

An Interview with
DAVID SCHMIDT

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Conducted by Jeffrey R. Yost

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David Schmidt Interview

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Abstract

David Schmidt, co-founder of Tymshare, reflects on his early career, the founding of Tymshare, and the firm's technology, key personnel, competitive environment, and early growth before leaving to found Mascor.

Yost: My name is Jeffrey Yost, from the Charles Babbage Institute at the University of Minnesota, and I'm here today with Dave Schmidt, and it's April 5th, 2012. We're in the suburbs of Sacramento, El Dorado . . .

Schmidt: El Dorado Hills, actually.

Yost: El Dorado Hills, for an interview about Tymshare. Can you begin just by giving me a little bit of background biographical information; where you were born, where you grew up?

Schmidt: Sure. I was born in Portland, Oregon; and it was in 1932. I grew up in Portland, married my first wife there, and moved to California in the Yuba City area. And that was — I have a tough time with these dates, but I'll give to you what I can remember — it must have been about 1952, thereabouts. I could be off a couple years, here and there. And I worked as a produce clerk at the Nugget Market; there's one of those right down the street here. It's actually headquartered in Woodland, which is where we actually lived. [I] left the Nugget Market to join the Air Force, spent four years in the Air Force, and after the Air Force I went to work for IBM.

Yost: Did you have any exposure to using computers in the Air Force?

Schmidt: In the Air Force, no. When I went in they said that I should be a heavy equipment operator. I declined to do that. I told them I was interested in photography and

could I be in photography. I was told no, you can't be in photography, but we have an opening for a camera repair technician. So I became a camera repair technician, but the technology of camera repair, flight cameras, was moving along pretty swiftly. So immediately it became obvious that I needed to have some electronic training. So they sent me to electronics school and I really enjoyed that. I spent some years in Japan, flying in B29s with the crew, and the cameras were out in the bomb bay of the airplane, and I had to go out there with an oxygen bottle while we did reconnaissance runs over Korea. So anyway, the whole point of that was —

Yost: And where was the electronics school?

Schmidt: The electronics school, Denver. Yes. So the point of that was that the electronics gave me enough of a basic training that I could become a field engineer for IBM on the electronic accounting machines, the things with little square holes in them.

[Laughs]

Yost: Right. When did you start at IBM? Do you recall what year?

Schmidt: I went into the service in 1949 [and was] there four years. Must be 1953 or very close to that. Yes.

Yost: And how long were you at IBM?

Schmidt: Just a year, a little over a year but not much. I went to Burroughs from there. Actually, I went to Vector Data from there, and Burroughs bought them, as you know.

Yost: And that was in Pasadena?

Schmidt: Yes. And I was with Burroughs for quite a while. I spent some time in South Africa. I was training field engineers at that time. And I went to South Africa with their field engineers; two of them that had come over. And I taught them. Then they sent me over there to monitor their effectiveness in maintaining the computer they bought from Burroughs.

Yost: And were you training in field engineering with their computing machines, the Datatron?

Schmidt: Was that a Datatron? Yes, it was.

Yost: How did you end up leaving Burroughs for GE, and when was that?

Schmidt: Okay. When I came back from South Africa they wanted to move me to Detroit. I was still in California when I left. I walked around the streets of Detroit in the middle of winter and decided I didn't want to be there. And that's why I went and got a job with GE.

Yost: And what facility of GE; where was this at?

Schmidt: Where was it? Well, my first job with GE was at the Bank of America in San Francisco, on Market Street. And I was the lead engineer there with a small staff and some Burroughs computers. Trying to remember exactly what we were doing with that. I moved from that job to a different location.

Yost: So was this work related to the ERMA system?

Schmidt: Yes, it was. You can probably refresh my memory a little bit on that, because I remember we had a facility —I don't remember the name of the city, it was in the Los Angeles area — but they had a lot of checks orders there. Anyhow my job was to reduce the maintenance effort there and we cut it down from 12 or 13 people to four to service that whole area. In the process we had some rather inventive things done to modify the actual sorters so they would work without so much maintenance. And that was a big success; I enjoyed that a lot. It was there that I met Tom O'Rourke and, oh gosh, I don't remember all the guys that were there at that time. No, anyway, that's what I did.

Yost: When you were at GE, before you had left to co-found what became Tymshare, was GE either already in the time-sharing business, or was there any discussion about time-sharing within GE?

Schmidt: Yes. Actually, GE had sold a computer to Dartmouth, as you probably know. This was one of the very early time-sharing systems and was developed for the engineers to use with FORTRAN to solve engineering problems. That was its first application. In fact, Tom and I had tried to buy a GE computer to start Tymshare but GE made that very difficult for us so we finally looked into the University of California- Berkeley.

Yost: So they already saw this as a business they wanted to expand and didn't want to help out a competitor.

Schmidt: Yes. They didn't want to create a competitor, that's correct. Yes, that's exactly how it was.

Yost: Do you recall any discussions you had with Tom O'Rourke? How did the idea come about to leave GE to start this company?

Schmidt: Okay. Well, we were in GE's lab in Sunnyvale, California at the time. And Tom O'Rourke was still in an office in downtown San Francisco then, but he was the regional manager and I got to know him through some work I did for one of the aerospace companies there. I forgot which one it was; it was in the area there. Myself and Verne Van Vlear — you probably have his name —

Yost: Yes.

Schmidt: . . . and Arden Scott also participated in that effort. We developed a multi-processing system, an operating system to be able to convert from magnetic tape to punch cards, and to do printing, and all of that stuff. That's how I got to know Tom, was in that project. In fact, I decided that I wanted to go into business for myself and Tom hadn't entered into the situation at that time. I tried to hire one of the other GE sales people to be on the sales side, but he declined. I forget how I managed to broach the subject with Tom, but at that time Tom was not enjoying his position with GE. I don't remember all the details but he was ready to move on. So we got together and talked about it and he said, yes, he'd like to join it. I had done quite a bit of the spade work and was ready to go. I tried to hire the other salesman and he wouldn't come aboard. That's when I offered to Tom to come aboard and be the president.

Yost: And you had decided you wanted this company that you were forming to focus on time-sharing services?

Schmidt: Yes, it was at that time, a real state-of-the-art thing, you know, computer at your fingertips, they called it. And we used old teletype machines that weighed about 75 pounds. [Laughs]

Yost: There were a handful of people writing about the future with computing, in the mid-1950s, where a computer would be a utility; kind of a vast computer utility, and comparing it to the electrical utility. Did that influence your thinking about what the future of time-sharing could be at all?

Schmidt: I don't remember even being aware that people were thinking that way at the time. In the relatively early days of Tymshare, the idea of personal computers was the more pertinent issue, technology issue. And, of course, a lot of that came about when I was still at Tymshare. But yet, the timing of all that is hard to remember. But that's where we saw the computer industry going.

Yost: Where did the initial seed money come to start this?

Schmidt: Seed money came from SBIC; well, let me back up. About the first nine months to a year, something in that range, Tom and I and Verne Van Vlear, we had no income. We kind of financed ourselves. I sold stock to my wife's relatives. Tom O'Rourke raised some money and he got in contact with George Quist at SBIC, Bank of America's Small Business Investment Company. And that became our funding source; or gave us the seed capital to start expanding the business and hiring the right kind of people, and so forth.

Yost: Do you recall how much money you got from Quist and SBIC?

Schmidt: No, it's been; it wasn't a huge amount. It was definitely a pay-as-you-go thing. We received more than one round of financing from them.

Yost: Is it proper to understand Tymshare as being co-founded by yourself and Tom O'Rourke? Or you were the founder and he soon joined on?

Schmidt: Oh no, we were the founders. It was my idea originally, but when he learned what I wanted to do, and he liked the work that we'd done at the aerospace industry with GE machines, he was willing to take a chance with me.

Yost: Okay. And Van Vlear came on from the beginning but wouldn't be considered a founder, is that correct?

Schmidt: Verne was our first employee.

Yost: Okay.

Schmidt: And in the sense of being there early, he certainly was a founder. But he was an excellent programmer; fastest programmer I've ever known. [Laughs] He also could take Morse code and carry on a conversation at the same time. So he was a fascinating guy. He was a heavy contributor but basically I was the director of the technical side and he worked for me all the way through that whole period.

Yost: So the plan was to buy a GE system, but that didn't work.

Schmidt: Right.

Yost: So tell me how you came to address that situation and find an alternate course.

Schmidt: Okay. I don't remember exactly how we came to know about the system at Berkeley, but we found out about it and talked to some of the key guys there, the technicians. We did a lot of visits to them to figure out exactly how their system worked and if we could use it for what we wanted to do as a commercial enterprise. Turned out we could, and we got into a conversation with Scientific Data Systems, which built the computers that they were using at that time. So our computers became SDS computers; and that's what we bought and used for our business. Later on we used the PDP-10, which was the last one that we had before I left there. So it evolved. We ended up with a big room full of computers with a false floor and all that stuff, which, at that time, was state-of-the-art computer facilities. And that's how it all evolved.

Yost: I understand the system at Berkeley was only capable initially of having two simultaneous users.

Schmidt: Well, we worked very closely with them to develop the operating system that we sold. And it was based on the Berkeley system, but obviously, we added a lot to it.

Yost: Who did you see as your target customer base in the early days?

Schmidt: Well, we sold the computer; we sold the service to a lot of engineers. That was because we had the history with the Dartmouth system. And we also had a lot of different kinds of business that wanted it. We saw ourselves as more the utility concept that you were mentioning, than focusing on any one business.

Yost: Were these larger businesses?

Schmidt: Larger businesses, yes. There were a few small ones, but most of them were pretty large.

Yost: And so a number of these companies had — I saw that Lockheed was an early customer — had substantial computer facilities but they wanted their engineers to be able to operate in a time-sharing environment?

Schmidt: Yes, exactly. I mean it was a huge step forward for the guys that no longer had to turn in their work and have them put on punch cards; and then read through; and then inputting the punch card machine into a computer and put it all on magnetic tape, and all that stuff. That slogan, “a computer at your fingertips” was very effective.

Yost: Tom O’Rourke was president and you were head of the technical division?

Schmidt: I was the vice president in charge of the technology. I don’t remember what title I actually had at that time. [Laughs]

Yost: Do you happen to recall what title Van Vlear had?

Schmidt: He was a senior programmer, yes, as I recall. I think that's what we called him. He was a steadfast guy throughout that whole period.

Yost: Can you discuss Tom O'Rourke's leadership and management style?

Schmidt: Well, I can, sort of. I mean, he was kind of a charming Irishman; he was a salesman by nature. He worked for GE for quite a while and at the time he was in GE, GE had formed their computer division. And then it changed hands, so the management changed twice while I was there and he was part of one of those management hierarchies. But what happened was they had brought in some people, I think it was from Univac and the other company I don't recall right off hand. But the thing was, the management was always pretty well screwed up because the people from different companies came in, and there was some tension, let's call it, between the different management styles of the people. And Tom was a traditional sales person; salesman; good salesman. As a manager he was pretty effective, too. So I give him a lot of credit. If I had had to run that company by myself it wouldn't have made it. [Laughs]

Yost: I understand that before you developed the network, you expanded to several facilities — to a facility in the Los Angeles area, New Jersey, and Paris.

Schmidt: Right.

Yost: Can you tell me how that came about and what the strategy for the company was in those days?

Schmidt: Well, it was more or less an organic growth situation, for the most part. Ray Wakeman was the guy that was in charge of the Los Angeles facility. We had another fellow — I forget his name — who was in New Jersey. We had a center there. Those were the three main centers at the time I was there. We also acquired some business by buying out one of the companies that sold to M.I.T.; I forget the name offhand [pause]

Yost: Was it Dial Data?

Schmidt: Yes, it was Dial Data. Right. And they became our customer. And so there wasn't anything particularly different about it. It was just that in those days because the networks and the costs and all that, it made sense to have centers in geographic areas. Nowadays, of course, over the internet, we can serve all kinds of places with virtually no cost equivalent to the telephone cost we did in those days. But that was the reason for the geographic expansion.

Yost: Do you recall anything about the financial side in those early years; how long it took to become profitable?

Schmidt: Well, to you say how long it took to become profitable is difficult. George Quist ran the SBIC for Bank of America. He left that to form the company Hamrick & Quist. They became our main venture capital supplier, so to speak. And, of course, during the early years they were the ones that were involved in all of the early growth things; the sellout to McDonnell Douglas, and all that. But that's where the money came from. When we began; just before we sold to McDonnell Douglas the company was pretty profitable. And we sold at a pretty good price; we thought it was a good price in those days. You know, I wasn't much of a numbers cruncher, as far as the accounting side goes, in those days, but we pretty much made a profit two or three years into the business.

Yost: And in those first three or four years, who did you see as your primary competitors?

Schmidt: Well, GE was still in the game. There was a company that was using the same, the SDS computer that also was a time-sharing company. Rick...do you remember?

Yost: Rick Crandall and ComSharing?

Schmidt: Yes, ComShare; that's right. They were kind of a semi partner and then later competitor.

Yost: I guess in the early days, when there was a partnering effort in working on the operating system for the 940, it was seen as a local business and so it probably wasn't

seen as competitors competing because they were in Michigan and you were in California? But that changed in the networking days?

Schmidt: That's true. And, of course, at that time, it makes sense to be geographically separate. We never took customers away from each other, in those days. Well, that's not true; I mean, with some national companies, we did wrestle with them, but not the local ones.

Yost: Now, I heard from Ann Hardy that a friend of the Hardys, LaRoy Tymes, who was at Livermore in 1966, pitched the idea of a network to you. Can you talk about your initial reaction to that?

Schmidt: [Laughs] Well, we knew about the ARPA project. I think Norm told us about that. Norm knew LaRoy and had talked to us quite a bit. I had a great deal of respect for Norm and so when the idea came forth and we realized how deep into it LaRoy had been, it would seem pretty natural to do and it was a way to eliminate communication costs, which would allow us to expand geographically without building all these centers. It was a very welcome idea and we pursued it with vigor.

Yost: So with that it could just be a tiny sales office with a mini computer in the closet, and basically, you could expand without these expensive 940 centers.

Schmidt: Right. It's the birth of the internet.

Yost: Can you describe the early marketing and sales organization for the company?

How did you get customers?

Schmidt: I think it was pretty much traditional sales. We were selling a technically advanced product and we had guys like John Jerrehian and Ray Wakeman, and Ron Braniff, and some other people whose names I don't recall right offhand. But we had a pretty good size sales force and it was traditional selling. It wasn't anything that unusual, aside from the fact it was an attractive technology. They operated like salesmen operate today.

Yost: I understand in 1967, Harvard became a customer. They acquired a 940 system and they had certain specifications they wanted met; and other companies weren't able to meet them and Tymshare was. Do you recall what impact that contract had?

Schmidt: No, I really don't. I remember that that situation did exist but I don't have a very good recollection of what that amounted to.

Yost: Okay. What did you see as the greatest technical challenges that Tymshare faced in the company's first half decade?

Schmidt: First half decade? I was only with them, as I recall, it was about seven years when I left. So during that time we did a lot of development. We invented SuperBASIC,

because Dartmouth BASIC didn't quite cut it and was not up to snuff where we wanted to be. And we did quite a few different development projects and we had pretty good success with them. It was just a kind of a classical growing business, with the exception, as I said before, the attraction by the technology. Otherwise, I can't think of anything that would have made a huge difference.

Yost: In the time you were at Tymshare, can you discuss what went on in terms of planning strategy and what businesses Tymshare sought as potential or businesses they wanted to be in, in addition to just selling computer time?

Schmidt: No, you know, through the period that I was with Tymshare, it was pretty much time-sharing as we've been discussing it. The moving into other areas like TYMNET, forerunner of the internet stuff, that, of course, was big-time. The advent of the personal computer was brought to us by Hamrick & Quist. And they asked us what we thought of it; and I was involved in that. And I made a judgment that I couldn't figure out why anybody would want to sell that kind of computer so cheap. [Laughs] So they weren't very impressed with my analysis; so we never got into that business.

Yost: So in the first seven years, were there discussions about providing applications and either — not necessarily businesses — but things that could be bundled and that would differentiate and make customers choose Tymshare over other time-sharing companies, besides just computer time?

Schmidt: Yes, that's a good point. We did try to identify potential business for particular applications and we had some success at that. But I didn't do a lot of that myself, but we did; it was important. I felt at the time that that was a very important thing to do and in a very fundamental way, grow the business. What happened, of course, is after a few years I ended up being in one of those businesses myself, which I am today. [Laughs] But yes, I thought it was a huge opportunity to serve all kinds of different businesses; not just engineering, education, and some of the things that we were already doing.

Yost: Now, the TYMNET project had started before you left, but was it up and running?

Schmidt: Yes, it was. We hadn't gotten very far with it, but it was up and running, yes.

Yost: So what year would it have been around 1970 that you [left]?

Schmidt: Must have been late 1960s or 1970; I left in 1970. Yes.

Yost: And what impact did that have on Tymshare, initially, to have the network up and running?

Schmidt: Well, it did what the internet does today; it makes it possible to deal from one location geographically all over the place. Today, the company I have here, we do business in 30 companies overseas. We do it all over the United States. Certainly we're in

Canada; we're in Mexico. None of that would be possible because this is our only installation right here. And that was just the tip of the iceberg, as it turns out.

Yost: Do you happen to recall the year that Tymshare went public? That was after you left?

Schmidt: Shortly before I left the company, so it was late 1960s; I don't know, 1969? Somewhere between 1968 and 1970 somewhere when it actually went public.

Yost: And was it on the NASDAQ? Over the counter?

Schmidt: It seemed to me like we got bought out by; I just don't remember much about that. We probably were over the counter.

Yost: What led you to decide to leave Tymshare and what did you do following?

Schmidt: Well, I was very interested in the; one of the people that we got to know was an engineering company in — jeez, it's really fuzzy now in my memory — but they wanted to build a computer and I thought that would be a lot of fun to do that. So we started Mascor. And Mascor's timing, starting up Mascor, was very bad. The venture capital market completely collapsed.

Yost: 1969 was a boom time and the following year [pause]

Schmidt: 1970 was terrible. Yes.

Yost: I understand Tymshare, at that time, had to lay some people off.

Schmidt: Yes. We had raised \$20 million to go into Mascor with this engineering company and we expected to do a lot more, but the venture capital people pulled in their horns and the crew that I'd hired from IBM went into another company financed by the Chinese, and with the Japanese; anyway, it was an Asian company. And they started up a company and we couldn't make it, and we were closing our doors, so they all left and went to that company as a group. And we just shut the doors. Perfect bad timing.

[Laughs] We couldn't have picked a worse time.

Yost: With the first acquisitions, such as Dial Data, do you recall what Tymshare was looking for in targeting certain companies to acquire?

Schmidt: Well, it was an opportunity to acquire a company that we could absorb into our infrastructure, save money in doing it, and make a profit. And they weren't doing that; so it was just a traditional purchasing market share is what it was.

Yost: And you were just looking at the universe of companies that were using 940s, is that right?

Schmidt: Yes. We did acquire more than one company in that period. I don't remember who they all were; Dial Data was one of them. But it was buying market share because if we could find a company that wasn't doing too well and we could incorporate it into Tymshare then we could improve the efficiency of the operation and make money on it.

Yost: And are there any topics with Tymshare that you feel are important to understanding the company and how it evolved in those early years, that I haven't asked about?

Schmidt: Well, all I could say is we had a clear vision of what we wanted to do; we had some really good people; we had a good product; and everybody worked really hard. [Laughs] I can't give you any special characteristics or anything that suddenly made it successful except that Norm Hardy, and Ann Hardy, and LaRoy, and Verne Van Vlear, and John Jerrehian, and Ron Braniff are all good people. They did a good job.

Yost: Could you perhaps go through and talk about each of them for a moment, and the role that they played, and kind of what they brought to the table to help Tymshare succeed?

Schmidt: Sure. And I could probably start with the technical people. We hired Ann and then Norm Hardy. Norm was the sharpest technical guy we had. He really had a lot of depth and he was very creative; and he played the piano well [laughs]. But Norm wasn't a manager kind of a guy. He worked well with LaRoy, and Van Vlear, and others, Arden

Scott. Ann was a manager, an excellent technical manager, as well as being an excellent technical person herself. So she kind of took over the management role and helped people keep their act together. Verne is what I mentioned; if you gave him the problem and you'd defined it well, he was faster than anybody I ever met at programming. And Arden Scott had a strong background; he was a good all around technical manager and technical person, too. And he worked with me and — Verne and I — on an operating system we developed for GE, before I left GE, so we knew his capabilities. I didn't know Ron Braniff very well. He's a nice guy; he's an effective sales person. I got to know John Jerrehian very well, [and] his family; and we had some fairly active social life together. He used to visit our house we bought down there and we had a lot of good times together. [He] had nice children. Tom, and I forget Tom's wife's name, but she was a lovely person, too. We had some social interaction with them but not a lot. Who else did we mention?

Yost: That was pretty much the early team.

Schmidt: Yes, it was the early team. And mostly the later team, as well, because most of them were there when I left. So, yes.

Yost: Okay. Well, thank you very much. This has been most helpful.

Schmidt: You're welcome, Jeff. Sorry my memory isn't better than it is, but [laughs] those are the memorable things.