RDBMS Workshop: Financing

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Abstract:

This session examines the business development and early financing of three of the independent software companies which developed and marketed relational database management systems (RDBMS) products. The individuals in the session represented Informix, Oracle, and Sybase. The participants explained the beginnings of each company, the financing needed to market various products, and they discussed the key people involved in company management and marketing. The discussion also includes insights into early marketing strategies and sales campaigns and the movement of personnel between companies in the early years of the industry.

Participants

Name	Affiliation
Luanne Johnson	Moderator, SI SIG
Mark Hoffman	Sybase
Mike Humphries	Oracle
Bob MacDonald	Informix
Stu Schuster	Sybase
Roger Sippl	Informix
Thomas Haigh	Historian, University of Wisconsin

Luanne Johnson: This session is about the *business* of relational database companies. And just to set the background, the relational database companies really got going, as we were talking in the other session, in the mid-to-late 1970s. At that point, all the companies that had been selling the hierarchical databases had been around for awhile and were doing a pretty

good job of getting into the Fortune-500 companies. There were companies like Software AG with Adabas, Cincom with Total, and Cullinet with IDMS, and so on. And someone mentioned earlier Datacom/DB which was a company out of Texas, first called CIM and then Insyte. But one of the characteristics of any database company is regardless of what kind of database it is, once the product gets embedded it gets pretty damn well embedded. It becomes very hard for a user company to shift to something else. So what I want to start off with the companies that began with the relational database products (starting in the late 1970s and then going into the 1980s), and ask what kind of strategy you had in terms of the markets you were addressing, and how you positioned yourself against the companies that were pretty well entrenched in some of the larger user companies at that point. So we've got Informix represented here and Oracle and Sybase.

So let's just start with that question. I know quite a bit now about the background of Informix because I've talked to these two guys. But for the record here, why don't repeat what you were saying earlier about seeing some real practical reasons for doing this. Where did you see that there was a market for doing this kind of a database product?

UNIX as a Market Opportunity

Roger Sippl: Well, the need for the relational database system (RDBMS) and the accompanying products such as query languages, report writers, data entry systems to go with it, was obvious to me, and that these systems needed to be available for all computers. And the situation in 1980 when I started Informix was that the UNIX operating system had started to get popular as the super-microcomputer operating system. So the multi-user computer, based on standard CPU chips from Motorola or Intel, seemed to me was the future of computing in multi-user environments. The standard operating system at the time for single-user computers was CP/M. The IBM PC hadn't come out yet. So our bet was on UNIX. It was not only a bet on the relational data model, but it was also a bet on the programming language, C, and the UNIX operating system. We would be able to port Informix from one UNIX implementation to another because it was written in C and designed for the UNIX operating system. So our gamble was as much a UNIX gamble as it was a database gamble or relational database gamble.

Johnson: Did you have some specific markets in mind other than UNIX users? I mean, were there some specific industry segments or someplace where you saw an opportunity?

Sippl: No. When investors asked: "Well, who's going to use your product?" I said, "Well, everyone's going to use it." They asked: "Well, is it going to be bankers and financial institutions or is it going to be more manufacturing companies?" I said, "They all need to store and retrieve data. This isn't that big of a mystery, I don't think." But apparently that was the wrong answer for the venture capital investors. Because they felt that a small company that tries to boil the ocean in terms of a marketplace isn't going to succeed and will run out of natural

gas before it warms anything up very much. If I would have given them a more specific answer about specific vertical industries, if we would have had some market research that said, "Retail is going to buy lots of UNIX machines because they're going to use them as point of sale servers in the back of the stores that are going to communicate to the mainframe to order more inventories." And if we would have given them a more concrete story of exactly how the money was going to flow, I think we would have gotten venture capital. But we didn't do that because I didn't think that was true. I thought we would sell the product to everybody across all industries and, in fact, that is what happened.

Thomas Haigh: Okay, wait. So give us some background here. What years specifically are we talking about here?

Sippl: Well, I started the company in 1980 and sold ten percent of the company to my ex-girlfriend for $20,000 to get it going. So that'll show you what my financial savvy was.

Haigh: Right. And what was your background at this point?

Robert MacDonald: By the way, his ex-girlfriend is now his wife.

Sippl: Twenty-five years of marriage later, yes, there is that.

Haigh: Had you been exposed to UNIX in the academic environment?

Sippl: I was not exposed to UNIX when I was at Berkeley. I was a pre-med and I got diagnosed with a late-stage cancer and I thought I was going to die. And I scrambled around trying to get treated and succeeded in doing that. But in the process I was told by the medical schools they weren't going to let me in. So I had to switch majors; one of the medical admission committee guys said, "Why don't you get a job, buy a car, date a girl, go to the movies?" And so that was my plan of life as thoroughly thought out as it was there.

Mike Humphries: That was my plan, too.

Sippl: So I switched majors to computer science because I felt I could make a decent living doing that. And I started doing these database projects, working part time while I was still in school.

MacDonald: When did you run across UNIX?

Sippl: Well, I did learn UNIX at Berkeley but I was totally unaware that Mike Stonebraker existed or that there was a database research project or a graduate program.

There were no undergraduate database classes at the time. There were programming classes: assembly language, higher-level languages and operating systems and stuff like that. But nothing as pragmatic as a database class in the undergraduate curriculum. And I learned databases on the job at Bechtel working on this Hewlett Packard proprietary operating system and the Image database which was a total knockoff of the Total database management system from Cincom. And then when I was at Cromemco —there was really the golden opportunity for me personally in the birth of Informix – I was meeting the two guys who started this pioneering microcomputer company. Harry Garland and Roger Melen were Stanford professors. And they started a company that grew from $4 million to $40 million selling S-100 bus-based microcomputers with a Zilog Z-80 microprocessor in them which was a knockoff of the Intel 8080 chip. And so I had an opportunity to sit there and be a graduate student, effectively, for these guys.

They hired smart people and gave them an office, gave them a personal computer and gave them a mission and left them alone. And so Laura King and I were the database department and I designed this multi-table, multi-user database system and while I was designing it I went to some seminars and I found Chris Date's book on the relational database model. I read his book and I realized that what we were doing was called a relational database system. So I called it the Cromemco Relational Information System and I wrote over a hundred pages of design documentation which my boss thought was totally ludicrous. He said: "When are you going to write some code?" When will you give me some more products to sell?" But at the end of the day we did build a couple of products for them that were simplistic, single-file systems. Because their multi-user UNIX clone was late – it slipped a couple years – I said: "I designed this for a multi-user super micro. Do you mind if I leave Cromemco, start my own company and try to implement these designs? And make them run on UNIX and UNIX-like multi-user computers?"

Haigh: So in 1980, Cromemco was working on a UNIX clone. You must have been very early into the UNIX applications market because I believe, that was before the Sun or Apollo work stations. So who was selling commercially oriented UNIX systems at that time?

Sippl: What happened was I hated assembly language. I thought it was way too primitive for *Homo sapiens* to be dealing with. And I thought it was just a horribly low abstraction. So I wanted to write everything in at least a programming language at the level of the C programming language. So I was the only guy at Cromemco who wasn't an assembly geek and there was no C compiler for the CPM Z-80-based microcomputer at the time. Whitesmiths was working on one but it wasn't done. So I rented time on a UNIX machine (when there weren't many UNIX machines you could rent time on). This one was owned by a guy named Bob McClure and he was writing a C compiler for a company called Onyx which was one of the first super microcomputer companies. And McClure and his partner, Dennis Ellison, were in charge of building a C compiler and using it for porting UNIX from the Bell Labs source code tapes, to the Onyx Z-8000-based hardware.

I was using this computer to build software that Cromemco eventually sold called DBR. It was the first report writing language for microcomputers. And it worked on this simple single-file database management system that I inherited when I took the job. I used Lex, the lexical analyzer on UNIX, to do the scanner. I used Yak to do the parser. And just, as a historical side note, Lex was authored by Eric Schmidt who's now the CEO of Google, and this shows you that he has some roots in lexical analysis, not just in the business end of that company. And I wrote the rest of that report writing language in the C programming language. I wrote it all on the UNIX machine that Bob McClure ran and when Whitesmiths finally finished their compiler I cross-compiled it to the Cromemco hardware to get a binary image that we could sell. And we sold it as the first report writing language for microcomputers. And it was a very successful product

Haigh: So then when you started the company and you wrote the business plan, you thought everyone would want the software.

Sippl: Right.

Haigh: But what hardware did you think they'd be running it on?

Sippl: From talks with Bob McClure, he unveiled to me that the Onyx machine was going to exist. And it was going to run eight users and have a 20-megabyte disk drive and a quarter megabyte of RAM. And this was as I was leaving Cromemco and I got permission -- and signed a contract with Cromemco -- to use my designs for a commercial product as long as I offered them an OEM license. And Bob McClure at that point took an interest and said, "These designs you've got for a multi-user relational database system for UNIX, that doesn't sound like half bad an idea. Do you mind if I mention that to my client, Onyx?" And so he introduced me to those guys and we bought machine number 12 or something from them when I started the company. They wouldn't give it to me for free which really was a disappointment because I had to blow, like, a third of my venture capital on this computer.

Johnson: A third of that $20,000?

Sippl: A third of the twenty grand had to go straight to Onyx. They gave me a little discount but that was about it. And that's where we developed the multi-user database product.

Haigh: And when did the product first ship?

Informix Sales

Sippl: Well, the original name of it was Marathon, actually, but we got some hate mail for that, so we switched it pretty quickly to Informix. I don't think it ever shipped as Marathon. The brochure was for Marathon but the first product that shipped was not the database management system itself. It wasn't done; but what we had finished was an indexed file system product, C-ISAM. The C programming language, unlike COBOL, did not have an indexed file system. So if you wanted to store and retrieve records and use indexes to do that, you were out of luck. The UNIX operating system did not have an ISAM nor did the programming language, C. So when we built our retrieval method, we actually started selling our retrieval method to C programmers. And if we had not done that we would have gone broke.

Johnson: So what really turned out to be your initial product was the C-ISAM retrieval method?

Sippl: That's right. That was our initial product, and our initial market. And then we struck an OEM deal with MicroFocus which needed an ISAM for their COBOL because they were porting their COBOL to UNIX. But they had rewritten COBOL in C with the help of the Santa Cruz Operation. But they could not translate their ISAM module to C. And its inner workings with the UNIX operating system and how to do record locking was going to be a major challenge for them. So they licensed our ISAM product from us to use as their C-ISAM and that got us a six-figure OEM contract which was a huge amount of money for us at the time. And that allowed me to be bold enough to hire Roy Harrington and make him bring some investment money with him. You almost couldn't come to work for the company unless you had money you could invest.

MacDonald: When do you think you first sold the database, because you were selling it when I joined in 1983.

Sippl: Good question. It was either 1982 or 1983.

MacDonald: Well, I know you were selling it early in 1983.

Sippl: We might have sold four or five copies, by then. Our first sale was to an Onyx dealer in England. So our first revenue was international and I hired Bob to come join me. We were high school friends. And I didn't know what to do with all these leads. We were getting all these leads and I was sort of busy trying to finish the product. So I said, "Bob, come on up here." I opened up the file drawer and said, "Look at all these-- all these people sent inquiries and letters and, they want someone to call them. We don't have anyone to call these people back. You'd better come up here and call these people back because they might want to buy something else."

MacDonald: And that's what we would do. Twelve hours a day we'd be calling people all over the world. But it was very much on the fringe. Back at that point, this was far from the mainstream. You couldn't have written a mainstream business plan. Nobody in the mainstream business was interested in UNIX for commercial use. So you were dealing with fringe elements. And those fringe elements were academics and entrepreneurs -- who saw some vision out of the super micro era that, "Hey, you could take this thing and you could do some things with it." And there were a lot of those people.

Sippl: Well, those guys were starting companies to build an accounting system or to build a pharmacy control system or other specialized systems.

Johnson: A lot of VAR's [Value Added Resellers] in other words.

Sippl: Yes, VAR's. So the VAR's were about a third of our markets. The OEM deals continued because more and more companies started up to build computers to run the UNIX operating system and they said, "Phew, we don't have a database either." So we would do OEM deals with those companies. And that was about a third of our revenue. And then the just plain end-user deals were about a third of our revenue. There was a Digital Equipment hardware-based UNIX market. It was very small. It was mostly aerospace contractors and government contractors. Universities wouldn't pay any money but there were people that got UNIX from Bell Labs or from the universities for doing these high-tech projects, and you would collaborate with some of them.

Johnson: So you were selling into engineering departments within companies.

Uniforum

Sippl: Right, but it was a big problem; we couldn't get venture capital because it was not a blessed industry. The UNIX industry was not considered commercially viable by the Gartner Group or by the venture capitalists.

Humphries: No wonder. Wasn't the first UNIX Forum in 1984?

Sippl: Well, we had to start a trade group in order to try to convince the analysts that UNIX was going to be commercially viable. And in order to just plain make it commercially viable. Doug Michaels over at the Santa Cruz Operation, Bob Marsh who was the CEO of Onyx, myself and a few other people started this trade group and it was called /usr/group. And inevitably the group took on the name of Uniforum because everyone always misspelled /usr/group.

Humphries: I went to that first Uniforum and about 80 percent of the people had ponytails.

Sippl: Oh, and it was vendors demo-ing to vendors and, there were no buyers there. It was just all vendors.

Schuster: I think one of the observations that people don't realize was that essentially the database technology made UNIX and VAX commercially viable. That without the database companies that focused on UNIX and VAX, these would never have been successful - outside of engineering, scientific - without the database companies taking them into the commercial marketplace.

Humphries: I have a funny anecdote about DEC and the databases in UNIX and VAX because I headed up Oracle's OEM sales for almost two years. And I was calling on the guys in Manchester, I think it was, which was where the UNIX guys for DEC were. And we'd been screwing around talking for a long time and I-- the guy that was, the lead guy, I don't even remember who it was at DEC, I told him on one of my visits there, I said, "This is going on way too long." I had a quota; I wasn't a guy that was doing academic exercises. I had a business I had to do and I said, "This is going on a really long time. You guys are losing out." So he actually took me aside, he said, "Mike, come over here a second." And he pulled me out of this little meeting we were in and he said, "Mike, look. Our job here in the UNIX group is to take people who are interested in UNIX and try to convince them to stay on a VAX/VMS. And we have to work really hard at it and only if we cannot convince them to stay on VAXVMS are we to sell them UNIX." And" I said, "Well, this is kind of a screwed up business model." I'll never forget this. He said, "Mike, if you want to be able to dance with an elephant, you better learn the steps."

MacDonald: Going back to Uniforum, it's an interesting thing. Not only was that first one 80 percent Birkenstock attendees, you could kind of track over the next two or three years the business growth within UNIX. Because I remember standing in a Uniforum session two or three years later, and commenting that for the first time ever ties were outnumbering sandals at the meeting. And the other interesting thing was that since we were not mainstream and back then the web didn't exist, although we were all using the Internet to email each other. So there was no information about the UNIX industry. You had to go to Uniforum to learn the latest stuff going on with the UNIX-oriented software-hardware industry. And so there was this pivotal year where all of a sudden the suits are showing up from all over because end-user companies were starting to think about it or wanting to investigate it. The larger computer companies were investigating it. And it was, "Hey, we're really getting somewhere now that the business threshold has been achieved." I just want to prompt you on two things, because in terms of starting the business and growing the business, there were probably two key investment or two key infusions of cash that I remember that helped Informix grow early on. One was a massive

OEM deal Roger did with Siemens, because that was a lot of cash for us at the time. And then Altos made an investment in us, but I can't remember when those were.

Oracle Marketing

Johnson: I'm going to come back to financing as another topic in a little bit. But, Mike, go a bit further now. You were with Oracle and trying to figure out what markets these companies were going after. When these companies were just starting, what kind of market was there for their products? Now we all know that Oracle really started with that government contract that Ellison and Minor had.

Humphries: Yes, I have a quick story to tell you about that. The long answer to your question about the markets is that it evolved over time just like Roger said. At the beginning, you just sold to whoever wanted it. And it wasn't until 1986 or so that Oracle really started thinking beyond the OEM marketplace and thinking about things like applications which we started with financials or vertical industries. But the story I wanted to tell is that Bob Minor was the other really true co-founder with Larry Ellison. And I was talking to Bob one time. Larry's official story was that IBM had blessed SQL and that that would be the relational database language forever. But who else was going to build for the other platforms? Well, that's what Oracle's mission was. But the truth of it was, in 1977, it was a development company and they had two contracts that they could take with two different customers. One of them was a compiler for the PDP-4. I don't even know who the customer was. And the other one was with the CIA for a relational database. And Bob Minor says, "We flipped a coin." Well, I would imagine if they flipped a coin, if the answer came up "relational database" Larry allowed that to be the coin flip. But who knows what Larry would have actually chosen?

The thing that got me to Oracle was that I wanted to do big software deals, and in 1984, I was the 135th employee at Oracle. They had just started the OEM business and they were looking for somebody to head up the OEM business. So I wanted to do big deals. I had no idea that Oracle was going to become what it did or that SQL was about to become the thing that you didn't want to be the last guy on your block to have. So I joined Oracle and Oracle had actually done a database for IBM. What was the operating system for the RS/6000? Does anybody remember? We were under contract to IBM.

Schuster: AIX, wasn't it?

Humphries: Yes. So it was a UNIX system and doing that development work actually drove us to isolate the operating system dependent portions of Oracle so that they could be ported in the future. And that made what we called the "porting kit" and which we called OSD's [Operating System Dependents]. That allowed us to go out and do OEM deals with anybody. And our philosophy was that we were not going to maintain 500 different versions of Oracle. We were

going to do OEM deals and we were going to support the people who have the other platforms. So the first two deals we did, one was the RS/6000 which was a UNIX derivative. And we did one with AT&T for the 3B2 which probably contributed heavily to not making UNIX very popular. What I remember is it gave off a lot more heat than it did results.

Sippl: Well, that was another thing that allowed Informix to survive because the Oracle ports to the UNIX operating systems in the early 1980s did not work. If they would have worked, we would have gone out of business.

Johnson: Interesting.

Sippl: Oracle didn't fit on a 3B2.

MacDonald: Initially, no.

Humphries: We filled up an entire PC. The first version that ran on the PC left no room for anything else at all and it was a pretty crude version of the database. But do you remember things like Convex and all those other companies? There were 25 relational database companies that I remember at that time. We were all competing and slugging it out. And there were a gazillion companies making hardware. So there were plenty of OEM opportunities for everybody, but with 25 players it was a really nasty slug-it-out tough business to do. Everybody was making computers back then and most of the new ones were using-- is it fair to say -- UNIX?

Sippl: Yes, we had over a hundred machines in our porting lab by then, in 1986 or 1987.

Haigh: So which platforms provided the bulk of orders coming in during the 1984-1985 time period?

Sippl: Well, as far as numbers of units goes, some of these machines were pretty small such as the Zilog which had started as a competitor to Cromemco as a single-user CP/M-based machine. Altos started building multi-user UNIX-based machines. And they sold a lot of them and their price points were pretty low and they focused on the VAR's where they would sell a thousand or three thousand at a time. Plexus got going with larger-end machines. Our product scaled price wise. And so we might only be getting a couple thousand dollars a unit for an Altos machine. But we got lots more for a Plexus machine.

Humphries: Prime Computer and Apollo?

Johnson: What about Sybase? Did Sybase start out with a particular market or a set of markets in mind? Or was it more, like, "This is the technology-- anybody can do anything with it."

Sybase Beginnings

Mark Hoffman: Well, we came along much later than all the other databases.

Haigh: What date?

Hoffman: The Company started in 1984. But I think to understand the start of Sybase you've got to go back before that, because Bob Epstein came out of the Ingres project. He was running that project for some period of time. And then he met up with Dave Britton and Jeff Lee who were building a disk based database system. They had the idea to optimize database performance because as we know back in the early 1980s relational databases were too slow to run the big applications, so they were limited to the other applications like query types of stuff. And so they built specialized hardware to optimize relational database performance. That became the database machine and the whole thrust was to go after major applications. So it had very fast performance and it was networked; it just basically hung off the back of the main machine and you offloaded the database on to this other machine. And then I got hired in to Britton-Lee and starting in 1981 Bob and I worked together. And we presented them with our belief that we could optimize database performance to run on general purpose hardware. And we wrote a business plan, presented it to Dave Britton and Jeff Lee, who rejected it and said, "We're hardware guys."

MacDonald: Because you were proposing to them that Britton-Lee do it as a business?

Hoffman: Yes, right. And they rejected it because they were hardware guys. So we worked there then for maybe another year and then Bob stopped, he quit. And he came to me and said, "Let's go do this thing." And so we spun out of Britton-Lee in mid-1984 and started Sybase basically going back to the proposition that we had before which is how do you build a high-performance relational database, networked and running on general purpose hardware.

MacDonald: When did your first product come out?

Hoffman: It came out real late 1986.

Haigh: You were also talking to UNIX.

Hoffman: UNIX. We were running on Sun at that point in time. Sun was just coming into the market.

Schuster: That was interesting. Because when I joined as head of marketing out of Ingres, I headed business development there. I had worked at Tandem Computers for a number of years in product development, and then in field service and support and sales. I wanted to get into marketing. And I saw the transaction processing world evolve and what I got excited about when I joined Sybase was the transaction capabilities of this system that nobody had -- everybody else was portable; we were not. The one thing I did know was that the system was developed on Sun, and Sun and commercial just didn't talk together yet. The only people who bought Suns were engineers. So I said we had to go VAX. We absolutely had to be on VAX. And -- a lot of the early sales were on VAX's.

Sippl: On VAX VMS.

Schuster: VAX VMS.

Hoffman: When we were at Britton-Lee we had worked with TRW and TRW, when we spun off, really supported this project, because they realized it would have very high value for them. They were selling into NSA and a lot of the security agencies. And into government projects, like the Hubble project at that point in time. And so those were actually some of our first sales -- very demanding applications. British Petroleum was one of our first customers. Picatinny Army Arsenal, I think was the second. So, real transaction types of applications.

MacDonald: Did you have multi-OS support?

Stu Schuster: After beta.

Hoffman: Yes.

MacDonald: After beta.

Product Pricing

Haigh: How did you decide on pricing?

Hoffman: Well, we were looking at all the other databases.

Schuster: I had been head of pricing for Ingres and I did their price sheets. So I just went and said arbitrarily that we were going to be above Ingres and below Oracle based on machine type. At that point everybody was doing machine-type pricing.

Haigh: So you were looking to each other. Now how was the pricing in this market different from IMS and DB2 and those mainframe type DBMS products?

Schuster: I don't remember how the mainframes were priced, because it was really dictated by Cullinet and those guys were really the dominant forces in software. And I can't remember if it was by machine size.

Sippl: The MVS mainframes with CICS were generally bigger ticket machines. IBM had some sort of baby mainframes that ran different operating systems, though. So the price for IDMS on a MVS CICS mainframe was $440,000 or something like that. The interesting thing about pricing was that when we first started trying to figure out how to price things on these multi-user UNIX machines in 1980, I looked at some of the early Ingres pricing. Tell me if I'm wrong, but wasn't it lease based? This might have been before your time. But it was priced by the month.

Schuster: That was before me, yes.

Sippl: Okay, and IBM leased software. So IBM would oftentimes lease the hardware, too, and roll into it a lease for the operating system. This was after the anti-trust decree forced IBM to unbundle [editor's note: IBM unbundled its software without any legal decision against it; the Justice Department suit against IBM which started in 1969 was eventually dropped in the early 1980s].

Schuster: This is the early days as a service which was called time-sharing.

Sippl: Well, but it wasn't. It was literally just ratable payment.

Schuster: I didn't remember that.

Sippl: I think Gary Morgenthaler's first price list, which somehow I must have gotten a hold of, looked like it was by the month.

Humphries: That's because he was from time share industry,

Sippl: Could be. But I think he was comparing it to IBM software pricing.

Johnson: That IBM pricing model was really used by a lot of the early software companies, particularly the ones that started in the late1960s. So I would say that probably Cincom and Software AG and all those used that model because they just assumed that that's the way it was supposed to be done.

Sippl: I would have preferred to do it that way except for two reasons. One, we needed the cash. If I could have sold it by the month but received a year or two cash up front (which I didn't think of at the time), I would have put up a ratable price list. And then maybe these guys would have followed our model. The other thing, though, by the time you guys got in the market I don't think it would have been ratable anyway because Ellison needed to put up numbers. And so if he took a hundred thousand dollar VAX VMS sale and turned it into a four thousand dollar a month or three thousand dollar a month sale, that significantly reduced how big a company he was running. Because you measure Oracle size by its revenue.

Schuster: He would have needed a lot more financing.

Sippl: Right. So in order to be the number one database system and pass Cullinet and all this stuff, I think he needed up front money.

Humphries: Well, I don't know anybody that didn't want to just book as big a number as they could back then. It wasn't just Larry.

Hoffman: But we did a lot of leasing ourselves in the sense that we would lease and sell the contract off. So we'd get a hundred percent of the money coming in.

Sippl: But you'd recognize it right away.

Hoffman: They would pick up all of the lease and the liability so that we could recognize it.

Johnson: Yes, through a leasing company -- there were a number of those companies that really serviced the software industry.

Humphries: Comdisco was one.

Sippl: But the software company itself still took lumpy revenue and I never felt comfortable with that. And it turned out to be a big problem.

Humphries: Well, you just book stuff that's questionable that's all. You fill in the holes.

Sippl: Well, what happened was, there was this guy named Bill Lerach who recently retired who would sue you whenever your stock went down. So if you had lumpy revenue, he would file suit. If we'd have leased the software, we would have very smooth revenues curves. We would have 80 percent, 90 percent of every quarter done on the first day of the quarter. So we wouldn't have had stock prices that fell off a cliff -- that went from 30 to 12 or something like that. Because we had a big quarter, because we did 18 million that quarter instead of the 20 million we thought we were going to do. And we wouldn't have gotten sued by Bill Lerach. And it was just a major pain in the butt every time-- if you had a bad quarter you had to worry about this clown suing you.

Haigh: All right, so how and when, then, did the companies, beyond the initial sale, start to get more aggressive about extracting money from the installed user base in terms of services, in terms of upgrades and maintenance fees?

Sippl: Well, we always charged for support contracts.

Schuster: That was standard. Everybody did that.

MacDonald: Everybody did it early.

Humphries: It started at 15 percent and it moved to 18, I think.

Schuster: Yes. And then you had more technology to sell. You had the tools to sell and sometimes there was a porting fee for certain changes

Hoffman: Professional services were huge; a database project would make a lot of money.

Schuster: Yes.

Networking and Client Server Systems

MacDonald: There was a power curve by the late 1980s, and I think your themes came right at the right time. Because when you look at it, by 1985, you started seeing there was interest among companies to this whole thing of open systems, to UNIX and things like that. By 1989, three years after you shipped your first product, we're in the mainstream of computing in a lot of places. I mean, there're major corporations making investments and if they're going to switch from a mainframe to a big UNIX machine to do their transaction-based reservation system, they want professional services companies helping. And then what was great for us was there was just not just the development of the system but the deployment of the system. And then you're selling all these licenses to deploy in all these multiple sites. So I think your theme, your

transaction theme, came at a perfect time. Even though you were younger and newer, you had a theme that hit at the right time.

Hoffman: Well, it complemented what Stu was saying about the whole Sun system, the networking stuff that was going on then. One of our biggest breakthroughs was getting into the financial markets. We broke into Wall Street. It wasn't our targeted market right up front. But I wouldn't say it was a plan either.

Sippl: Did Bill Joy, like, walk you guys around? Are those Wall Street terms or something?

Hoffman: Well, we had a great sales guy out there early on.

Schuster: We did.

Hoffman: He got into a firm and the story was perfect; because they were all sitting with multiple screens, multiple systems trying to consolidate it and they go, "Wow, Sun is the way to do it but we need a database to support that."

MacDonald: And you had the right theme of database performance.

Hoffman: So we had to write the high performance, high query capability.

Schuster: From a technical point of view, Sybase was really a kind of a breakthrough: the architectures before Sybase were all really query oriented because if you tried to multiply them across multiple users, they ate up the machine very fast. And Sybase was really a database operating system that ran almost as a single process with multi-tasking inside. And that gave us the ability to do lots of users at a very low incremental cost. So, sort of the early theme was if it was ten or more users or twenty or more users, we were a slam dunk winner on any benchmark. And we had the integrity and the reliability and recovery as part of it.

Humphries: I seem to recall you guys had triggers before anybody else, too.

Schuster: Yes, right.

Humphries: So people were writing applications.

Sippl: They had stored procedures and triggers and moreover you guys pioneered the notion of a database server.

Schuster: Yes.

Sippl: Marketing wise.

Schuster: Right.

Sippl: We always architecturally had it.

Schuster: We grabbed on to client server.

Sippl: In the SQL versions of our product, and by the way we didn't switch over to SQL until 1983, or 1984; we had our own query language. But when we engineered the SQL product, there were two processes: the query language was one process talking to our database server process. But it never dawned on me to market that. And the network background that you guys came from was that the Britton-Lee machine was a machine that sat on a network. So you guys had this notion of a database server right when the notion of servers was becoming popular.

Schuster: We pretty much defined the client server format.

Haigh: So step back then. They had the idea of a server. What did you think of the database as being a process that was running on an end-user machine, a process that was running with other server processes on a shared server? What did you think about that?

Sippl: Well, the minicomputer model was that you have a computer that 30 or 50 or 100 or 200 people use -- and they're running word processing on it, they're running email on it, they're running database on it.

Haigh: So that's like the time sharing model, then.

Sippl: Well, as opposed to the batch operating systems of the mainframes, they called them online operating systems. You went online, you logged in, and you were interactive. So it was interactive computing where you had an ASCII terminal with 24 lines and 80 characters across. And this ASCII terminal sent every keystroke that you clicked to the machine and it got echoed back. And the operating system dealt with absolutely everything from managing keystrokes to doing database storage and retrieval, but you were usually running in a mix of other applications.

"Killer" Applications

MacDonald: And I think the key thing is where they were doing networking. When you look at our VAR business, because we had developed on UNIX we had a small footprint and we could run in any UNIX box of any size. And so then this VAR market took off. And we were selling thousands and thousands of copies to these guys that had created these lower-end accounting systems and things like that. And then they were selling multi-user systems.

Sippl: And the whole accounting system ran on top of the database system running on the minicomputer.

MacDonald: And then they would sell into a business and they would have "x" number of terminals in that business tied to whatever that box was. But this was the larger concept of a networking environment.

Johnson: And were these very industry-specific applications that these VAR's were doing then?

MacDonald: Oh yes. Thousands of them. I mean, it was unbelievable because I remember when my wife went to work at Sybase. She was in a group that was trying to grow their VAR business and so they were always looking over at Informix' and asking "How do we get more of that stuff?" And she had been in Informix and one of the reasons she got hired at Sybase was to work with this group on how do we do we grow the VAR business. And it was, like, everybody had their strengths. So they had this incredibly fortunate beachhead with that great sales guy and I can't remember his name now. But I remember the stories. The finance stuff was incredible for them. We had all of this business happening over here. Then, it was like Oracle, you were on every computer. I mean, that whole idea was to run the same database everywhere which they could do ahead of anybody else.

Johnson: What was Oracle originally written for?

Humphries: The VAX.

Schuster: I think that one of the things you look back on in the industry and discover is that a database is a platform that ran on a platform. You have to find some killer apps that are going to take you up. And I was at Ingres in the early days. For Sybase, VAR's and OEM's were your forte, your killer app, in a way. Because you had to have something that made sales easy, right, if you did five of them. And I came from Tandem Computers where I loved transaction processing. And I didn't know where our applications were going to be but I knew they were going to be in finance and they were going to be in telecommunications. Mark introduced me to the government because I'd never sold anything to the government. I didn't know that there was

a government transaction market. And manufacturing was the fourth area. But it turned out that finance was our killer app; for us it was Broker Workstations.

MacDonald: It's interesting; our killer app perhaps was essentially being an early DBMS product and having it on UNIX with our 4GL language. Our fourth generation language which you guys wrote to be so incredibly easy to create applications is what fueled the VAR market. Just having the back end database structure wasn't really what drove our VAR business. It was how quickly they could write apps with our 4GL.

Sippl: Yes, we wouldn't have been a big company without the 4GL.

Haigh: Was that a standard part of the database package?

Sippl: No, it was priced separately. In fact, we had a very piecemeal price list. A lot of people bought our C-ISAM. That went on forever.

MacDonald: A long time.

Sippl: And, in fact, a lot of people bought our database system because they could also program it at the lowest level, at the ISAM [Indexed Sequential Access Method] level. Even though they'd bypass the database data dictionary and it was kind of dangerous, it was sort of programming with a sharp knife. But they could program below the level of SQL so they could avoid all the set-model overhead and do very lightweight singleton selects and writes. And I think we would have gotten all the business those guys got if they wouldn't have started because Ingres didn't run well on UNIX; it didn't run on a lot of different platforms and Oracle's early porting efforts were broadly unsuccessful on UNIX. So if they wouldn't have started, I think Informix would have grown even faster in a way.

Haigh: So, if I get this segment right, then, Sybase established a niche in the financial area with advanced features like high performance transaction processing, stored procedures and so on. Right?

Schuster: And networking.

Haigh: Triggered stored procedures, networking?-

Schuster: Servers everywhere.

Haigh: Right. Oracle had this beachhead in VMS, is that where the core thing was, then?

Humphries: That's where it started, but I think as Roger mentioned, because we ported everywhere really quickly, we were almost in every market.

Haigh: All right. Now Schuster and Sippl said that your early porting efforts were spectacularly unsuccessful.

MacDonald: On UNIX boxes.

Humphries: We had performance problems, and it took awhile to learn how to tune UNIX. So I would say it probably took us two years with that effort before it got to where it had decent performance. The AT&T 3B2 which I mentioned, did produce a lot more heat when it was running Oracle but it did get results.

Johnson: Well, how soon was Oracle on the IBM platform?

Humphries: Well, the same month I was hired, Jerry Baker was hired from IBM. He'd been at the IBM Research Lab. Jerry was under some kind of a non-compete clause for about a year. But he was there to begin the effort. I think we offered our first products on the IBM platforms probably about the end of 1986. Although, as I mentioned, we actually wrote the RS/6000 relational database for IBM.

Haigh: When you say "IBM platforms" do you mean minicomputers, mainframes or PCs?

Humphries: Mainframes. At the time I was there (I left in 1989) we had not written anything for IBM's mid-range computers

Johnson: The AS/400?

Humphries: Yes, the AS/400. We had just written a product for that as I was leaving. But we wrote for the big mainframes and whatever succeeded the RS/6000.

Financing for Informix

Johnson: I want to change topics a little. One of the things I want to talk about is financing. And Roger mentioned a little bit about how he got started. Roger: has your wife ever done the ROI on that investment?

Sippl: Well, it was money she got from her dad, and he invested as a navy captain, sending his battle pay from the Korean War into the venture capital firm which was a public company that spun Digital Equipment off as a dividend. So she took the Digital Equipment

money and some money he had invested in IBM in the 1950s and invested $20,000 in Informix. So if you trace those dollars back to the 1950s, the return on investment all the way through the Informix IPO and beyond, it must have been one of the best portfolio appreciations of all time.

Johnson: But you never had any other outside financing, then?

Sippl: Well, I did. I raised money from my lawyers and some of their friends. And I had a business advisor because I was 24 when I started the company, so I didn't know what I was doing. I didn't know what a balance sheet was versus an income statement. I didn't know how to run a board meeting. So I had a business consultant and he thought this looked like a pretty good idea. So he invested. But, I mean, these guys invested, like, 20 grand or 30 grand. So by the end of the first couple of years of trying to raise money, and the post-money valuation on these other rounds was around $360,000 or $480,000. $183,000 was what we raised before we became profitable and the cash-flow was positive.

MacDonald: But then we got ten or so venture capital presentations. We had two other infusions later on which helped.

Sippl: Well, from the OEM deals, we could get a free computer and a hundred grand and that was huge. And so we gave away discounts that were far too steep in order to get those kinds of deals. And it would drive me crazy because we ported to all the AT&T machines, 3B2, 3B5, 3B20 and they held this huge bake-off and we won on all the technical evaluations: performance, features, suitability for UNIX, easy to install, whatever. We beat Oracle and we beat Ingres. Oracle got, I don't know, a million dollar OEM deal or something. Ingres got a $400,000 OEM deal. We said: "Why don't you guys just give us a few computers and why don't you put a few copies of Informix in your sales office and see if any customers are interested?" The ATT sales people would get interested in database products on the ATT computers, but Ingres and Oracle did not run well, so the ATT sales people would call us for help, because they didn't know much about the non-phone equipment they were now chartered to sell. They would ask questions about databases, minicomputers, whatever, and so our sales people were their Systems Engineers, the people that help salespeople with technical issues in the computer industry sales force model started by IBM. And that was a big cash flow for us. We finally did get an OEM deal with AT&T long after the fact, after we had already sold a bunch. And the biggest joke was we actually had the telecomm market for quite awhile because it was UNIX. It was AT&T. It was the AT&T affiliate. So, half of the hardware that AT&T built for computers got sold into the AT&T or Bell operating companies themselves. And all the database applications were UNIX for the first couple years. The OEM deal with Siemens was, like, a $300,000-some OEM deal which was like a huge thing for us.

MacDonald: But we were small and we were young, and Roger flew by himself with one lawyer to Europe.

Sippl: I didn't have a lawyer.

MacDonald: Didn't Maggie go with you? Oh, you went by yourself on that trip.

Sippl: No, no. I went with Maggie, but that was a different deal.

MacDonald: Okay. So you go on this trip to somewhere, Frankfurt or Munich.

Sippl: Munich, and I went to see Siemens and they were negotiating with me. I took a redeye over and I was jet lagged. I'm just bleary. I'm just desperate to get a few hundred grand to go home with. And they don't know whether I'm going to want three million or, what. And they wanted this really steep discount because they were going to translate it into German. They were going to do a big investment in it. And they're having a fire drill right in the middle of the meeting with a fire truck outside. They had this 12-story building and this fire truck had this hook and ladder thing where the ladder went up 12 stories. And they had this dummy hanging off the end of the hook and ladder on a rope because they were showing how to pluck people off the ceiling. This dummy was hanging there 12 stories up, swinging around by this rope. And the lawyer goes: "Zee, zis is vat ve do to vendors!"

Financing of Oracle and Sybase

Haigh: And how about Oracle?

Humphries: What about Oracle?

Johnson: In terms of the initial financing. Please tell the story.

Humphries: Well, there are conflicting stories; Larry Ellison says that there weren't any venture capitalists, but Sequoia says they were an investor. But I tend to believe Larry, but I don't know why Sequoia would say that if it's not true. Larry and Bob Minor bootstrapped the company through contracts and some early deals.

Johnson: I know they did. They had a bunch of deals.

Humphries: There were some ISV [Independent Software Vendor] deals. We all erroneously called it the VAR [Value Added Reseller] business back then but it was really the ISV business. It was only later that I know for sure that outside money came in and when Larry got the company in trouble in 1991 or 1992, whenever that was, a Japanese steel company had to come in and kind of rescue things with a giant infusion of money. But we had no VC representatives on our board. Don Lucas who was a VC was there because Larry was having

lunch at the Sundial Restaurant at 3000 Sand Hill one day. He went to the restroom and he was washing his hands and Lucas was there washing his hands. They started talking and Larry was always a great sponge. He realized that Lucas knew a lot of stuff he needed to have, so he got Lucas on the board. And Lucas had some stock for being a board member but I don't think he ever invested any serious money either.

Johnson: Interesting. What about Sybase, then? You came out of Britton-Lee and did you go out and get venture capital?

Hoffman: Yes, we came out of Britton-Lee and initially Bob and I funded the company.

Johnson: Another bootstrap.

Hoffman: We were running up credit cards and debts. And when the first round came in, it was a million and a half dollars and it was all venture capital.

Johnson: How long was that after you started?

Hoffman: It was probably nine months.

Haigh: That was before the product shipped.

Hoffman: Way before that, Yes. At that time we had a few people working in the company but we were basically selling a business plan and trying to get them to invest in it.

Johnson: Probably, because it was those few years later that really made it possible to do that.

Schuster: On the one hand, the success of other companies made it possible to raise the venture money. On the other hand, if we hadn't raised venture money we wouldn't have been able to catch up.

Hoffman: Right. We needed a lot of money regardless.

Johnson: But Ingres did start with venture money because of the guys at UC Berkeley had developed it and that's why Gary Morgenthaler came in, because the venture capitalists wanted to get a professional -- manager with his background in there to run it. I guess Ingres must have been kind of an exception, then; everybody else was pretty much bootstrapping.

Sippl: Yes, Ingres was an exception and little did I know, I had dinner with a guy, I can't remember his name right now. In, I think it was late 1979, and little did I know he was deciding whether to pursue Ingres or to invest in Informix. But they did give venture capital. Gary's dad was one of the early American venture capitalists so they definitely went the venture capital model.

Schuster: I didn't know about Sybase. I was at Ingres at the time and was launching Ingres Star as the head of marketing for them – it was a distributed database. And I got back and there were a whole bunch of phone calls that turned out to be a headhunter that Hoffman had hired. But I didn't return the phone calls right away because I only returned phone calls to people I knew. And then I was at a venture seminar and one of the guys from Kleiner Perkins said, "Well, we invested in Sybase." It might have been their second or third software investment ever back then because they'd never done software before. And this name Sybase came up and I was thinking that it was kind of early for venture investing in software. And I was thinking, "Oh, it can't be a database company because there can't be another database company." So, the first time I heard about Sybase was actually through a venture guy speaking about it at a venture conference.

Sippl: So who were your venture investors?

Hoffman: Kleiner Perkins, TRW and H & Q were the first three in.

Haigh: Was it a happy relationship?

Hoffman: Absolutely.

Haigh: Do you think they brought anything to the management of the company or influenced you to approach things differently from how you would have done otherwise?

Hoffman: Yes, I mean, definitely they had a lot of input. We were new. I'd never run a company before. New technology, new players; the hardest thing we had to do was to answer the question: "How can you compete against the established guys that have been in the market for seven or eight years already?" And they helped put us together with other people. They helped bring in a different mindset.

[Due to a change in the audio tape, the audio begins abruptly. Humphries was describing a scene from the movie 'Airplane" where a nun in full gear – like the singing nun – was playing a guitar and singing to a sick child who was on oxygen and seated on the airplane.]

Humphries: She was standing on the kid's oxygen tube while she was playing and singing. So Larry [Ellison] got the idea from that to do a campaign against Ingres called: “shut off the oxygen.” And everything we had was focused on Ingres and while we were doing that was when you guys really got going and established.

Schuster: I'll tell you some other interesting secret behind that. I don't know if it's worth it for the tape but there's an interesting secret. See, I worked for Pete Tierney at Ingres and Pete Tierney went over to Oracle as head of marketing. But I told Pete that I was going to Sybase, that I got an offer to go to Sybase and he said, "Stu, are you guys going to work on engineering workstations in the engineering market?" and I told him, "Yes, that's our focus," all along knowing, with Mark and Bob, that we were going to go after the commercial transaction processing business. So I wanted Pete, through our "old connection" to think that all we were going to do was engineering type applications.

Humphries: So, Stu, what you're saying is you're the guy that started the tradition of untruth? <laughter>

Schuster: No, I would not characterize it as that. I would characterize it as misdirection. <laughter>

Humphries: Yes.

MacDonald: Deft handling of the situation.

Competition in the RDBMS Industry

Johnson: Let's talk about competition.

Haigh: Who did you think your competitors were? And particularly, were you competing with each other? I mean, was there ever a time when you had a sense that you were competing with the pre-relational vendors like Cincom, Cullinet or Software AG with their mainframe proprietary DBMS products rather than with each other inside the relational niche?

Humphries: We never competed with them. We never competed with those DBMS products.

MacDonald: You have to go platform by platform. Oracle is on all kinds of operating system platforms. So with different operating system platforms, you'd be set up against a different bunch of competitors.

Sippl: We had to kill off a bunch of guys who aren't here any longer. In the UNIX database market, there were some also-rans and so we had to get rid of Logix and the Mistress guys; Unify was the toughest one to kill off.

MacDonald: They lasted the longest.

Sippl: They're still alive. They're still an independent public company.

Haigh: So your starting point was that your customers were people who had already decided they wanted to go relational and they had already decided they were going to be on basically DEC or UNIX?

Sippl: Right. Mostly it was by operating system for the 1980s.

Hoffman: But it was also the type of application. I would just say you were going after the decision support kind of stuff, and in the sense, initially, we didn't really compete so much head to head. And I think that's how we snuck under the radar; we were going after this high transaction stuff and they couldn't do it and so there was a whole set of companies and a set of applications that we just didn't compete against.

Schuster: The more users, the more we had a chance to go in as a latecomer.

MacDonald: But then you switch from the 1980s to the 1990's...

Sippl: That was different.

MacDonald: And then in the early 1990s, it was, basically Oracle, Sybase, Ingres and Informix; we were going up against each other all the time.

Hoffman: We had all caught up with each other.

MacDonald: Because we had redone the core of our database products, we had a symmetric multiprocessing capability and when we went to our dynamic, scalable architecture we could compete on the high transaction stuff...

Hoffman: When was that?

MacDonald: This was early 1990s because I took over marketing in 1989 and found that the Gartner Group considered us an also ran. We were behind the other three companies in perception; that was when the rest of you guys were the acknowledged leaders. I remember

that in 1989, I met with the Gartner Group and found out that they would say that Sybase was the technology leader, Oracle was the marketing leader, Ingres was a serious competitor, and we had been written off.

Hoffman: Yes, but you guys at Informix did a great job coming back with the new architecture...

MacDonald: Yes. By the 1990s, there was a pretty fierce battle between all of us.

Hoffman: It became a marketing battle.

Operating Systems Functions

Haigh: How much influence do you think that you collectively had on the development of UNIX? I'm assuming that there must have been areas like virtual memory and security and scalability that it was lacking.

Sippl: The very first thing was record locking. So there probably was a difference. Whereas these guys took over the machine and ran with their own operating system, they didn't have as many issues as we did because our mission was to ride on top of UNIX gracefully. So we had to have some changes made to UNIX but we were very early on. So, with the UNIX user group, we formed a standards committee that later became the POSIX Standards Committee and, in that process we put in some additional system calls into the UNIX operating system for record locking, concurrency control capability and later some other things.

Haigh: Did Oracle work with the operating system manufacturers?

Sippl: They pretty much took over the machine, too. They took over the disk drives. You had to format them for Oracle. It made installation very difficult.

Humphries: Yes, we sold them a porting kit and they got classes on how to use the porting kit. They got support. But we didn't spend a lot of time after that working on operating system issues if it were something other than the main operating system. I mean, we were not real benevolent in that area. Once we sold them the deal, then, if they needed more help, we'd sell them more help. <laughter> That was the sad part about the OEM business. I didn't have to worry about the people who had the relationships with them afterwards. My job was selling the OEM deals and I look back now and I think, well maybe I should be lying awake at night worrying about that. <laughter> We sold all those deals and we just moved on to the next one.

Schuster: For the most part, UNIX stayed fairly pure and AT&T never really understood the commercial market for a long time so that gave us the ability to go deep and broad and high because UNIX never really became an OS/370 or anything that really supported commercial applications.

Haigh: Right. So you were doing your own transaction processing and virtual memory. Were you scheduling your own processes internally?

Schuster: Absolutely. Absolutely.

Haigh: So UNIX was really just doing the terminal input/output?

Schuster: Basic stuff. Yes. Boot up and that's almost about it.

Sippl: We ran on top of that so we used the shared memory features of UNIX by and by. As UNIX got more features, we used them. But, inevitably, none of that mattered. By the 1990s, everyone had good products that ran on UNIX and had good tools supporting them so the 4GL didn't make as much difference.

MacDonald: Also, the multiprocessing UNIX boxes enabled UNIX to scale so, all of a sudden, there were projects where they were considering UNIX boxes where they hadn't before. And I think that really changed the nature of the UNIX market because, if SMP hadn't come along, I think there would have been a cutoff point where we can't consider UNIX for it but, all of a sudden, with the SMP stuff, you had these hotel transaction systems that got them to say, “We can do this on the UNIX box.” And then they started trading the hardware vendors off against one another: we're not stuck with you any more; we could go buy a bunch of these boxes over there.

Adoption of SQL

Haigh: Now, I would guess, from what you've said, that you didn't have to sell people on relational databases, right? Is that true?

Sippl: By the time the market finally matured, there weren't any non-relational database systems on UNIX or VMS, for that matter. I mean, DEC had RDB, which wasn't relational but that didn't sell very well. It was mostly Ingres, Sybase and Oracle that people bought on VMS. So, on the UNIX machines, there was never a non-relational database system.

Schuster: Right. Yes, I remember my first year at Ingres, which was 1983, and Ingres had done a million dollars in revenue and we were still sometimes going out and giving a lecture on why relational was better. By 1984, it was a non-issue.

Sippl: Oh, Yes. But we also had to talk as much about why use a database management system at all.

Schuster: Because these guys were technical programmers that were buying in the beginning.

Sippl: Right. So when we were selling to a company building an accounting package, there was always some guy who wanted to write his own index file system.

Schuster: Right.

Sippl: And so we started off by convincing him at least you ought to buy C-ISAM and then, gee, don't you want a report writer with that? Well, we actually need the database data dictionary for the report writer to work. So, then we've got SQL and we have other products too.

Humphries: It all came together, I think, like you said, by the end of 1984. Because there came a time, and I think the end of 1984 was it, when everybody that you dealt with didn't want to be the last guy on their block to have a relational database system. And the way I found it out while running the OEM business is that I had this little book. Do you guys remember the book from IBM? It was by Date and Codd; it was, like, a brochure. It was a little book called *The Meaning of Sequel* and we used that to convince these guys, on the various hardware platforms, why they really needed to be going with a relational system. Even though IBM wrote it, it worked no matter. [In reply to an inquiry, Humphries stated: "It was a softbound small booklet publication from IBM." It was an overview of what SQL was and could do. It was designed to give a quick overview to anyone not familiar with it. It was especially good for management involved in making decisions about spending on DBMS]. So, towards the end of 1984, I put in an order for some more of these. I'd go through stacks of them and IBM told me that they weren't printing them anymore. And that's when I realized that I guess everybody had bought into SQL.

Sippl: The issue in the early 1980s was not relational versus non-relational as far as our industry went, it was SQL or not SQL. Ingres did not have SQL. Informix did not start with SQL; we had our own proprietary query language. And it was the switchover to SQL that was very dangerous for us. It was Siemens and Altos who made us do it. They made us switch over to SQL. When we succeeded, then Altos actually invested in the company just prior to us going public.

Marketing Campaigns

Johnson: I need to kind of wrap this up. We can go a lot more into this in the sessions this afternoon. But, as long as we're on this subject, I wrote an article for Core magazine, which is a publication of the Computer History Museum about the IT Corporate Histories project. We've been collecting information, and I explained the value of collecting this information from these companies and why we want to save it. I suggested that people go on the website and look at a marketing document from Cincom from the late 1960s versus one from Informix from the 1990s. The marketing document from Cincom is all about what a database is and why anybody would want one. And it's very dry, very dry. The one from the 1990s that Bob MacDonald had donated to the Museum was about why Napoleon won the battle of Waterloo. I mean, it's a totally marketing pizzazz type of thing. In that intervening time, it went from trying to explain why a customer would ever want a database at all to, why this product is better than the others

MacDonald: Something totally different.

Schuster: We were selling architecture, religion and a way of life; that was what high tech marketing became for the database business and it was very competitive marketing. Whereas in the early days, it was all technical marketing.

MacDonald: Oh, 1990s versus the 1980s; even in the early 1980s it was marketing of information sharing.

Schuster: That's right.

MacDonald: You weren't thinking about themes. You weren't thinking about concepts...

Schuster: I remember the first brochure I wrote for Ingres had a list of features and functions of each product, and it almost read like the back index of a technical manual. That was the type of brochure you wrote because people wanted to know about every little feature: about the data types you had, what operators you had; and it was lists and lists and lists of features, functions and benefits.

MacDonald: But that wasn't what Oracle did. Because you guys may remember, we had the poster that had the F-15 shooting down the biplane that said Ashton-Tate on the side.

Schuster: Right. <laughter>

MacDonald: So Larry was a whole different animal.

Schuster: Larry taught us a lot about marketing.

Johnson: And, by the way, any of that material that you still happen to have around, we'd love to have it for the Museum.

Schuster: Yes, I think you'd have to go back to Sybase and actually ask Hoffman, but there was a really famous marketing campaign they did. There were eight or nine companies still viable when we entered the market -- and several new ones trying to do a little of what we were trying to do -- so we said we had to make a decision. We said there was only one competitor and that was Oracle. We just ignored everybody else. We could not compete against eight people and, as a result, we did a marketing campaign to bait Oracle and my favorite example of that was sending out, on a Friday night, a FedEx package to Larry Ellison and Pete Tierney saying, "We're going to produce the Sybase view in a week on some topic like high performance transaction processing; and we're going to publish the Oracle view and you've got until Monday to respond," and we will send a copy of your response to Price Waterhouse, because we're going to make sure it's provided verbatim. I was 99% sure they wouldn't respond, with a 1% chance that they might respond and if they did a 50% chance that their response would be better than what we had to say. But I was almost certain that they probably wouldn't respond, and that Larry would be writing all weekend wanting to respond and Pete would be holding him back, saying, "Don't do it." And those campaigns helped put us on the map.

Sippl: Did they respond?

Schuster: Oh, they never responded. They never responded; but they never knew how many of these they were going to get. So, every three weeks, they got another one and those are all still left over-- they're probably on the wall at Sybase. They're really worth having.

Humphries: You're lucky Larry hadn't perfected the death ray at that point.

Schuster: He had lawyers by then.

MacDonald: You could tick him off because, when we put up our billboard next to Oracle, we had the one with the guy waving like, Oracle's behind us.

Humphries: Yes, waving bye-bye. That was nice.

Schuster: I thought for sure they would burn it down.

MacDonald: The V.P. of marketing at the time and I had dinner or something and he's going, "You don't know how many times I'm in meetings and all he wants to talk about is the flipping billboard." <laughter>

Sippl: We started the billboard wars. We were holding a user conference and we wanted to rent a billboard but you have to rent it for four months so we rented it. We put up the "Come to our user conference" ad for about a month and a half and then we were stuck with this billboard for two and a half more months. So I think that's when we put up the guy waving good-bye or something like that.

MacDonald: And Jamie Williams, who worked in my group, said: "We've got this for four months, can I come up with some concepts?" and so we went to our little ad agency and we came up with all these ads and then we did this multi-stage thing. They got so pissed off they rented a portable billboard on a truck so they could park it in front of our office for a week.

Sippl: That's true. And then IBM got a billboard and then you started reading these things in the Wall Street Journal: "What's with the billboards and the databases..."

MacDonald: Do you know why IBM got a billboard? A Gartner representative was meeting with the IBM DB2 people. DB2 was now on UNIX and they wanted to compete on those platforms and they said, "Well, what should we be doing?" and so the Gartner guy gave them a list. Well, look what Oracle's doing, look what Sybase is doing, look at Informix. So, they bought a billboard. And so, a couple of weeks later, the Gartner guy is at his desk and he gets this phone call from the guy from IBM: "Have you seen it? Have you seen it?" And he said, "What?" and the IBM guy said, "We took your advice. We got a billboard."

Sippl: I'm sure it's never cost-effective marketing...

MacDonald: No, no.

Sippl: It was not the way to go, but we started this billboard war. How much money did you guys raise in total from the Venture community? Because the press would call me up and they would go, "Do you think Sybase is going to make it?" And I'd go, "Look, the window of opportunity is now closed but I think they raised money so quickly and so much that I think they're going to make it through the window of opportunity. Larry probably would not have said that.

Hoffman: We raised about $60 or $70 million.

Sippl: $60 to $70 million. That was a big bag of money back then.

Hoffman: Yes.

Hoffman: For a software company, I think we set a record at the time.

Sippl: I think you did.

MacDonald: Mark, who was your lead at Kleiner Perkins back then?

Hoffman: Frank Coffield.

Hoffman: They put Dave Liddell on the board, right?

MacDonald: Yes, Dave Liddell.

Sippl: Dave Liddell. I remember that name, too. I have not seen him. I know all the partners.

Johnson: Lunch is on the way so we will have to close the session. Thank you very much.

