior technical guy, got a call one day. The guy who called had done some homework and found out, I don't know how he found out, the name of my key technical guy in Reston. He wanted to see Addis on a Friday night for a drink at the Sheraton hotel in the bar there. Marc Degator sat down with Addis and started talking about his client, who was willing to pay a lot of money for a copy of the Adabas system software source code. Addis was scared shitless. On Monday I came in and Jim came to see me and told me a little bit about it. I called the FBI immediately. The FBI was out in less than an hour. They were talking about bugs, hidden cameras, recordings, and Addis's face turned white in my office. I saw his concern. He said he had mentioned to Degator that he couldn't do anything like that without talking to John Maguire. So the two FBI guys and Addis and I were sitting there and I said, "Jim, I know that you have a lot of really important technical work to do." He did some great work. He did a phenomenal automatic testing system for Adabas to simulate unbelievable combinations of environments and then wrote a monitor to manage it and report. This was early on, but it was a beautiful piece of work.

Anyway, Jim flew out of my office and I met with the FBI people and devised a strategy to trap Degator. They bugged my office with a lens and other stuff covered with little teeny black holes in the ceiling. The lens was an eighth of an inch in diameter, no more – this was 1981 and you could do that sort of thing. I had a sitting area down at the end of my office and next door you could go see this thing; it had a mike, it was all recorded, and you could see it. So I began a telephone dialogue with Degator and he was always off to San Francisco and St. Louis and here and there. Finally we met at National Airport. I went under the airport and the FBI wired me. In those days the hardware was pretty big, so I had on a three piece suit and they taped a mike onto my T-shirt. They had some experts who knew the behavior of European people. They warned me that in Europe when two men go to a door, they try to be polite to each other to let the other one go first and the second person will inevitably put his hand on the back of the first one. And they had done their homework. They had a big file on Degator.

He and I got a room at the Ambassador's Club and did the dance at the door and finally I went through sideways and he missed the hardware on my back. My mission was to act as if I didn't believe he was a Russian agent. "You're bullshitting me. You're working for John Cullinane or somebody at IBM." He fell for it hook, line and sinker. He came out. He had a card, he had a pad. He filled the pad and he's talking all at the same time. He's giving me notes of the whole God damn KGB and their names and their functionality and everything and what their specialties are and who he's chasing here in the United States and how much this technology is worth. I mean he really opened up a ton of information. Priceless. Anyway, we filled the tape – three hours. The FBI was

ecstatic - they loved it. There was a “drop” and they arrested him with a fake copy of the source code. And it went on and on.

Finally he ends up in jail and I end up testifying before a Senate committee, 80 reporters sitting behind me and my wife. I had to drag her there. Afterwards she said, “That was interesting.” Anyway, at the time, Ann and I had been married for 26 years. I was bitching to the Senate committee that here I am, taking all this personal risk. I have a young son. I have to walk out to the school bus carrying a .38. They know who I am now. They are going to kidnap my young boy and you’re talking about letting this guy go? Give me a break. This is very important technology to the United States. I had 80 reporters behind me with tape recorders. I was mad because they are talking about letting him go. Then Greenberg from Justice says, “Excuse me, Mr. Chairman [Sam Nunn from Georgia], may I speak to you privately or in your chambers?” And I wasn’t part of it. I mean I worked my ass off waving the American flag, taking my own risk and everything, trying to do the right thing. I had called the FBI right away, played no games and did exactly as they asked me to. They eventually let him go. I think there was a trade, I don’t know. I never found out. The Russians tried a similar thing in Germany with one of Peter’s people. The same thing happened. Anyway, I sent you a copy of the New York Times article.

## **ADAPSO**

**Aspray:** Right, I’ve seen this. I know that they’d like me to talk about ADAPSO for a few minutes with you. Do you want to talk about your role in it? What role did ADAPSO play for your company and for the industry?

**Maguire:** Sure. It was the only game in town. We were all little babes in the woods trying to fight the big monsters, the hardware companies, to sell services, to sell products. Because it saves time and money, it’s got to work. We could see the technology coming. You know, coding in binary and then the SOAP Assembler and then FORTRAN and COBOL. You got to know that super stuff is coming. We had a lot of issues and they have listed a lot of them for this meeting. The Image Committee, I worked a lot in that, telecommuting issues, IBM relations, intellectual property issues, Contracts Reference Directory – I contributed a lot to them. This was one hell of a forum where we’d get together. I even joined a president’s roundtable where nine or ten of us, including Larry Welke, would meet for two days somewhere. There was no book. One of my guys, I fired him later, said we ought to have McKinsey come in and tell us how to organize. I said, “We’re writing the God damn book.” There was no model that I could find that I could use to do business in this new industry. I had to define maintenance as something other than to have someone paint your house every five years. But maintaining a technical product that is changing, there has to be room for the customer. He’s getting that new benefit, he’s happy with what he’s bought and that has to be paid for. I was a leading flag bearer for maintenance. I went to Japan and they wanted to kill me. Nobody charged for maintenance – I changed it. It was a battle. But it was only fair, and the only book I read was Grant’s book on computing the interest and financing and stuff. That’s all done. But that was just a tiny, tiny part of what I had to do.

Then there were the psychological problems of overcoming IBM. ADAPSO was a good home. All of us were busy working like dogs and we banded together, John Imlay and me. I can’t remember exactly how often, but at least once a quarter we went to New York City and met with these media people. In the meantime there would be something new, a new story, a new user for MSA or for software a.g. and we’d send it to them. But it wasn’t until September of 1980, it was a Saturday and

my *Business Week* came, and I immediately called Imlay at home in Georgia and I got a babysitter – they were out for the evening. And I said, “Write this down carefully. This is John Maguire calling for John Imlay – MAGUIRE. There is a new *Business Week* cover story on the independent software industry out today.” And then I said, “I want to spell this out: ‘YIPPEE’ with an exclamation point.” I had her read it back to me. It was special. We made thousands of copies of that article. The unbundling of 1969 helped a little bit but the *Business Week* article and what we did helped a lot of other companies. Once our clients bought a product that originated in Germany and they are in Springfield, Massachusetts and it’s working fine, people from MSA and the application companies and Computer Associates got a warm welcome because we kind of pioneered the way. That’s Burt Grad’s theory, and he’s right. That’s the truth.

The software a.g. Russian ad thing was being discussed. It had Khrushchev on the reviewing stand for the May Day parade and had the tanks and the soldiers parading by and the pitch – it was a full page ad in *Computer World* – was that the Russians were willing to pay \$500,000 for Adabas but you can get it for \$120,000. [We were having a Sales and Marketing meeting at the Hilton Hotel in Myrtle Beach (why not?). There were 13 of us – that was everyone in Sales and Marketing for the US, including myself. We had a lot of decisions to make. But this Russian ad seemed to stir up a lot of controversy. Tom Berrisford (IQ was 164 – yes) said, “John, they could sue you.” I replied, “Tom, do you really think they might do that?” We took a vote. It was a 6 to 6 tie vote. I voted last. I said, “Let’s go with it.”]

I got thrown out of a few places. A guy in New York said, “I don’t pay anybody \$2,500 for a demo. This is the City of New York.” I said, “Well, okay, write your RFP and we’ll perform a benchmark,” which they did and we won. And then a few times like at the Federal Reserve Bank of New York. They said, “IMS is \$600 a month and you want \$120,000 for your database system? You’re crazy.” You know, door shut, bye-bye. And I’d move on and it took me a solid, not-waste-one-single-minute-of-your-time sales call of eight hours. Nine to five. Or I’d stay until eight-thirty whatever they wanted.

One August I went by myself to Pierre, South Dakota. It took me all day Sunday to get there. They had fifteen committee members to make a decision for a statewide database management system. They had three major installations and the big one was in Pierre. I bought a local paper and went to the Holiday Inn. I felt sorry for myself. I had steak dinner and it was “leather” and then I complained to the manager and he said you must have been brought up on corn fed beef. Here we raise grass fed beef. I said, “Okay, thanks for the education.” But that was the way it was. When I got into this bus at the airport, this 90-year old guy was driving. I’m the only passenger and we’re going down the street – it’s the capital, 10,000 population – and he points down the street and, I swear to God, he says, “Now there’s the picture show.” I said, “Oh, thank you so much for the information. I think I’ve seen that movie.” But what I did was to read the local paper and I got my camera – I think I probably had a Polaroid camera. With the rains, there was a mudslide in a new development outside of town. It was Sunday night and it was August so it was still light. I went and saw the houses sliding down the hill and took some pictures. I’m in there the next morning with 15 committee members and maybe a half a dozen or a dozen juniors and I’m giving a presentation on Adabas. But first I brought them up to date on the mudslide outside of town with pictures. And we talked about that for a while and then I went into my pitch. Six companies presented in that two-week period. Out of the fifteen votes I got nine first place votes.

**Aspray:** We should wrap up soon. Are there some things that you want to talk about that you haven't had a chance to?

**Maguire:** ADAPSO was great. It was a forum, and IBM was nice enough to come there. We had some tough sessions with them. It covered the whole range, including interfaces – we're still arguing with Microsoft about interfaces for their operating system. There was a lot of good that came out of it, and a lot of animosity and strong feelings. You know this is the guy – he's got one shot – this is his little company and he's not doing so well. ADAPSO played a function. Eventually I interviewed some people to work for ADAPSO, and then they got a full time PR guy.

It was a good experience for me and I could grasp some of the issues, especially the fear that people had of not going with IBM. That guy I told you about in Japan, he looked me in the eye and said, "If I go with IBM and fail, no one is going to blame me." He spoke good English. I understood exactly what he said and I moved on. I've enjoyed it.