



## **Timesharing/Professional Services Workshop: Session 8: Marketing and Sales: Adapting to Change**

Moderator:  
Burton Grad

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## Timesharing/Remote Processing Services Session 8: Marketing and Sales: Adapting to Change

**Conducted by Software Industry SIG – Oral History Project**

**Abstract:** This session covers how the expansion of the use of more powerful minicomputers changed the timesharing market. Topics covered include:

- How the individual companies adapted to these changes
- Changes to marketing strategies or the target markets
- Changes to the selection of applications to be offered
- Changes to the pricing structure
- Changes to the sales organization
- Acquisitions that were made to expand the companies' product offerings

**Participants:**

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Dick Bayles	National CSS
Frank Belvin	Interactive Data Corporation
Chris Brook	GE Information Services
Rick Crandall	Comshare
Ann Hardy	Tymshare
Norm Hardy	Tymshare
Mike Humphries	Tymshare
Gary Myers	Tymshare
Dick Orenstein	National CSS
Nick Rawlings	National CSS
Jeffery Stein	Online Business Systems
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## Introduction

**Burt Grad:** This session is a little different. We're going to talk about the adaptations and changes you made, looking at the subject from two standpoints. We've talked about some of these, but I have some questions regarding your responses to the specific technological developments that took place in the 1980s. What things you were doing then that went beyond what we've talked about already. And secondly, what did you change from a marketing and sales standpoint? Did you change organizations, did you change pricing schemes? What did you do?

Some of the things I heard yesterday reminded me of an old article in the Harvard Business Review on why the railroads failed; they thought of their business as the steel wheel on the steel rail, not in providing transportation for goods and people. And some of the things I've heard in the last day or so have been that timesharing was incredibly exciting. Some of you said, "It was the most exciting time in my life. We were innovating, we were building the new models; we were doing everything differently." I have heard a lot of that from all of you. That was a wonderful time.

But you thought of yourselves, to some extent, as timesharing companies. And if that particular technological model didn't work anymore, because of price/performance issues, things like that, did you go into other ways to provide the services? GEIS [GE Information Services] was in EDI, it was in online transaction processing, it was in information access, it was in remote processing services, it was doing application processing, and it was doing e-mail. They had no sense of what their business was, other than to make money on anything to do with the use of computers on a remote access basis. I don't hear, in many cases, quite the same stories from the rest of you, but all of you must have gone through some of this kind of thinking during the late 1970s and 1980s, as you saw the dropping off of the timesharing business. And I'd like to hear a little bit about what you were thinking about, besides building machines, about what other things you were thinking about, that would salvage your companies and help them grow. So that was what I was hoping we would talk a bit about here. Nick, please start, and tell us all the wonderful things that NCSS was trying to do?

## National CSS in the 1980s

**Nick Rawlings:** I'll tell some of them. Among them, we were acquired, as we've said, by Dun & Bradstreet in 1979. Why did they acquire us? Because we were smart and handsome, obviously, <laughter> and making lots of money. Well, not really, but part of it was that they were finding themselves outmoded, using ancient paper and pencil techniques, while significant competitors of theirs were moving ahead, computerizing all their stuff. So they said, "We need to somehow get on that bandwagon." Then after they acquired us, they split off our network group. We had this thing that became called DunsNet and it was an organization that not only helped continue our timesharing business, but also connected all of the maybe 26 or 28 companies of Dun & Bradstreet with a network. They took over the network. They also took our NOMAD system and made that available within Dun & Bradstreet. We solved a whole lot of problems that they needed solving, by using our timesharing system and our software, so they became a customer. They had never been a customer of ours, essentially, and suddenly, they were one of our largest customers.

A different thing that happened was that the Bank of America, which had been running our system for quite a while, loving VP/CSS and loving our Basic and our NOMAD and some other things, our COBOL application development. They said, "We don't believe in VP/CSS anymore, and we want you to work on VM." They wanted NOMAD to work on VM. So they gave us a million dollars and said make it work on VM. So we did. Once we had it on VM, we could sell it to other people. And so that was a different kind of model for us, selling software. Then, Bank of America came back with another million dollars and said make it work, not just with the NOMAD database, but with an external database, specifically, SQL/DS which a few people at Bank of America had fallen in love with. They had thousands of NOMAD applications. They said, "We want to replace the NOMAD database engine with SQL/DS," and they also paid for a substantial consultancy from Chris Date to help us with this effort. So because we had this big relationship we did the migration, not so much because we thought it was a great idea, as that they gave us the money to do it. So we made that migration. So we somewhat moved into then – well, at least a section of us – selling NOMAD to run on your computer on your VM.

**Grad:** Let me ask you a question, though. One of the things that bothered me, and this has happened in our industry a long time. If someone is willing to pay us to do something, we do it, even though it's not necessarily the best use of the limited skills that we have, in terms of growing our business.

**Rawlings:** We had a very significant thing like that. We were paid by Suntory in Japan, a nice compatible likely-suspect business partner. They made beer and whisky and stuff, and so that was an obvious fit. <laughter> I think it's closer than Rick Crandall's – you know, glass and the pretty women. You know, beer and whisky. But at any rate, they said we want NOMAD to run with a double-byte character set and if you solve the problem for Japan, it will also be fine in China and Korea. So I was in charge of the development group, and I said, "That's fine, give us

the money," which was maybe four million dollars. "Give us that money and we'll do that, because it will cost us about two million dollars to do that." So we didn't do anything else, essentially, for about a year and a half, and that was one of the reasons we went out of business, to a certain extent, because we did what you're saying. We took the money and took the scarce development resources and put them on that, instead of fixing some of the other problems.

**Grad:** I have a wonderful quote from John Maguire, who was a very smart businessman, and he says he was offered money by CDC [Control Data Corporation] to port ADABAS to run on the CDC 6600, and he said, "Hell no." And they said, "Well, how much can we pay you to do it?" He said, "No amount of money would convince me to take my scarce technical resources and waste my time building it for your five percent of the market." He said, "I'm not going to do it."

**Rick Crandall:** Burt, in that direction, because it will be the last comments that I will be able to give at this meeting, we had the very same failure, conceptually. We had DuPont and a couple of other companies who were absolutely committed to the Apple Mac platform and, of course, we had IBM pushing us like crazy for OS2. So we made the decision, we got some funds, and we actually came up on three platforms with our PC stuff, including the EIS, Executive Information System, on Mac and OS2, and it killed us. I mean, it didn't even support the costs since every time we developed something, we had to develop it three times. And it was murder. The smartest thing that he [John Maguire] did, and I didn't, was to resist this platform spread.

**Grad:** It's a really serious issue, and it takes guts to do it. Let's finish up with the NCSS. Did you ever look at EDI as a business? Electronic Data Interchange?

**Rawlings:** Not that I know.

**Dick Bayles:** Well, we once entertained bidding on one of the state lottery contracts. This is back in 1977, or 1978. I'm not sure whether it was Connecticut or Massachusetts or exactly what state. I don't know if it was Vermont or New Hampshire, I've forgotten exactly where it was.

**Rawlings:** Vermont.

**Bayles:** It might have been Vermont. It was a logical extension of our communication capabilities, and all the rest of it. The best thing that ever happened was that we didn't win the bid. I don't think we ever pulled back from it.

**Grad:** The fact that you were now part of D&B, did that open up some new application directions or new strategies you could follow?

**Bayles:** I was gone by then. Nick?

**Rawlings:** As I say, we had the fact that Dun & Bradstreet became a huge customer.

**Grad:** Other than that?

**Rawlings:** No, other than that, no.

### **Interactive Data Corporation in the 1980s**

**Grad:** Okay. IDC. You keep moving ahead. What did you do to adapt?

**Frank Belvin:** I had left.

**Mike Wyman:** By the 1980s, I think, our primary focus was on the securities industry. By this time, we were starting to focus on selling in-house copies of the Dynamics Associates XSIM package as software. At one point in time, we had a fragmented sales force. It was broken up along vertical markets. We had one selling to the securities industry, another selling to the corporate industry, I think there may have been a third, selling the economic stuff. And on the securities side, we actually had two sales forces, one selling information via timesharing, the other selling bulk data, and these two sales organizations would constantly run into each other and, you know, they'd end up internally squabbling. Actually, there was a third sales organization which was selling securities data through a third party.

**Grad:** Were you still part of Chase then, or had you split?

**Wyman:** We were still part of Chase. We didn't get acquired by Dun & Bradstreet until the late 1980s.

**Grad:** Nick, were you still with D&B then?

**Rawlings:** No. The NOMAD business had been sold to a French company called Thompson in about 1987.

**Wyman:** If I had to guess when we were acquired, 1988 sounds more like it.

**Grad:** Did that change the character of your business after you were acquired?

**Wyman:** To a certain extent, because by that time Chase Econometrics had been sold off to somebody at Wharton, WEFA, I think. I think the Dynamics XSIM business was just about dead. It had been killed by the PC.

**Grad:** But you were a data company by that point.

**Wyman:** We were primarily a data company. We had financial data, we had something which we called D-O-T processing, which stood for dirty old timesharing. <laughter> Which business we tried to sandbag to go away however we could. Like I think most of the people in this room were doing. We reorganized our sales structure, so you no longer had an online and an offline sales team. In terms of how the acquisition by Dun & Bradstreet affected us, D&B already owned what amounted to a more or less complementary UK company called Datastream which was essentially selling securities information in the UK. They were just starting to try and make a presence domestically and they were doing that in conjunction with George Feeney who was running an organization called DunsGate at that point in time, which was basically replacing timesharing hardware with a whole cluster of PCs. Anyway, he had come up with a system for distributing Datastream data directly into IBM PCs.

**Grad:** Lee Keet, when he was with Dun & Bradstreet, developed something called DunsPlus. Do you remember that?

**Bayles:** That was essentially online access to the underlying Dun's credit data.

**Grad:** Right, that's what I thought. Was this related to that in some way?

**Rawlings:** We did have a PC that we bundled with the software and that was DunsPlus and it was the NCSS guys who did the work.

**Grad:** I'm sorry, what was the name of the company that you said?

**Wyman:** DunsGate.

**Grad:** Was Feeney still with GEIS or had he left GEIS by then?

**Rawlings:** He'd gone.

**Chris Brook:** He left, yes, an unfortunate departure.

**Grad:** Was that a plus or minus from the GEIS standpoint?



**Brook:** Oh, for us it was a huge minus.

**Grad:** Losing George?

**Brook:** Yes.

**Bayles:** Really, was it?

**Brook:** Oh, he was the guy that started the whole thing. He'd driven it, and he was technically oriented, and he'd driven the whole timesharing initiative from when he came in in 1968. He came in at the same time as I did. And he went through to the early 1970s, I guess, then one day there was a falling out with [GE headquarters in] Fairfield, essentially. They wanted to go one way, and he wanted to go another. He was not a team player type person.

**Bayles:** George? You think? Just a little bit off topic, but I actually worked with George after he joined Dun & Bradstreet, after D&B bought NCSS. I was commissioned to spend three and a half months with him on building a prototype of a system which we ended up deploying as a division of Dun & Bradstreet, so I know George.

**Brook:** Yes, we all loved him. I've had my run-ins with him, but we loved him.

**Bayles:** Okay, that's a fair assessment, a fair analogy.

**Brook:** The problem was not in GEIS, the problem was external.

**Grad:** So tell me, was this DunsGate that you were working on, or was that something else?

**Bayles:** That was Sales Net.

**Grad:** That was Sales Net.

**Bayles:** Which was an automated telemarketing organization. Originally it was aimed at R.H. Donnelly, doing online telemarketing, semi-automated telemarketing selling yellow page ads, bold listings and stuff like that. They ended up turning it into a business so that they could get Xerox as a customer, Minolta, and a number of other people as customers. That was George's idea.

**Brook:** Yes, well, he's a great ideas man.

**Bayles:** I built the prototype and six months later, they started a division

**Grad:** Okay, let's hear about the others. What did Tymshare do as far as its growth? You were not there anymore, Mike, in the 1980s, is that correct?

### Tymshare in the 1980s

**Mike Humphries:** Right.

**Grad:** Were you there, Gary?

**Gary Myers:** Let me offer an observation, at least as how we perceived it in the late 1970s. You could buy a PC at that time, in the early years, for around \$5,000 purchase price. We would run some benchmarks and, typically, a \$5,000 per month [timesharing] price was giving you the equivalent power that you could buy in a standalone PC. So here you had an order of magnitude difference in price, for the same power, same capability, solution presentation, if you will. So that's what I think we saw within Tymshare as the handwriting on the wall. It wasn't going to get better as far as timesharing was concerned, because you had this huge infrastructure of network and data center cost and, more importantly, the marketing costs were growing as a percentage of sales, because it was harder and harder to sell. So it was a treadmill that you could never get off of.

Now we did some things, I think, to slow down the attrition of the revenue, on a straight per hour timesharing basis. We've talked a little bit about the facilities management arrangements, where we would manage on our facilities, and in one case, on their facilities and computers, running our software, and our procedures, and that sort of thing, so that minimized the decline of the revenue. And then Tom [O'Rourke] – I think maybe rightfully so, maybe, in retrospect, not so rightfully so – went on this acquisition kick with Bernie [Goldstein] and Al [Eisenstat] and we tried to buy our way into more revenue, and that was kind of what our strategy was to prevent the demise of the company.

**Grad:** But was there a strategy of what you wanted to buy? You mentioned some of the things that were purchased that you weren't quite sure why. Why did they make the UDC [United Data Centers] purchase, for example. Could you see a strategy there?

**Myers:** UDC was a very unique purchase because that was really Bernie and Tom getting together to save the UDC operation, and I think that strategy, if there was one, was very different from any other subsequent, or even prior. The prior strategies were all consistent with timesharing and UDC was the break in that strategy. It radically diverged into their applications, and batch, and way off.

**Grad:** Took it to a lot of different places.

**Myers:** Way off, yes, never-never land.

**Ann Hardy:** Yes, and with those acquisitions that Bernie initiated in the late 1970s, we focused on growing those businesses. Well, first of all, I have to say, what Gary said about our regular timesharing business and how the things that were put in place to keep that revenue going, they focused very, very strongly on that. In addition, we worked on trying to grow the revenue from these acquisitions that Bernie was making. We did some very interesting applications.

**Grad:** Examples?

**A. Hardy:** We did a lot in the travel business, and it was based partly on our communications, and partly on our applications, and that business grew through the 1980s.

**Grad:** What did you do? Were you competing with Sabre? What were you trying to do?

**A. Hardy:** There was no Sabre. We worked with a travel agency organization. They had travel agents who were trying to get to these multiple different airlines. Every airline had their own reservation system, and everyone was different, and every one required the travel agent to have a different computer, a different terminal in their office. So what we did was, take your terminal whichever one it is, call into Tymnet, you can go wherever you want. And so we converted the protocol from the terminal to whatever was appropriate for that destination.

**Grad:** Got you. Okay.

**A. Hardy:** It started out that way but, of course, every airline had their own different protocol for making reservations, and they weren't all as user friendly as the protocols are today. So we ended up developing software that gave a common interface. This really helped out the travel agents, and we, who worked on this, could also, as we flew around the world on various business, make our reservations online. That was way back in the 1970s, we were doing this. It was fascinating working with the airlines at this point, because some of them, like American, understood that this was a potential profitable business for them, gaming the reservation system. They could see what we had done and said, "You know, we could do something like that." Other airlines, like TWA, just couldn't get it. And even though, at that point in time, they had a better reservation system, better organization as an airline, the executives just couldn't understand how providing reservations for everybody would be a good business. So TWA ended up going out of business and American got stronger and a lot of it was built on just having reservations systems.

**Grad:** What else?

**A. Hardy:** We did a lot of online banking. We acquired an online bill paying and online banking system, so again, a lot of online interaction. The problem was, it was like telephones in 1900, there weren't enough people with terminals

**Grad:** But didn't you start to interface with PCs at about that point in time, or was that too early?

**A. Hardy:** Did we ever interface with PCs? Not very much, and there weren't very many PCs.

**Humphries:** There was an effort in Tymshare's product marketing to offer PCs as a product and to have the interface built. That was never approved.

**A. Hardy:** Yes. The other thing that we did, which was completely different, was try to build up Tymnet and their business, and they actually were expanding their business substantially, providing the network for corporations that were worldwide, providing interconnections between various communication systems that were out there.

**Grad:** Was Tymnet a completely digital system?

**A. Hardy:** Yes.

**Grad:** So you had to interface with the analog systems that existed on both ends, is that correct?

**A. Hardy:** Right.

**Grad:** But you were sending all those digital signals the entire way.

**A. Hardy:** Digital signals, right. And that business was growing rapidly, but it was so different I think we didn't take advantage of it. So eventually, we pulled out.

**Grad:** Did you ever try and do an EDI type of business?

**A. Hardy:** We did. We had an EDI project.

**Grad:** What community did you try and serve?

**A. Hardy:** Did you guys ever try to sell it? No. We did have a big EDI project, internally, but maybe it was only in development. It may never have really seen the light of day.

**Grad:** Okay.

**Myers:** Burt, I think this is an interesting point. Ann and Norm and Las[lo Rakoczi] and a number of the technical people were really doing some cutting edge work. But there was a disconnect between what they were doing and what the marketing team was doing. And it's my sense that we were trying to do some product design and development, and those people were off in left field as well. So the company fragmented in its strategic thinking and I think that really contributed to the demise of the company, in a way.

**A. Hardy:** Yes, that's a very good description.

**Grad:** Three things that seem to come up here. One, the internal technology people are building new things, new technologies. Number two, marketing sees market opportunities or possibilities, and then you have Bernie and whoever buying companies which might have not be related with either of those other two things going on.

**A. Hardy:** And in addition, we had the Tymnet group.

**Grad:** Well, Tymnet became a very successful business but it seemed to be disconnected from what you were doing after a point in time.

**A. Hardy:** Only partly.

**Grad:** Well, how was it changing your business?

**A. Hardy:** Well we couldn't have done the reservation systems or the banking system without it

**Grad:** Oh, I see, so you were taking advantage of your technology.

**A. Hardy:** Yes, we sure were.

**Grad:** How about in marketing and sales, were you thinking about that from a product standpoint or market standpoint?

**Humphries:** Well, if I, for instance, had had greater foresight, I could have realized that it was an advantage instead of a disadvantage, but one of my big customers in Los Angeles was

called Market By Market. It was a spinoff of Gene Autry's media empire. They bought Arbitron Data and they figured out how to crunch it up and produce reports and that they could not only use it for their stations but they could sell it to TV and Radio stations all around the US. For all I know, around the world, but I think it was US data. So we were very successful at it. In fact, I went in, and I negotiated a large agreement that reduced the price because we got to that point where their monthly bill was no longer acceptable. So I thought, well, here's the solution, and I won this battle, but Prime Computer – and it could have been anybody, it could have been Data General, or HP or anybody – Prime Computer came in and said, "Hey, look, you can have this computer and reduce these costs down to a fraction of what they are." And the missing piece was my own company, Tymnet, to then provide the network, so that all of these customers, these TV and radio stations all around the US, could use it. So I viewed that as a negative. What I really didn't see is that that was probably the next place we could jump to, and make all these guys who were our competitors, like Prime, our new partners.

### **GE Information Services in the 1980s**

**Grad:** Interesting difference, interesting angle. GEIS, you were in many things, what were you doing differently, or not?

**Brook:** Well, we were sort of looking around for additional things to do. For instance, we started a joint venture with NEC in Japan. We said, "Okay, what can we do together?" And I spent a lot of time going to and fro across the Pacific, and the result of that was "Okay, we'll do a G-4 fax interface." So the terminal acted like another terminal, you G-4 fax in, you got G-4 fax out. The Japanese were pushing the hell out of G-4 fax, but it didn't do anything for us. So we developed all of this stuff, and you know, it kind of went away because there was no market in the states for G-4 fax. There was in Japan, but that wasn't big enough.

**Grad:** What does G-4 fax mean?

**Brook:** It was the next generation. The ones you use today, the normal fax machine, is a G-3 fax. The G-4 fax had much better resolution, had all kinds of other capabilities. It's a bigger box.

**Grad:** Is it still a scan and forward kind of thing?

**Brook:** Oh, yes, you still scanned it, and you used [the] X.25 [network protocol] and it had its own set of CCITT [Comité Consultatif International Téléphonique et Télégraphique, an organization that sets international communications standards] protocols for that.

**Grad:** Okay.

**Brook:** We developed interfaces for the IBM PC and also for Apple, both of which went pretty well because they fitted in with the EDI model. EDI was pretty much our main driver, at this point. We added, because of Europe and EDI and the French auto industry, the interface with Videotext which is the French system. I think we were the only people who did that, and that worked very well, and got us a lot of sales in Japan. We created a TP [teleprocessing] terminal. We created a lot of terminals to plug in and support old time data processing rather than timesharing. And we had a lot of big applications. We were still hanging on and we tweaked this, added another interface there, and so it worked pretty well. We had two interesting things, I guess. One was that by the mid-1980s, we had an online auction system. Sound familiar? It's called E-Bay today. So we kind of invented that technology. And it was kind of really weird. We had a meeting and said, let's get into this, and the network was there. People used one of the terminals, and did their bids.

**Grad:** What kind of products?

**Brook:** It was exactly like E-Bay.

**Grad:** It was really that general?

**Brook:** It was a third party actually doing the physical auctioning, we just provided all the communications, coming in and out. I don't know where it went to, it did very well for a while, and then kind of disappeared. And then, at the same time, we were thrashing around getting into new areas and GENie [General Electric Network for Information Exchange], which was the home computer thing, came on, and that was a huge success.

**Grad:** Tell me about GENie.

**Brook:** GENie is what AOL became. That was our competition, Quantum [Computer Systems], which became AOL. So it was exactly the same thing. I think we had a much better product. It was obviously a much bigger product and it was worldwide home computing. Of course our own people had a great time using it, too.

**Grad:** So was it an ISP, basically? It wasn't for Internet, this was pre-Internet.

**Brook:** It had nothing to do with the Internet at all. No, you came in from your regular old terminal. You know, your PC or whatever it was.

**Humphries:** Like CompuServe.

**Brook:** Yes, I guess CompuServe is similar. But AOL survived. I mean, Quantum survived, and we did really well. It had a huge market. The marketing premise was, here's Mark III which was used very heavily from 8 in the morning till 6 at night, then it's idle. Okay, what can we do with the excess time? So we said, "Oh, GENie, home market." All these people can log on at six o'clock at night, chat to each other all the way through the night, and, you know, go away, which worked really well. We had a huge audience and they were making zillions of dollars out of it, but the premise was, it could only use excess capacity. It got so successful, we said we need to buy another machine to support GENie. But you can't do that. And so literally, it died of its own weight, because we couldn't grow it.

**Grad:** Isn't that fascinating?

**Brook:** I mean, there were some strange management decisions made, let's put it that way. But that was, you know, we had the whole market. When we pulled out of the market, then Quantum had it pretty much to themselves. And, you know, they became AOL, and the rest is history.

**Grad:** How about e-mail? You said you were doing that, didn't you?

**Brook:** Well, QUIK-COMM. QUIK-COMM was the underlying thing that went from terminal-based to PC-based, so we had PC interfaces for QUIK-COMM for e-mail, for Apple and so on

Oh, and the other thing that was happening about this time, was we were going through the same kind of thing: what can we do to grow revenue? Because, even though we had a lot of stuff, revenue wasn't growing, the downward price spiral was pretty heavy, a lot of pressure, and I'm sure everybody had the same issue then. So we were growing business, but revenue was flat, and the word came from on high we've got to grow revenue. We were probably about half a billion at this point, we were somewhere about \$500 million. So people put their heads together and said, "Well, we're not going to grow organically, the only way we're going to grow is acquisitions." So they went out and eventually found, I think it was four companies, it's probably in the history somewhere who they were. I can't remember who they were. One of them was a minor fit, the other three were not. And so we spent a lot of effort bringing them onboard, and as far as I'm aware, none of them ever really made it. One was a professional services type company, which didn't really fit what we were doing, but they ran them as a separate company. So that's when we flattened out.

**Luanne Johnson:** [Reads the online document at <http://corphist.computerhistory.org/corphist/view.php?s=tl>] Lambda Technology, Energy Enterprises of Denver, Banking Systems, Inc., and Software International [SI]. That's right, I remember Software International. They were one of my clients.



**Grad:** So you went into the product business then?

**Brook:** Yes, they were separate, so it was purely and simply a growth play. We needed to get to a billion dollars that was the magic number. We were stuck at \$500 million. We needed to get to a billion to be a GE player, and the only way to do it was to acquire because we couldn't do it organically any more.

**Grad:** [Jack] Welch was in charge by that point.

**Brook:** Yes.

**Grad:** Yes, his viewpoint was, if you weren't at least this big, why bother being in the business? Interesting point.

**Brook:** Right. So they went out and bought four companies and I think, probably SI got in there. The others just either died or dropped off or disappeared almost straight away. So, that play didn't particularly work.

**Thomas Haigh:** So, since the 1950s, GE had been famous for its commitment to management education, you know, formalized procedures, special methodologies, etc., in terms of managing a huge diversified conglomerate. Over the time period, in what ways do you think that kind of corporate infrastructure helped and hindered the development, and did it change over time?

**Brook:** A certain number of the people went to GE management classes. The biggest problem was that we were a small company in GE, but a very successful one. And the result of that was, we were a good management stepping stone. So we'd get a new CEO every couple of years, until near the end. For instance, you know, [James] McNearney, who's now, I guess, Boeing, was there, he was marketing manager, then he became CEO, and left. Greg Liemandt was before him. He took over from Feeney, then there was a guy called Bates, who was there for a couple of years. They were all GE managers. A GE manager can do everything from tooth brushes to jet engines. The fact that they don't know anything about computers didn't really matter.

**Grad:** I was a GE manager, so I can understand that kind of thing.

**Brook:** That made it somewhat disruptive, to say the least. The people below were all fairly dedicated computer salesmen, techies, whatever, so we didn't really fit well in GE. With the way the business went, and also culturally later, it was probably a mismatch in there that didn't help us.

**Grad:** You were a small fish in a very big pond there. You were a big fish in the industry pond, but a small fish in the company.

**Brook:** Right, a small fish in the pond, but we were very cash rich. For a while there, we were churning out all this money, so we were superstars, because bottom line was what counted, right? So it's the cash or net income that counted, depending on who was the GE CEO, and so, therefore, we were very popular.

### **Online Business Systems in the 1980s**

**Grad:** Yes. Jeffery, you're the last one on this subject. You're growing from \$10 million to \$30 million during this time period.

**Jeffery Stein:** Which period should I cover?

**Grad:** 1980s.

**Stein:** Well, in 1980, 1981, we were growing organically, and beginning to diversify a little bit, but we were very much a local company, serving a lot of people, companies that had needs all over the world. And so we were at, like, \$10 million, and there were a couple of competitors in the Bay Area, that did similar things that we did. Optimum Systems, called OSI, owned by the Murchison family and then CUC, Computer Usage Corporation, which had a data center, and they were just selling time on them. And OSI, Optimum Systems, really never made any money. It was funded by the Murchison family of Texas, and they just kept on pouring money in, and pouring money in, and pouring money into it, and they decided that they wanted to get rid of it. The place was run down, it was run by a lot of technical people. They had their way, not the marketing side, or sales, and so it was our first acquisition, and we bought that for no money down, and took on a six million dollar note, and paying \$150,000 a month. I used my stock in the company as security. That's how naive I was about it, and we almost went out of business three or four times. It was just, you know, poorly executed by me.

However, buying that company almost ran us out of business, but also buying that company kept us in business, because what it did is that they had five million in sales, we had ten, and overnight we were 20 million. And although the arithmetic didn't add up, all of a sudden, the business just poured in. We got a lot of new business. But again, our costs were out of whack, and everything like that, and we reduced staff, and we didn't consolidate the data centers fast enough. But, in the end, we pulled it out, we paid off the note. We owned the whole company again, and went on and continued to grow. It wasn't easy, it was not easy at all, but we did that.

**Grad:** Were there any particular applications that you picked up in acquiring OSI that were different?

**Stein:** They had some applications, but probably half of our business was very similar to their half of the business. They had TSO [IBM's Time Sharing Option] offerings, they had a lot of remote batch, they had time sales.

**Grad:** Were there any other acquisitions you made?

**Stein:** Right, we made some more acquisitions. We made some software acquisitions, and we had a couple of data center acquisitions.

**Grad:** Where did the cash come from to do these?

**Stein:** Basically, they were all earn outs, because we were under-capitalized, and with the OSI acquisition, which cost us six million dollars, we had \$150,000 dollar a month principal and interest payments. It was all leveraged out.

**Grad:** Heavy duty. So we have this period of the 1980s, some changes in the business structure, some new applications, timesharing revenue is, at best, stabilized, and, at worst, dropping down, maybe ten percent a year. That kind of a picture is what we're dealing with. Comment?

**Brook:** If I may, my mind is kind of compressing stuff. In the early 1980s, we did pretty well. We did a lot of EDI business, especially in Europe, and so the stuff I was talking about was end of 1980s where things started to flatten out a bit. But in the early 1980s, we were finishing up the network stuff, we did a lot of enhanced EDI stuff in Europe, different protocols being added in, and did very well out of that. But then it flattened out at the end of the 1980s.

**Grad:** This afternoon, one of the things we'll talk about is what caused the demise, what were the major factors that caused that, and then what was done, and what happened with the companies.

**Wyman:** Based upon Chris' comment on coming up with GENie to go out to the consumer marketplace, a notable absence here is CompuServe, which started off, supposedly in the late 1960s, as a timesharing company, and in the mid-1980s, I guess, went after the consumer marketplace, much to the chagrin of their corporate customers, because this totally changed the focus of the company, and took their eye off the ball.

**Johnson:** We had CompuServe on the initial list of target companies, but we just weren't able to track anybody down.

**Grad:** We had about 25, 30 companies on the list, and in a lot of cases, you couldn't find anybody to even talk to. CompuServe was one. I'm sure it's there to find, but it takes a lot of energy to identify and find people.

**Wyman:** I'm just curious if anybody else went after the consumer marketplace in the 1980s?

**Grad:** Did any of you do it?

**Brook:** Yes, we had a subsidiary that did that. We hired somebody and that was what he did, and so we made him chief of that division, or department or whatever, and sent off a group of really hackers. They went off and ran GENie by themselves, about eight of them altogether. And they did a tremendous job. I mean, GENie was the most popular thing the employees had. All of us were on there all day and night, so we were our own best users.

**Grad:** This is a very interesting. When you signed corporate customers, the idea of selling into an end user, a consumer marketplace is very foreign. IBM failed at that over and over again. They didn't know how to do that right. Do you remember the PC Junior? I mean, a great advertising campaign, but it had nothing to do with the product or anything. So selling those are quite different models to work with.

**Haigh:** And those services were also popular with very small businesses. You know, it was a cheap way of getting e-mail service, they were used for tech support forums, for some companies, those kinds of things.

**Grad:** Interesting. So you're saying it was not just consumers, it could also be dealing with small businesses.

**Haigh:** Yes.

**Grad:** Which, again, IBM didn't know how to do well, either. GSD [General Systems Division], was okay with the next size up, \$50, \$100 million dollar businesses. I always felt that the timesharing and remote processing companies filled that gap to some extent for IBM for many years. They could deal with the smaller customers in a different way. The unit costs were a different level. The IBM salesmen had no interest, certainly not in DPD [Data Products Division] and not even in GSD. Remember GSD ended up selling the AS/400s and things of that size, these smaller machines.

It's time for our luncheon. It's going to take us about 45 minutes. We'll reconvene about a quarter after one. John Hollar may join us for lunch.