Oral History of Jeffery Stein

Interviewed by:
Burton Grad

Recorded: June 4, 2009
Mountain View, California

CHM Reference number: X5385.2009

Table of Contents

Jeffery Stein

Conducted by Software Industry Special Interest Group

Abstract: Jeffery Stein has been an innovative and creative participant in the computer software and services industry with significant technical and business contributions. He worked in San Francisco most of the time. He also worked in Europe for CEIR. In 1960 he started as a machine room operator and became a self-taught programmer. While working for CEIR in 1962, he created a report generator for the IBM 1401 that led to the creation of the company ADPAC [by Peter Harris]. From 1963 to 1965 he worked for CEIR in London and Paris.

Returning to California in 1965 he worked for several professional services organizations and during that time he was responsible for the development of an online transaction processing application. In 1970 he formed On-Line Business Systems, an online transaction data services company, the first of its kind to offer real time business applications with an original and unusual business model. The company was self-financed and its primary service offering was online transaction processing using IBM's CICS. Multiple additional streams of revenue were developed to take advantage of unused computer time. On-Line Business Systems completed a major acquisition of OSI in 1980. The company was then sold in 1989. Jeffery Stein is currently Chairman of the Board of the IT History Society which he founded.

Burton Grad: This oral history interview of Jeffery D. Stein is being conducted on June 4th, 2009, at the Computer History Museum in Mountain View, California. This interview is part of a series of oral histories sponsored by the Software Industry Special Interest Group, which is part of the Computer History Museum. I am Burton Grad, co-chair of SI SIG and I'll be interviewing Jeffery Stein.

We normally start all these interviews with some personal history; please tell us where you were born and a little bit about your parents as a start.

Early Years

Jeffery Stein: Burt, good to see you again. This is the third day in a row here [in Mountain View, CA]. I was born in Toledo, Ohio, January 31st, 1941, and my mother's name was Pauline. She just passed away a week and a half ago, at age 91 and my dad, Sam, has been gone 26 years now.

Grad: What did they do?

Stein: Mom was more or less a housewife and Dad was in the gaming business and also had a pawn shop.

Grad: What's the gaming business?

Stein: Well, back in the 1940s and 1950s, mainly the 1940s, the auto industry ran the world. Everything was dependent upon the auto industry and here we are in 2009 and the American auto industry is now a whimper. But the US economy, all the business, everything, pivoted around the automobile industry and Detroit was really very close to Toledo. It was about 40, 45 minutes away. In Detroit, you had auto manufacturers, but really what they were was assemblers. They assembled cars. The little doorknob, some guy down the street put that together; the glass, the chrome strip on the left side and the headlight, the tire, the hubcap, the little wire that went from the spark plug over there, it was all done by assemblers and the assemblers were pretty much uneducated. They had a lot of money. Many could barely speak English properly and this is before jet planes. They loved action. They loved to gamble because they had a lot of money. The sheriff or the local authorities in Michigan weren't paid off but, in Toledo, they were paid off so there were a lot of gambling joints in Toledo.

Grad: It wasn't just numbers and stuff?

Stein: They had numbers, too, but these were slot machines, these were crap tables, blackjack, the whole thing. So my dad was involved in that and I remember we would go pick up my dad. The sheriff got paid off, Sheriff Hirsch who didn't get reelected. At that time, Bugsy Siegel was opening up Las Vegas. This was before air conditioning and so Las Vegas basically was a winter place to go. My mother didn't want to move to Las Vegas. She felt that gambling would corrupt the kids, being in that environment. So all of my dad's friends, his buddies, picked up and moved to Las Vegas to help Bugsy Siegel open up the gambling business. They didn't need to be trained, they were experts. They could show Bugsy Siegel what to do. Anyway, one summer in the very, very late 1940s, my dad gets a phone call and said, "Sammy, Sammy, you have to come out to California." And he says, "Well, what do you mean?" He says, "Well, there's this beautiful lake, it's high in the mountains, it's got snow on top and beautiful trees and this lake is so gorgeous. You cross into Nevada and then all these gambling joints are there. We go up there in the summertime, because Vegas are closed, and we work there in the summer. September, they close it down and we go back to Las Vegas and go to work." He says, "Come out and have a summer vacation." So, in 1950, we came out to Lake Tahoe and spent the entire summer as a family, my dad had action down at the local gambling joints and these are high class places, too. We had Nat King Cole, Spike Jones, Dean Martin and Jerry Lewis, Pearl Bailey, Frank Sinatra. It went on and on and on, the people we met. So we came out every other summer and, of course, as that's going on, I grew up. Why do I want to live in Ohio, leave beautiful California?

Grad: He continued with his business, though, back in Toledo?

Stein: He had a pawn shop there in the wintertime, the nine months. We only went every other year. My grandfather ran the pawn shop when he was away.

Grad: So your grandfather was still alive at that point, then?

Stein: Yes. My grandfather passed on, on my mother's side, about probably 1971.

Grad: Were your father and mother born in the United States?

Stein: My father was two years old when he came over from Russia. My mother was born in Toledo. My grandfather on my mother's side was born in Russia. My grandfather on my father's side was born in Russia.

Grad: So you have a Russian heritage?

Stein: Yes, they were Russian Jews, right.

Grad: What part of Russia?

Stein: My father came from Riga, which is really not Russia, it's Latvia. I don’t know where my other grandparents came from.

Grad: Okay. You went to high school. Was all your schooling done in Toledo?

Stein: I went to the same high school my sister went to. Everything was in Toledo.

Grad: Any special school experiences?

Stein: Well, by the way, I did have a paper route. I worked as a kid because I just liked to work. I had a paper route and I worked in a discount store as a clerk.

Grad: You couldn't work in your father's business?

Stein: No. I did help him out a little bit. These were all weekend jobs. Also, I fried hamburgers so I could buy a car. I had money to do that.

Grad: Were you a good student?

Stein: I was average or a little bit above average--it depended on the course. In accounting, bookkeeping, I got straight A's. In economics, I got straight A's; in English I flunked or got Ds in. In artistic courses, I didn't do very well. It was just what I was interested in. I was an okay student.

Grad: Sports? Any other activities?

Stein: No, no. Jewish boys didn't do sports.

Grad: Any other outside activities besides working?

Stein: Yes, nothing really special to remember. But I liked to tinker with things.

Grad: Mechanically?

Stein: I liked to take things apart, put them back together, fix things.

Grad: Can you give me some examples? Was it electronic? Radio? Mechanical?

Stein: Mechanical things.

Grad: You were interested in cars?

Stein: Yes. I was interested in cars but not in a big way. I could see a piece of a car, a trim, and I could tell you which year it came from.

Grad: Ah, the memory thing. One thing historians are interested in is how people got into the computer field and I think yours is a little different background than some.

Stein: But, anyway, I took good care of my cars; even though some of them were clunkers, they were always clean. You could go out to my car right now, it's clean. It's taken care of.

Grad: You're going to school there in Toledo. This is the 1940s and 1950s. Now, the end of the 1950s, you go to university in Toledo?

Initial Interest in Computers

Stein: I went to Toledo University and I lived at home. I didn't like it! I never really cared that much so I decided I would go to Ohio State but I didn't have a lot of money to do that. My parents really stretched themselves so I could go to Ohio State and I remember that on television the presidential election was going on and I was watching on a black and white TV. They were using this electronic brain and it could figure anything out. I said, geez, that's kind of interesting? I felt, I want to learn something about this. I didn't know what it was. I had no idea, what it was. I just thought it was something magical. I'm waiting on tables, in fraternity houses, because I needed the money, and wasn't doing that well in school.

Grad: This is at Ohio State?

Stein: Ohio State, right. And there was a job posted in the Ohio State Lantern, which was the local newspaper. It was for a computer operator. You had to be a junior/senior, you had to have an A/B average, you had to have engineering, statistical, and mathematics background. It was at Battelle Memorial Institute, just a part-time job. I went there and I had no idea. By the way, even before that, I went to the head of the computer sciences department, they had an IBM 709 there, which I still didn't understand, and I had no idea what I was talking about, to see if I could get a job there. I didn't have any experience and, I was just a young punk. I had a C/D average and I was a sort of late freshman/early sophomore and I had accounting and statistical background, mainly accounting. So the interviewer at Battelle said that I'm not qualified, I needed experience. So I talked more with him and I said, "Look, I really want this job. I really do." I was going to be a computer operator on an IBM 650. I said, "I really want this job" and he said, "Well, we have other people." So it came down to two people. It was myself and this other guy. The other guy had all the qualifications and he commuted, he lived a little bit outside of Columbus. He was married and he wanted it for the money. I wanted it for the education. I told him, I said, "I really want this job and I'll do a good job. In fact, I'll do it for nothing and, if you push me hard enough, I'll pay you because I really want this job." They gave me the job at a dollar and a half an hour. Then I became hooked because I would come in about 6:00/7:00 at night, three days a week. I'd run this stuff until, like, about 11:30/12:00 at night on the computer; the last thing was to turn it off. They said, "You can play with the computer." So I played with the computer all night long?

Grad: What kind of things did you do?

Stein: Well, I just learned the instruction set but I didn't know how to program. I learned how to operate the computer. I could make the tapes go. I could make it read cards; I could do some simple calculations. I wrote in machine language.

Grad: It was all self taught?

Stein: It wasn't anything sophisticated at all.

Grad: Did you take any courses at school that related to this?

Stein: Nothing. Zero. There weren't any.

Grad: Did you graduate from Ohio State?

Stein: No, I didn't. I got so interested in computers. I flunked out of school because I was fooling around with this and an IBM salesman came along, who was the IBM salesman for Battelle, and said, "There's a full-time job at Wesleyan University Press and they do the printing of the My Weekly Reader." That was a big deal in those days, My Weekly Reader. Every public school in the country used it.

Grad: I remember it.

First Computer Related Job

Stein: It was a subscription accounting system. We had a database of all the schools and their classes, and how many papers they got in each class and then we would do the updating of the database. Call it the database; they were just files then, flat files on tape. And then there was an addressograph or mimeograph that would print out a dot matrix tape that would go on the package with the address and the number. I ran that at night, I ran those updates at night on an IBM 650. There might have been 12 tape drives, maybe 16.

Grad: Were you employed by Wesleyan?

Stein: Yes.

Grad: You were still in school?

Stein: No, no, I was out of school. This was my first full-time job.

Stein: All right. So here is the operative thing right here. Okay. This is an IBM 650, it's a vacuum tube computer, cost millions of dollars, this computer. Because it had tape drives, it had core memory off to the side, it had a 4K drum, it was an expensive computer. I think it maybe was a million and a half dollars.

Grad: Wow!

Stein: I'm working from midnight to eight in the morning running this computer and this was a pretty good-sized computer and this was a big deal for IBM. They also had 709s

Grad: You must have had the RAMAC on that 650. If you had that kind of price, they probably had the RAMAC.

Stein: We had a RAMAC and we had core, also. Yes, we had printers on there, we had card readers, we had card punches, I mean, it was a lot of stuff; it was a fully loaded deal.

Grad: Okay. Go ahead.

Stein: The transistor computers were just starting to peek in a little, just a teeny bit. They were just starting to be delivered: the 1401, the 1410. I got off work at 8:00 AM and I was just a little bit on the outskirts of Columbus, not too far. In the center of Columbus was the IBM office and the IBM Ed Center. Every morning, I was at the Ed Center at 9:00 AM. I took every single course that you could ever imagine at the Ed Center. I took one on key punching, on the 026, and how to run a tab machine. I knew some of those things but I took them anyway. Then they had the 1401 programming course and they had more 650 stuff.

Grad: And you were eligible for this because you were working for Wesleyan?

Stein: Yes, because I was an employee of Wesleyan University Press and at the IBM Ed Center, if you were a customer, you could take any of these courses for free.

Grad: What year are we talking about now?

Stein: That would be 1960.

Grad: Okay. Let's move ahead.

California

Stein: There were consultants coming in from CEIR at Wesleyan and they were going to do some things to make things a lot better for Wesleyan. I was telling them about what to do with the computer. They were bringing in a 1401 and I showed them how to use it. They didn't know how to use a 1401 and I knew how to use it. There was this gal in Toledo and I would go see her a lot. She came from a very prominent Jewish family and my parents wanted me to marry her. Her parents wanted me to marry her, too. It was a very, very, very nice family. So I drifted back to Toledo and I was probably going to going to get married to her and probably end up in her father's business, which was Pepsi-Cola distribution. I was in my early 20s and I said,

I don't know if I want to do this. We dated a lot. We went out on a date and went to this movie theater and we saw Bird Man of Alcatraz. We got out of the movie theater and I ran into this guy who had gone to California. I had started this whole trend of all my friends going to California because I ended up running a big resort; I was the assistant manager of this resort. All my college friends would come out and work there in the summertime.

Grad: In Tahoe?

Stein: In Tahoe. Because, remember, I was coming out in the summer. We were reminiscing about California and how nice it was and one thing led to another so that we both got in a car within three weeks and we moved to California and I left her behind.

Grad: Left your jobs behind and everything.

Stein: Everything. We went to California. We got an apartment together He wasn't employable. I was employable. I could go to any city that had a quarter of a million people or more in it and I could get a job in a day, maybe a half a day, because there were very, very few skilled computer people around. So, I got a job, he didn't get a job. He didn't last very long in California.

Grad: Who'd you get the job with?

Stein: It was called R and S. It was a tabulating company that was just getting into computers. They were out of Chicago, I think.

Grad: Go ahead.

CEIR

Stein: I had never really programmed for money. I programmed at R and S on the 1401 and then some Burroughs programming. Then some of the people at CEIR that I had met in Ohio actually were from California so they offered me a job there. I got a job at CEIR and started working on a 7090.

Grad: So CEIR was your next employment?

Grad: Since they were using 709s and 7090s, that's why the 1401 was a little different for most of the people there.

Stein: Right, right. Well, they had 1401s there, too, for printing and I/O. They would share the 7090 with Kaiser.

Grad: Where in California were you?

Stein: San Francisco. Always in San Francisco.

Grad: And we're about at 1961?

Stein: 1961. Right. Yes.

Grad: All right, let's move on. So you weren't with R and S very long?

Stein: I was there for about a year.

Grad: Then with CEIR?

Stein: Right, right.

Grad: Another year or so with them?

Stein: A year plus. So this is what happened. I was going out with this lovely, lovely gal, really lovely gal, Dagmar, but her nickname was Sandy; she was a California girl but with a Swedish background, and we decided one day that it'd be nice to go live in Europe. So I said, "Fine, I can get a job pretty easily." So I wrote a letter to the London office of CEIR which was basically independently run. They didn't really talk to each other, but there was some relationship

Grad: Dr Robinson was the head of the company?

Stein: That's right. DR H. R. W. Robinson. I met him, too. Well, the Vietnam War was going on and I kept very, very close touch with the Toledo draft board since I wanted to know when my number was coming up. So I wrote this letter to London and I kept in touch with the draft board. The lady from the draft board called me from Toledo...it was a long distance call by the way. Back in the 1960s, that was a long distance call; you didn't pick up your phone like that and call anyone. She said, "Your number's coming up" so I enlisted. I enlisted because I wanted more control of what my destiny would be. If you were drafted, you didn't have any control. You had a little bit more control if you enlisted and there were some other features. This would be 1963.

Grad: Just the beginning of the Vietnam War then. It was very early.

Stein: She called, and I enlisted. I went home to my apartment on Sacramento Street in San Francisco and there are two letters in the box. Two! One was from London and one was from the Selective Service. So which one do I open first? I opened the one from the Selective Service and I had a bad hernia at that time and they gave me a 1Y status. I said, okay, pretty good. I opened the second letter. I had only written one letter to CEIR in London. They never called anyone and they never saw me; I never filled out an application. They gave me a job offer, all my expenses paid to move to London. They gave me an amazing salary and an amazing position.

Grad: So?

Stein: So I wrote them a letter back and I said, "I accept," and they said, "Fine, would you fill out the application?" So I filled out the application and they said, "Well, Mr. Stein, we still really want you to come but we didn't realize how young you were. We didn't realize your experience level but mainly your age and we can't offer you as much. We're going to cut the salary back." So they cut the salary back 25%. So I decided to still take the job. But the girlfriend now says that she's not going to go to Europe with me unless we get married. And I said, "Well, I'm not really ready to get married? I really love you, it's fun. Look, let's go together like we had planned." She said, "No, I can't do that." So I said, "Fine, good-bye." I left and took a boat.

Grad: So you left something hanging out here. You said you were going to enlist.

Stein: I enlisted but they didn't accept me.

Grad: So you enlisted but were not accepted because of your hernia?

Stein: Right.

Grad: So you're going to London.

<u>London</u>

Stein: I went to London.

Grad: And this is 1963, somewhere in there?

Stein: Yes. 1963 I think is when I arrived.

Grad: And you're working for CEIR still.

Stein: CEIR. In Europe I found the company very scientific oriented and less business oriented in terms of the processing. While in San Francisco, I got my exposure to doing COBOL programs on a 7090 with IBSYS 8. I created a program that became a report generator on the 1401. We did an insurance system. They have all these reports, lots and lots and lots of reports but the reports are all kind of the same. Maybe you would tabulate on this column instead of that one and you would sort it a different way or this would be by month or week or whatever. But it's all the same reports.

Grad: You had been doing actually programming there at CEIR, is that correct?

Stein: I did programming at R and S, too.

Grad: So this is before the Fargo or the equivalent report generators came out from IBM?

Stein: I took Fargo. It was there. And I took that and I made it tape oriented and I called it Misprint. Remember ADPAC?

Grad: Yes.

Stein: ADPAC came from Misprint because Pete Harris who was my boss at CEIR and, when I went to Europe, he took what I did at CEIR in San Francisco and created ADPAC.

Grad: Would he agree to that statement?

Stein: He would agree to it.

Grad: He's kept his own company all these years.

Stein: All these years. Yes. Anyway, that's another story.

Grad: You've gone to London and you're working over there. How long were you there?

Stein: I was there almost exactly one year.

Grad: And what kind of things were you working on?

Stein: The main thing I was doing is that, since they were not business oriented they wanted me to create a mutual fund shareholder system which they called unit trust over there. A piece of cake, it really was. So I got the system up. They wanted it on a.1401. Yes. And I showed the CEIR manager what it was going to be, that they would have to have a shift and a half of a 1401 running all week long just to run this application and maybe more. And I said, "Look, I could do most of the processing on a 7090 and I could do it in probably less than an hour a day and we'll just do the input and output on the 1401 and everyone will be happy." "Oh, no, no, you can't do that." And they had to deal with a customer which was in Cardiff, Wales. The customer was Julian Hodge; it was his company. They took a crap shoot on me and I did it on a 7090 and, all of a sudden, business and data processing were being done on the 7090 and a 1401.

Grad: You had COBOL on the 7090 by that point?

Stein: Oh, Yes, it was running COBOL and I had a team of people working for me, a team of about five or six people.

Grad: Was that the first management responsibility you had?

Stein: Yes. That's right. But I was an American and everybody kind of looked up to me; and while Europe is ahead on scientific processing they were behind on business. America was ahead on business but behind on scientific in a way. The project starts to come to fruition. It started working so I went to my boss and I said, "Look, here's my original letter of employment. Here is my other letter, what happened." And I said, "Look, I'm doing the work that you expected me to do and more and I want the original letter plus." And they said fine. So I got the money that they had taken away from me.

Grad: Okay. What happens after that? Where'd you go next?

Geneva

Stein: What happened is that Bernie Cornfield was getting really, really, really big in Europe, really big in Geneva and one by one by one, the employees in the CEIR London office were being “bought” to go to Geneva. When they went there, they told Bernie about me because I was the mutual fund expert and that I could do some big stuff. So Bernie sends an emissary to London to interview me and wants me to come to Geneva and they fly me to Geneva. I meet with Bernie. They made me an offer I couldn't refuse so I went to Geneva.

Grad: What was the company's name?

Stein: I think it was ISI or something like that.

Grad: Go ahead.

Stein: Yes, but it was a legend. He was being written up all over the place. He was just starting to really go up like that. On my way out the door of leaving London, I had met this lovely, lovely Swedish girl <laughs> and, I was in my 20s. I wasn't even 25. I met her and I kept in contact with her and she came over to Geneva and met me and we had this big romance and we got engaged. I was going to move to Paris and be with her and then we would get married. Bernie found out and it was a crazy place. They had people killing themselves. They had alcoholics? My first introduction, really, to homosexuals was there and, a lot of ex patriots. It was a very edgy place to work. He had Arthur Anderson in there doing things. So Bernie calls me up and, "Where are you?" I said, "I'm at the data center." He drives over, again, ISI is getting big, okay? He comes to the data center. He says, "I will give you anything you want. I want you to stay." I said, "Bernie, I've really made up my mind." "Anything?" "No." So I go to Paris and connect up with CEIR and I'm there for three months on an assignment working on an 1107, 1108, and trying to help the French railway understand COBOL. Then the personal relationship falls apart and I take a three month ride on a motorcycle around Europe before I go back to San Francisco.

Grad: So you never did follow up with Bernie?

Stein: Well, I met Bernie again later. By the way, he was just really starting to go like that and, after I left, it was, almost straight up. I would have been a multi-millionaire many times over if I had stayed.

Grad: You're back in San Francisco. Now what happens?

San Francisco

Stein: Okay. So I arrive there in December of 1965. I'm doing some interviewing. There was a startup software company doing application programming and it was really hooked into IBM a lot. I became the first full-time employee. He had a lot of part-timers, a lot of ex-IBMers like housewives who wanted to work part-time.

Grad: What was the name of the company?

Stein: Western Operations. They did the first MasterCard credit card billing system and it was a failure. It was a local company.

Grad: How long were you there?

Stein: I was there until 1967.

Grad: Then what happens?

Stein: I was in my mid 20s and this guy, he was South African and very, very smart but he was very principled and didn't understand business that well. He kept on bringing in people to try to run the business and I said, "Look, I can run this business." He wouldn't give me the chance because I didn't have the "experience" and I wasn't old enough. It was a big problem, my age. He ran the company into the ground and I quit. He brought in all these senior guys from IBM. They were all washed up. It just became like this and it just shrunk like that. And so I went to work for Computer Sciences Corporation.

Computer Sciences Corporation

Grad: They were a successful company by then.

Stein: I think CSC was formed in the early 1960s.

Grad: Yes. Fletcher Jones, Roy Nutt and Bob Patrick were the original three people who started the company in 1959.

Stein: Right. And Al Hoover came in relatively early.

Grad: Well, he wasn't one of the three founders. Okay. So you go to work for them. What kind of things were you doing for CSC?

Stein: I was working out of their Los Altos office and I was doing systems analysis, consulting work.

Grad: Who were your clients?

Stein: Bechtel, I did a job for Governor Reagan, and I got a license plate from Governor Reagan for doing that. So I'm working with this other guy there. He was really an Italian guy, Petone, but he went by Pedley; his father changed his name. He was older than me and he

came from Lockheed. He was a really good writer and I wasn't a good writer and I was working for him.

So anyway we get a big job at Bechtel. Bechtel had the data processing department under the guy who had administration and the mail room was on the same level for Bechtel Corporation. Billion dollar company, almost a billion, and that's where the data processing was. It was run by this guy named Schultz and so they brought us in to do a management study. I did all the work. I did all the interviewing. I checked, and I came up with a recommendation and then, at the same time, we were opening up a San Francisco branch for Computer Sciences to get more business in San Francisco from the Los Altos office. Anyway, another guy on the project went to his boss and said I was a sloughing off and he was doing all the work and he's the one getting everything done and they got to get rid of me. It was a play for him to take over the San Francisco office and advance his career because, basically, I was going to get the office. So they called me down to San Antonio Road and fired me. I said, "Foster, you got to be crazy. Everything is the opposite. I'm the one doing all the work." "Oh, no" and he had it all politically set up and I was fighting City Hall. I mean, I got screwed, I really did.

Grad: So you left Computer Sciences?

Greyhound Computer Leasing

Stein: I left with no plans. So, anyway, just to close that chapter on that book, Foster Pedley, the manager of the CSC office, he called me six months later and said, "I have an apology. You were right. You were absolutely right. I'm really, really sorry this happened" and he fired the other guy. The other guy was out of work for years? But, anyway, it worked out really well.

Stein: Some of these things, too, are very pivotal things.

Grad: Yes, you've left CSC, now what happens next?

Stein: Okay, I got a phone call from someone who I knew at CEIR and he said he's in charge of trying to figure out how to build a data center in San Francisco with IBM Computer equipment that came off lease They knew they weren't going to lease it and so they put it in a data center and they were going to try putting this off lease returned equipment in a data center.

Grad: Let's stop you. This is Greyhound?

Stein: Greyhound, Yes.

Grad: Tell me what was the business they were in?

Stein: Okay. Well, there was a Greyhound Bus Company and then they had Greyhound Financial and then Greyhound Financial had a leasing business and then they had Greyhound Computer Leasing within the leasing business.

Grad: So they would get the computers from IBM and lease them to other people?

Stein: Right.

Grad: And why was that a possibility? Why was that a profitable business for anybody?

Stein: Leasing was a big deal.

Grad: Why?

Stein: The numbers made a lot of sense on paper because IBM was trying to turn equipment every four years and with the leasing Greyhound Leasing felt there was longer life in it, so they did their analysis over a six to eight year period.

Grad: So the difference was IBM's assumption as to what the valuable life would be to their pricing, so that Greyhound could buy at that price but they could lease with an assumption of a 6 – 8 year life

Stein: And IBM was really controlling the market and you couldn't really buy computers until then.-

Grad: By the late 1960s you could buy. They had a purchase plan and they were required by the government.

Stein: Well, we're in the late 1960s now so it's new.

Grad: Yes, so it's a new thing.

Stein: A new thing because IBM what they'd do is they would really, kind of, control the client to have a four year cycle for each machine that you would use.

Grad: So Greyhound, the view was, “Hey, I’ll lease it to you at less money than IBM would lease it to you and at the end of that four year lease, I, Greyhound, have the machine, what do I do with it?”

Stein: They have some machines. They either re-lease it or they got to do something with it, so their thought was to get a higher return on the asset was to open up data centers with the unleased equipment.

Grad: Once it came off lease, they couldn’t re-lease to the same people.

Stein: Yes, some of the equipment, not all of it.

Grad: But some they could do that, right?

Stein: Right. The San Francisco Data Center which was in this old building was going to be where the experiment would be located and I was in charge of application programming systems development. I was trying to create value added things to use on those computers in addition to just selling straight computer time. Pete Harris, by the way, was one of the customers buying time on it. That was my department. So then as I mentioned to you yesterday I took this junket from IBM in a prop plane with a bunch of other executives, must have been about 12; we flew up to Salem, Oregon from San Francisco Airport and went to the Department of Motor Vehicles for the state of Oregon and they had a 360/50 with lots of tape drives and a lot of data cells and 70 2260 terminals running the DMV. The equipment took care of all their paperwork, all their file maintenance. I was really impressed because when the 360 was introduced there were these things you could add onto it which was the 2260 CRTs with a keyboard but you never saw them being used. But here it was really being used. So in the building where the data center was located in San Francisco two floors down was a small insurance company.

Grad: Oh, where you were located.

Stein: And the executive director was talking with me because I was partially in sales, too. I brought a lot of business in because I had a lot of contacts in San Francisco and I was having a great time and he wanted to start mechanizing his insurance organization for dental insurance and the only automation he had was printing the checks that went to the dentist. That’s all he had. Everything else was manual. He wanted to create a batch system I talked him into doing an online, real-time transaction processing claims system. Everyone thought he was crazy, people thought I was crazy and we talked about it.

Grad: How long had you been at Greyhound when you did this?

Stein: I was there four months.

Grad: But you had equipment already sitting there in the data center, so you were operational.

Stein: Oh, Yes.

Grad: Let's move ahead through that. So you designed, implemented this system. You had some people working for you?

Stein: Right, took about-- less than a year to get it installed.

Grad: So you had some people working for you doing the programming?

Stein: Oh, Yes, I had about 15, 20 people working for me.

Grad: A big operation then.

Stein: Right, Yes.

Grad: So were you managing the data center or just simply the application development in the data center?

Stein: I was managing the development staff and we had a data center manager and then we had a branch manager who ran the sales department. I brought in over half of the business that ran on the system

Grad: Did Greyhound consider this a successful experiment? Did they emulate it elsewhere?

Stein: Yes, they started building data centers elsewhere. They were going to use my techniques and the idea of adding a value added something to running on the Greyhound computers as opposed to just selling straight computer time.

Grad: So now you've joined Greyhound, you've worked with them, you spend that year or so working on the system that's now operational there.

Stein: And it becomes a major success. In fact, I had to go back to Chicago several times to explain this to the president of Greyhound Computer and Greyhound Financial because they were starting to make a big plan to go nationwide.

Grad: But this was a custom system for that one

Stein: Custom system but the concept worked and we were making a lot of money on it.

Grad: What system software were you using for your online transaction processing?

Transaction Processing

Stein: Well, it was a homegrown software package called Magic. It did simultaneous transaction processing and we did it on a 360/40.

Grad: Okay, that was a little early for CICS. My question, were you using any standard systems that were available to you?

Stein: No, that was all homegrown.

Grad: So you did your own transaction processing monitors and so forth?

Stein: Right, right.

Grad: In your own database?

Stein: Yes, well, we used BDAM. We would take the claim number or the dentist number and we would use those numbers and we'd go through a formula to generate the direct address where the record was.

Grad: How did you ensure the direct addresses were unique?

Stein: Because each one of the dentists had a unique number

Grad: So the algorithm guaranteed you had a unique address?

Stein: Yes.

Grad: Oh, interesting. That's not easy. Okay. Let's bring you to the end of your days at Greyhound then.

Stein: Okay. Well, anyway it was just a smashing success, everyone was really, really happy and then I was getting married and I was in Philadelphia getting married in Bryn Mawr. Three days before I got married the senior vice president of all this stuff, the data center division called me and said, "I want you to come to Chicago. We got to talk to you." And I said, "Well, I'm getting married." "So well, can you at least come in for the afternoon?" I went there and he said, "We want you to move to Chicago and build this whole thing out." So I said, "Well, okay," and so I commuted to Chicago and my wife said, "Why are you doing this?" I was making $30,000 a year. That was a lot of money then.

Grad: You were less than 30 years old.

On-Line Business Systems

Stein: Yes, I was 27 I think and I said to myself, "Why don't you just start your own company?" I was thinking about it because this online transaction service was so popular. So I quit on January 1st.

Grad: Of 1969?

Stein: I incorporated in 1969, but I quit January 1st of 1970. And CICS was announced in early 1969, late 1968 and that's how-- that's what I was going to use as the core of running the new company under CICS.

Grad: You have to thank me for CICS. That was my product.

Stein: It was your product? That came out of a power company.

Grad: Came out of the Commonwealth Edison in Chicago.

Stein: Customer Information Control System, right, Yes.

Grad: How did you know about it? Because of your work in Chicago or how did you know about CICS?

Stein: Well, when IBM announced it and started talking about it we wanted to dig into it because we were thinking maybe we would convert but then the light came on, I said, "This is my vehicle to start a business."

Grad: Terrific. So that was in your mind when you started the business. That's interesting.

Stein: In fact, I didn't even put in the business plan because I felt it was confidential information.

Grad: It was formally announced in June of 1969 but it had been available as a type two program somewhat earlier in late 1968.

Stein: Right, Yes, Yes.

Grad: Interesting. That's interesting. I've not heard that before. That's a good story.

Stein: And then because we're running CICS, we're running it for several organizations. We put a lot of stuff into CICS that a lot of people didn't have, a lot of calls and how to run multiple customers. I mean, we put a lot of money into it.

Grad: You started your business with CICS although you had not been using CICS at Greyhound. This was a new thing.

Stein: Right, we had not. We were looking at it on their dime.

Grad: Did you have a partner or anyone when you started the business?

Stein: I had a 25% partner who was working with me at Greyhound.

Grad: What was his name?

Stein: Keith Davis. Yes, nice guy.

Grad: And what were his skills?

Stein: Technical, very technical.

Grad: So you were both the business man as well as the systems man.

Stein: And accounting and finance and marketing and sales, Yes.

Grad: Was it just the two of you when you started the company?

Stein: It was just the two of us, right. Well, actually it was my wife and I and then he joined us a little later.

Grad: What role did she play in the business?

Stein: She basically helped with some administrative matters

Grad: She was not a programmer or tech?

Stein: No, no, not at all. She is a wonderful person.

Grad: Where were you locating the business? Was your office at home or what did you do?

Stein: We were at home and were trying to raise money and we got a computer terminal from CTC or that firm in Texas. They made these ASCII terminals, CRTs, Computer Terminal Corporation I think it was. They were in San Antonio and the rent on that terminal was more than the rent on our apartment. We dragged that around to give demos because we were creating the demos, emulating using a mainframe and doing an online plan-- online transaction processing. We were using Allen Babcock Time-Sharing Service to do the emulation.

Grad: Since you had no machine of your own, you used the Babcock equipment? You had this one terminal for demo?

Stein: For demo, right.

Grad: Who was your first customer?

Stein: Okay, well, the business plan was to locate in the Embarcadero Center in San Francisco which is Rockefeller Center west. It hadn't been built yet. We signed a lease for the entire 7th floor of the Embarcadero Center to have a data center there and that was where we were going to do with our business plan. This is 1970.

Grad: Not a good time.

Stein: It was a great time to do what we were doing but we couldn't raise any money. That was the only problem.

Grad: Yes, you had a recession.

Stein: Yes, but there was a lot of need for us because a lot of people really needed our services. Anyway, we didn't raise any money. We were still the first tenant in the Embarcadero Center. We got 600 square feet there. We moved into our office in the marina and so we started. We started doing contract services for B and A, Wells Fargo and PG&E and still looking for processing customers. We needed a data center and so what we did is that we went out and wrote letters to a lot of data centers to see if we could work out some kind of arrangement.

Financing

Grad: Starting the business, did you have any outside money other than what you, yourself, put in?

Stein: I didn't put anything in. Sweat, that's all. Nothing.

Grad: Well, you had to start to pay rent. You had to put in some cash.

Stein: But I had cash flow coming in

Grad: You had enough money coming in from the beginning to pay the rent there at Embarcadero?

Stein: Right, yes, but nothing else was being paid. I wasn't getting paid.

Grad: Were you doing any of the contract work yourself?

Stein: No, I wasn't. I was just doing the bookkeeping. I was doing sales. I was collecting the receivables.

Grad: So how quickly after you started did you have your first customers for professional services?

Stein: Probably about six, seven months because we'd given up the idea we were going to raise any money.

Grad: So over that first six, seven months you had no income?

Stein: No income at all.

Grad: When did you move into Embarcadero?

Stein: We moved in there probably about a year and a half after we started this.

Grad: Oh, so you didn't have out of pocket costs, okay.

Stein: Yes, we were bare bones.

Grad: Okay, that's what I was trying to understand, all right. Because I picture that, I said, "Oh, how they going to pay the rent in that place?" So the only thing you had to pay for was this demo box and your time on the Allen Babcock machine. Is that correct?

Stein: That was in a sense our only expense, Yes.

Grad: Okay. So you're running a thousand bucks a month or something like that?

Stein: Might have been less.

Grad: There is some money, though.

Stein: Yes, Yes.

Grad: Maybe well under $10,000, but there is some money.

Stein: Right, Yes, Yes, well, in fact my wife was working in an advertising agency and she was supporting the family, the two of us and any money and then we just, got by.

Business Concept

Grad: But your concept from the beginning was that you were going to do this online transaction processing?

Stein: We were going to offer online transaction processing services which are a great mousetrap for batch processing.

Grad: Through a data center.

Stein: Yes, through a data center for businesses that couldn't afford to do online real-time transaction processing themselves.

Grad: So by definition you were looking at relatively small companies?

Stein: No, they weren't small. They were, kind of, like, above medium size and down.

Grad: Why wouldn't they be big enough to afford their own machines by that point?

Stein: Because they couldn't find the expertise to create an online real-time transaction processing system.

Grad: So they couldn't write their own program even if they could afford their own machine?

Stein: To find the people to take care of these particular programs which were very sophisticated at that time was very hard to do.

Grad: I would like to understand better because it's a different business concept. It would seem to me that you would have then said, "Hey, look I can write the programs for you. Pay me to write these programs and I'll do them for you." That would have been a business, but you were thinking of a data center to run the programs for them, not just write them for them.

Stein: Right, both.

Grad: I understand you were going to write them, but then run them and why wouldn't they have instead said, "No, no. We have our own machines. We're big enough to afford a model 40 anyway. Hey, write the programs. We'll pay you for that but then we'll run them on our machines."

Stein: Really wasn't on our radar. We didn't want to do that.

Grad: Why not?

Stein: Because we would have just been a job shop.

Grad: Well, no, you were doing projects. It's not just bodies. You're selling an application development capability.

Stein: Yes, but the thing is, Burt, if we created a computer system for our customer and we got paid to do it, we would have continuing maintenance from a personnel standpoint but we wouldn't have continuing income on the processing because that's really what we wanted. We wanted the revenue on the processing.

Grad: So that's what I was getting to exactly. In other words what you saw is that you could benefit not just from doing the work and getting paid for producing the program, but you could have an ongoing recurring revenue stream from the processing services. And you believed that there would be enough companies to make it work.

Stein: We didn't need very many.

Grad: But enough companies that even though they could afford their own computer would be willing to buy the services from you in conjunction with your writing the program for them.

Stein: Yes, we felt there was enough but also again, just because a company could get a 360/40 doesn't mean they could do the job.

Grad: They could have run the job conceivably.

Stein: Yes, they could have with our help. In fact, early on we lost a customer because we taught them to do everything and that was a really painful mistake, but also a very profitable one because we changed our way of doing the work later.

Grad: What I am trying to get at was that there were a number of different models people were using. There were the time-sharing companies, there were the remote processing companies, and you had a different model. Your model was to combine the building of the applications and running them on a processing services basis.

Stein: In some sense we were a service bureau of a different decade. We were an online service bureau.

Grad: And that, in my mind, is a very important difference and that's what I wanted you to bring out. Now, however, that has by its very nature has some limitations in terms of growth opportunity, doesn't it?

Stein: Yes.

Grad: Because if you're just selling bodies you can open up any place, anywhere and you can grow to a certain size. Now, you're still really early. It's 1970. There are no big software services companies at that point. They're all just getting started.

Stein: Right, right.

Grad: The few that had started in the 1960s, some of them had died by then. The recessions killed off Computer Applications, Inc. CEIR had died long before that.

Stein: Right, but we didn't have the overhead and also, we had a wonderful opportunity because we started in a recession and it was really easy to get good technical staff.

Grad: That's a very interesting point because there are others who've told me that because of the recession and because of IBM's previous bundling certain things had been taken for granted that you wouldn't have to pay anybody for. All of a sudden you had to do it yourself or pay for it.

Stein: As I was discussing with you yesterday, too, the environment was changing. More companies were interested in getting more information processing done beyond payroll, beyond accounts receivable, beyond accounting and the financial statements because they found this to be a competitive advantage. And this is what I said during the 1960s and the 1970s and the 1980s and that is that if you had an expertise in the use of information processing techniques, it was an advantage. Now it turned to the point into the 1990s and 2000-- the decade of 2000 is that if you don't have it, it's a disadvantage. The playing field's been leveled now. Everyone has it

Grad: Yes, let's come back. So here again, no initial financing, working on your own, you have a definite business model in mind. You're really focused on the online transaction processing but I gather when you were doing your initial consulting work just to bring some money in, you took whatever you could get?

Stein: Whatever we could get, yes.

Grad: But you did have some pretty nice size clients?

Stein: We did and that was a very purposeful thing in that we could do to a prospect and we'd say, "We did work for the Bank of America. We did work for Wells Fargo Bank."

Grad: Let's go ahead from there. So now you had a business model that was what you wanted to do. You knew what kind of applications you wanted to write. You'd had this successful experience with what became Delta Dental through your Greyhound work.

Stein: That was the basis for this.

Customers

Grad: How did you pick your prospects and how did you go after them? Not for the professional services but to try and move to this processing services model?

Stein: It was hard. It was hard. First of all we had to sell the concept of doing something online.

Grad: My point is, to whom are you going to sell it to? Why did you pick industry X or company Y? Why did you pick those particular ones?

Stein: We just felt that they had a need and also a lot of companies we spoke with, they had a perceived need, they wanted to create a system. They wanted to do something, and so what we did is say, "Hey, here's an alternative for you," and so that helped us a lot, too, that they needed that. Also, people came to us because they heard about some of the things we did which were pretty revolutionary.

Grad: Who were some of your early prospects?

Stein: Well, we had Princess Cruises and they closed down their 360/30.

Grad: They closed it down?

Stein: They closed down the 360/30 data centers and went totally online.

Grad: But you didn't have a machine. How did you get your machine?

Stein: When we were doing the contract programming we looked around for a shared data center or an arrangement where we could have time that we could use on a data center basis or manage it so that we could pay for it on an incremental basis and use our expertise. We sent letters out and one guy whom I had known in the past said, "Our business is going down. We want to keep our 360/40 and if you come in and work together we can save the computer." The recession really hurt them. Have you ever heard of Carter Associates? Yes, so

management came in and they got Carter Associates to come in and do the management and then they finally kicked Carter Associates out, even though we were in there using the computer, too. That worked out fairly well and Pacific Far East Lines were using outside computer services and they heard about our reservation system and they wanted to use our reservation system but they really wanted a data center but they didn't want to manage it. So we worked out a deal where we built the data center. They owned everything. They paid for everything and we got to use the data center and all of our work that we did on that data center, we got to keep the revenue and that was working beautifully.

Grad: Okay. So it was their machine. Did you do applications for them to run on that machine or not?

Stein: Yes, we did.

Grad: So that was theirs.

Stein: Right.

Grad: There were open cycles and you had the chance to use those open cycles.

Stein: Right, right, it was our staff, too. We didn't have to come up with the capital. We didn't have to pay the rent.

Grad: Did you pay the staff anything for the use of their time?

Stein: No, we didn't have to because we had our staff. We ran it. We took care of their work. It was a great arrangement. It really was a great arrangement.

Grad: So it was, sort of, an onsite facilities management in a sense with you having the right to sell the other available time?

Stein: Yes, it was a really interesting sweetheart deal. It really was.

Grad: Now, who was your first customer? You mentioned Princess Lines.

Stein: Princess Cruises, right.

Grad: Who else were some of your early customers?

Stein: US Leasing with a nationwide online real-time database system

Grad: To do what?

Stein: To manage all of their leases in real-time. They were using Xerox Data Systems and it was, a typewriter driven system which was expensive. They had a quasi online system. The Xerox system was not doing the batch processing, so we picked up the batch processing and saved them a lot of money and then they finally gave us the online processing. Then there was a small wall covering distribution company in the east bay and what they did is they bought wall covering from all of these people who made it and then decorators would call them and say, "I want 15 rolls of red paper and two rolls of blue for a job," . So we automated that whole thing online for them and it took them from a small, small wall covering distributor to going nationwide with this online real-time transaction system.

Grad: This is over a couple of year periods?

Stein: It took about five years for them to go national. We did the whole system in nine months.

Grad: So these are projects you did during the early 1970s to mid 1970s in general.

Stein: Yes, yes, 1970s to 1980s. Not having capital was a big problem for us. The Pacific Far East Lines ran into financial problems. The Alioto family came in and took over Pacific Far East Lines. They roughed us up and they tried to break the contract and they wanted us to pay more money for it. They were giving us the squeeze, very dishonest people and we had to get a temporary restraining order and then we finally settled with them and in an emergency we moved over to another data center for a while. Rand Information Systems almost went out of business and we got our own data center. I got a 15 year lease for a facility in San Francisco at 50 cents a square foot which was unheard of, and we built our own data center and we opened up with a 370/158.

Data Center

Grad: Where'd the money come from?

Stein: Didn't have any money. We had revenue.

Grad: Yes, but it was it enough revenue to cover your whole cost?

Stein: Yes, and when we opened the data center new business flocked to us.

Grad: What was your first machine?

Stein: 370/158.

Grad: That was a good sized machine.

Stein: Yes, we put more memory on it and we had a 158 MP, The business was just rolling in. This had been a mistake in judgment on my part. A lot of companies had wanted to use us but the perception was since we didn't have our own computer, they were too scared to do it. But once we had our own computer the, revenues just jumped up.

Grad: Who were your competitors at this point in time?

Stein: OSI, they would take business away from us, from the system development standpoint and also from the time sales because times sales, batch processing sales, whatever you want to call it, that was a good way to really reduce your costs. It really was a good way to reduce your costs?

Grad: For whom?

Stein: For us.

Grad: You could use your extra time that way.

Stein: Yes, we used our extra time to lower our overhead.

Grad: Because I gather one of the problems with the kind of model you were doing is that online transaction processing is mostly daytime work.

Stein: Right. But it doesn't take that much time.

Grad: But still you couldn't run many batch jobs when you were doing the other.

Stein: Oh, Yes we did. We really customized CICS and the way we did it is that all of the transactions were written in machine language and some of these people when they'd get a CICS module, they would do everything hook, line and sinker in one transaction and we broke everything up in little bites, payment on account, change of address, a new record.

Grad: Did you continue to use BDAM as your database or had you switched over to one of the other systems?

Stein: Eventually against my wishes we moved over to -- what came after ISAM?

Grad: VSAM?

Stein: Yes, switched over to VSAM, and I didn't want to.

Grad: But you never went to one of the standard database management systems?

Stein: Didn't need to?

Grad: Why?

Stein: Why would we need it?

Grad: Because you didn't have big inventories to manage or things like that.

Stein: We had all of that stuff. We didn't need it. All that stuff just consumes cycles. It consumed technical expertise. You didn't need it. All we did was use the simple BDAM files and we had inverted files if we needed to get the address another way.

Grad: You'd didn't use a system like ADABAS or one of those inverted file systems?

Stein: We didn't need it.

Grad: That's interesting in that most customers used the database management systems for their online transaction processing system applications.

Stein: Because IBM trained them to do that. We were trying to get the job done with the least amount of resources possible because we were doing it for a fixed price.

Grad: So having your own processing data center changed some of your dynamics and some of your economics.

Stein: Everything. It changed everything. And I was still in shell shock from the failed relationship that and what it did to our organization. It was an emergency. We were almost out of business then. But our customers stuck with us.

Grad: So when did you get your own center?

Stein: 1977.

Grad: So it's seven years you were working with other people's machines with basically pretty much free time on those machines and now you make to this big jump to a 158.

Stein: Right, and now we had a lot of business. There was a lot of business that I didn't realize that we were losing because they were afraid. But we had a lot business already and we just got a lot more when we got our own computer.

Grad: Okay.

Stein: And also there was a psychological thing. Today we can use servers that are in Florida or in Wyoming, no one gives a damn; but then the customer wanted to be able to walk down and see the data center to know that it was nearby and they could touch it and they could look at it. So we built palaces for that reason to close a lot of business.

Grad: So were you profitable with your new operation fairly quickly?

Stein: Yes, we were always profitable. We didn't make a lot of money but we were always profitable.

Grad: Were you paying yourself a decent salary by this point?

Stein: Yes.

Grad: Did you still have the other 25% owner or had you bought him out by that time?

Stein: Well, what happened was is that he didn't grow and I was a young punk. I never really had been a president of a company and I made a lot of mistakes. Fortunately, I made more good decisions than bad decisions and he didn't grow and he became a drag and he was a nice, nice guy and so we separated.

Grad: Did you buy him out?

Stein: Yes, we bought him out, right.

Grad: So you then became 100% owner?

Stein: Well, no, I had other people come in and we gave them shares, too.

Grad: So what percentage of the ownership had you given away by 1977?

Stein: I still was a 75% shareholder.

Grad: So basically it was his share that you sort of split up among other people.

Stein: Right, Yes.

Grad: Were there two or three particular people who were most significant to the growth of the company?

Stein: It depends what stage.

Grad: The first 10 years.

Stein: The first 10 years? Well, just one guy-- well, the first five was the 25% partner and then the next 10 was this other guy.

Grad: Who?

Stein: His name was Don Eichler. He was the MIS manager at PIE, Pacific International, the trucking firm. And he had a trucker background; he was a nice guy and he was not appreciated very much. He didn't present himself as well as he could. We worked together and complemented each other quite a bit. He was older than I.

Grad: Was he your operations manager at that point?

Stein: He was, kind of, like an Executive VP. But I took care of sales and finance and he took care of the shop.

Types of Business

Grad: Let's clean up the 1970s and then we'll go into the 1980s. You mentioned in one of your notes to me a whole range of different businesses that OBS was into.

Stein: Right.

Grad: Let me do one at a time. Online transaction processing we've talked about how it was a fundamental objective and goal of yours; would that become the foundation of your business?

Stein: That was a big part of our business. Again, online transaction processing feeds the technical staff. And it's a great mousetrap for batch processing and uses little daytime cycles.

Grad: It's interesting what you say, I have always viewed OLTP as being very heavy daytime use because that's when all the transactions are processed.

Stein: That would be the IBM way but not us.

Grad: Were you running in a semi-batch mode?

Stein: No. What we did is that we broke the transactions down and made them really small and we didn't use really, really aggressive big database management tools.

Grad: Let me ask you for an example. In banking areas, for example, they will not update the files except at night.

Stein: We updated everything real-time.

Grad: I'm puzzled as to why the OLTP would not be heavy daytime.

Stein: Very heavy night, very light day.

Grad: What was going on at night?

Stein: We had a lot of batch reports. We had backups to do.

Grad: So the transactions were taking place in daytime but you had programmed them in such a way that they were very efficient in use of the machines?

Stein: Very efficient.

Grad: But all the other subsidiary related things in terms of reports and everything else you were doing at nighttime so that wasn't affecting your daytime access?

Stein: Yes, because they would close down during the day, right.

Grad: Okay. Now I understand. Another area you mentioned was financial software; is that later or is that during the 1970s?

Stein: We started compartmentalizing our company in 1980, 1981.

Grad: Then let me put that aside there. What other major activities did you have in the 1970s as far as revenue was concerned? Did you continue independent professional services work?

Stein: Yes, we did that but we really, throttled way back on that as we got older.

Grad: Okay. What other revenue producers were there during the 1970s for you?

Stein: Time sales, turnkey batch operations. We did applications later on. We made a deal with Stanford University on a royalty basis to resell Wilbur.

Grad: What was Wilbur?

Stein: Wilbur was a very early TSO look alike, but with an incredibly efficient online editor and online RJE submission terminal. It was kind of like a real-time editing of your software, real-time submission TSO.

Grad: Who built Wilbur?

Stein: Stanford University.

Grad: And so you licensed that from them to use?

Stein: Right. We paid a royalty. We gave them a royalty. And I think we gave them almost a million dollars over the lifetime of the contract. And that was a great way to sell computer time, too, because a lot of people got to use the power of a 360, 370 and not come to the computer center to do that.

Grad: So they got used to the idea of remote access?

Stein: Yes, because again, you would edit your code and then you would resubmit for a compile and do a test online, all through the terminal.

Grad: So Wilbur was primarily used for program development?

Stein: Program development and also some operations, too, but mainly program development and it was very fast and inexpensive to use whereas with TSO, you could have 15, 20 TSO users and you would bring a 360/40, a 370/158 to its knees. Because with TSO, when you did the execution of the program, you could take it over immediately and start executing that program. Whereas with Wilbur you put it into the batch queue and you had to wait your turn to do the submission.

Grad: So did Wilbur get you some new clients, some different kinds of clients?

Stein: Yes, right.

Grad: So you had a lot of clients by this point in time?

Stein: Yes, over the span of our existence we had a total of approximately 2,000 clients. But they came and went a lot of them were small. But we had some big ones fortunately.

Staffing

Grad: This brings you to the end of the 1970s and now we'll do the 1980s. Do you have any memory of the stats in terms of your revenues, numbers of employees, anything like that?

Stein: We left the decade of the 1970s at around $10 million in revenue and we had about 110 employees.

Grad: Were many of them operators? Were many of them programmers? What was the mix on that?

Stein: We were very heavily technical. That was my rearing even though I became more and more involved in sales. We were very technical and then we had a lot of programmers, a lot of support people, we had computer operators, systems programmers. We never had a lot of sales people.

Grad: We'll continue with the 1980s and what happens in On-Line Business Systems: $10 million in revenue, a little over 100 employees, but a mixture of some significant number of technical people, but some operators and other people like that. So your revenue was about $100,000 per employee?

Stein: Yes, I guess so, if you do that right.

Grad: That's one of the numbers we used to use as a check as to whether a business was working or not.

Stein: Right, we used that, too.

Grad: Okay. Going into the 1980s, you had your own machine now for three years and you're continuing to make money. What's changing now? How do things change in the 1980s?

Stein: Doing organic expansion is hard. It's a lot of work. And we heard that OSI was in trouble, Optimum Systems, Clint Murchison's company in Santa Clara. And they were always kind of in our way sometimes by competing. We also developed a system for Intersil, an online real-time system to do what MANMAN does now.

Grad: That's manufacturing control?

Stein: Manufacturing control, and order processing. And we built that for Intersil, and then Monolithic Memories starting using it. The founder was with one of the original Fairchild groups that spun off: Ne'ev Dron.

Grad: And that's another manufacturer.

OSI Purchase and Problems

Stein: We were physically and mentally separated from Silicon Valley. We just didn't get it. We should have opened up earlier in the Valley. We missed a really big window there. However, the people that were there really weren't doing that good a job, except maybe Carter Associates a little bit. They got a lot of ride on Intel. OSI was not doing that well, spending a lot of money, never making any money. So anyway, they got into trouble, and I decided that we really should be down in the Valle, even if a little late. So we worked out a deal and we ended up buying it. And it was probably the worst decision I ever made. I made a lot of bad decisions, although fortunately I made some good ones, more than bad ones. But it was the worst decision I ever made. We took on too much debt. It was killing us, absolutely killing us.

Grad: Okay. You've talked about this a little at our meeting yesterday, but to quickly summarize, you agreed to pay, what, $6 million...

Stein: Six million dollars over five years.

Grad: It was a five-year note. Was it a balloon note?

Stein: No, $150,000 a month.

Grad: To pay it off over that five year period?

Stein: Right. Yes.

Grad: And you took over the entire company lock, stock and barrel.

Stein: Lock, stock and barrel, including the branch offices, too.

Grad: And did they have multiple locations?

Stein: Yes, they had branch offices in Dallas, Denver, El Segundo, Houston.

Grad: Multiple branches as against you, with basically a single location. So this suddenly was going to change the picture for you.

Stein: Right. Oh, very much. Very much.

Grad: Okay. Were there any problems in the closing of the deal?

Stein: No, there really weren't any problems, just that I had to give up my stock as collateral. We thought we could get the cash flow to support it. We were hoping it would work out.

Grad: Let me ask you a question now. This is your first acquisition.

Stein: My very first one.

Grad: Did you do due diligence?

Stein: Yes, we did.

Grad: Did you have professional help in doing due diligence?

Stein: No, we did it all ourselves.

Grad: And you had no broker who was working with you.

Stein: No, no broker at all. Gil Mintz [of Broadview Associates] just came there to be sure that we would keep talking, that's all.

Grad: Was he representing OSI?

Stein: I think that he was representing both of us.

Grad: Did you give him a piece of the action as a result of the deal?

Stein: Fifty-thousand dollars.

Grad: So they must have paid him something, too.

Stein: No, he didn't. We had to pay him.

Grad: You paid the whole thing.

Stein: Actually I think he was representing, them, and we ended up paying the fee.

Grad: That's unusual.

Stein: You know, again, we were very naïve. We really screwed it up, we really did. Their guy was Raymond Jewell from Baton Rouge.

Grad: So you go through some kind of a due diligence process, but you didn't necessarily do a particularly good job? Is that a correct statement or not?

Stein: I think we did a good job, but we just made the wrong deal, that's all.

Grad: Wrong deal in terms of the amount of money?

Stein: The amount of money, the payments, the security, the whole thing.

Grad: Usually in a small company buying another company, you don't have a hell of a lot of choice in terms of security, do you?

Stein: Well, they didn't have a lot of choices either, because what they were going to do is close it down, because no one wanted to buy it. It was really a broken organization, and a rundown organization, too.

Grad: So you felt you overpaid in that respect?

Stein: Yes. Right. But for the terms of no cash down whatever, it was gone. It was over. We overpaid.

Grad: Based on what the realities were, you paid more than you probably should have. So, that put a financial burden on you for the next four or five years?

Stein: It nearly killed me, physically, too.

Grad: Really?

Stein: Yes. Right.

Grad: Did you acquire any really good staff as a result of the acquisition?

Stein: Yes. We did. We got some good people, and then we let a lot of people go from OSI also. And then I made the mistake of not closing down our San Francisco data center.

Grad: You kept that open as well.

Stein: I kept that open as well. I should have closed it down.

Grad: Why was that a mistake?

Stein: I was really afraid that our San Francisco clients would be really upset and that we would lose them.

Grad: So why do you think it was a mistake to keep it open?

Stein: Because whether they would have been upset or not, it wouldn't have made any difference. That's what we should have done.

Grad: Why?

Stein: Financial reasons, because we would have cut our cost tremendously, and been able to pay off the note.

Grad: If you closed that down and cut your operating costs, would that have helped considerably?

Stein: So anyway, we went into debt. We never had any debt before to speak of. But we got a lot of business, too. We got a lot of new business.

Grad: What puzzles me is, why wasn't that a point in time when you would seek outside investment money?

Stein: I don't know.

Grad: Wouldn't that have been an obvious thing to do rather than borrow?

Stein: Right. Well, we actually did get an investor a little later. We got an investor who I think put in $2 million.

Grad: For what percentage of the business?

Stein: I think it was like 35 percent.

Grad: So you only valued your business at 6 million bucks?

Stein: Well, we were trouble.

Grad: And you had paid $6 million for this other operation?

Stein: Yes, we were in trouble. Yes. But it all worked out. I guess I got lucky or something.

Grad: So what did you do to integrate? You picked up these four, five, six data centers?

Stein: Wait, they were branch offices. There was just one data center.

Grad: Oh, I misunderstood you, I'm sorry.

Stein: Yes, sorry. Data offices.

Grad: Were the offices to sell services?

Stein: RJE offices to sell RJE time, and some timesharing time. They had lines going in, and they had staff there, and they had printers, and card readers.

Grad: Was that a whole new thing for you to have to manage all that communications?

Stein: Yes, it was new, right. And we did really well, because there was no leadership at OSI to speak of, and they were very, very technical. And the staff really appreciated our working with them. And we brought in Gary Myers. He worked with us for a while. And as part of the restructuring, I had to let Gary go. You know, he wanted to build another timesharing operation, and that was really passé, but also we were having financial problems, too.

Grad: Five years of turmoil. Did revenues increase?

Stein: They did increase. They had about five-and-a-half million dollars in revenue, and we had over ten million dollars in revenue, and all of a sudden, overnight, we were $20 million and growing. But still we had to come up with $150,000 a month in cash. It was tough. Well, anyway, that's what happened.

Grad: Well, just to summarize that, in other words, you had $1.2 million of new expense each year, so you had to generate another $1.2 million in profit in order to be able to pay that bill.

Stein: Right.

Grad: You have an accounting background, you have a financial background, you obviously had the acumen to come up with these arrangements. Didn't you sit down and say where the heck am I going to get $1.2 million of profit from?

Stein: We really were convinced that by eliminating a competitor who would undercut us on prices, and by having a larger data center, we felt that we could make it up through more revenue. I started when I was 27, had never been CEO before, and my mentor was the executive chairman, but I was the CEO. He was just a rah, rah, rah kind of guy, and basically I listened to him a little bit too long.

Grad: This is the chairman of your company?

Stein: Yes, right.

Grad: Who was that?

Stein: His name is Bill Evers. He's still a good friend, and I see him a lot. In fact, I'm on the board of his company now.

Grad: I guess what I'm trying to look at is your margins. You had a $10 million business. I'm not going to try to deal with your salary particularly, but were your gross margins running about 15, 20 percent? How high were you running?

Stein: At $10 million, I took a lot of money out of the company.

Grad: Were you taking half-a-million out?

Stein: I was probably up to about quarter-of-a-million a year.

Grad: So were you producing another million of profit?

Stein: No.

Grad: I wouldn't have thought so. That kind of business tends to have a 10 to 12 percent margin at best.

Stein: Yes. We, again, put a lot of money back into the company, a lot of money all the time.

Grad: To do what?

Stein: You know, updating our air-conditioning system, adding more staff to do more development work, because I'm very technically-oriented.

Grad: But you weren't building systems programs particularly, were you? I'm trying to see, that kind of business should have been a relatively-low, out-of-pocket investment, except for your equipment.

Stein: It was. It was, yes. Right.

Grad: So you can have fairly good margins.

Stein: We were doing well. Before we bought that company I think we made a half-a-million dollars that year, after I was paid.

Grad: So the company was generating somewhere around 7 to 10 percent.

Stein: Right. Yes.

Grad: OSI, I assume, was either breaking even or losing money.

Stein: Every year they lost money. Murchison had put in maybe over $20 million in that business.

Grad: So where did you think the $1.2 million extra was going to come from? I don't mean to be contentious, but you must have thought about this.

Stein: OSI would undercut us on competitive bidding.

Grad: So you thought you could raise your prices.

Stein: We could raise our prices, we would not have a competitor around. We felt that by having an office in Santa Clara, a data center in Santa Clara, the way we ran it we would get more business.

Grad: Okay, that’s fair.

Stein: And it happened, but it just didn't happen enough.

Grad: I'm doing very raw numbers, but even assuming you got 10 percent margin, you'd have to make $10 million additional revenue to pick up a million bucks.

Stein: We doubled. I mean, in a sense we went from $10 to over $20 million.

Grad: So if you could have made that as profitable as the rest of your business, you probably would have been okay. Let's move ahead.

Stein: Well, anyway, let me get to the point here. We had a customer, U.S. Leasing. And they really got into us. We were doing their online transaction processing, we were doing some of their batch processing, and they decided they wanted to do more stuff. They were

going to end up buying computer time because they were going to build up their own staff to do more applications rather than depend on us, but they were going to use our computers.

There was a real hard-nosed guy there, a really, really hard-nosed guy. He wanted a contract, but he wanted really, really, really low rates. So we gave him the lower rates, but we asked for a long term commitment. Because these were key cornerstones in negotiating with our clients, because what I said yesterday, is that, they said, "Well, we're going to put an in-house computer in, and it's going to be this much per month." I said, "Well, if you're going to put an in-house computer in, you're committing four, five years out to do this. If you commit four or five years out to do that, we will beat that price," because we could. It's a piece of cake, if they commit it. So anyway, he went along with this, and the very week before we were signing this major contract with him he wanted to have an out on the contract, and he wanted the out to be simple. And I said, "Wait a minute. This is a long-term contract." And we got locked in this whole thing, so we went back and forth with the verbiage. But he didn't get the verbiage totally right. He wanted to get out if he felt that we weren't doing the job, and that's the way it was worded. So in 18 months his bill went way up even at the very low rates. We were making so much money on that deal we couldn't believe it. But still it was a good deal for him.

He was using some database management system that he converted over to that just sucked up the computer time. He canceled the contract and went in-house. He said, "We're cancelling the contract, we're using this out to go in-house." I said, "Well, what you're doing is that you're really screwing me, and you can't cancel that contract." He says, "No, we have a right to cancel it." I said, "You have a right to cancel it if we're not really providing the service. You're canceling the contract because you've determined that it's less expensive to go in-house, and that's why you're canceling it." We had never sued anyone, and we never got sued in 15 years. So I said, "John, I'm going to sue you." He said, "You're not going to win." I said, "We're going to win." At the same time the person we were dealing with for the OSI from Murchison left and we're dealing with another guy, and he was tough.,. And Murchison had other data processing businesses, so they were trying to hold us hostage because we were behind on paying. On the courthouse steps we had a million-dollar settlement with U.S. Leasing, we got a million bucks, and then we turned around and paid off OSI completely, and we were out, gone.

Grad: So this was 1985 or so?

Stein: 1984, 1985, right. Yes.

Grad: Now you got five more good years?

Expanding the Business

Stein: Good. Yes, good years. They weren't great, but they were good. You know, we had a good team, we kept on building the business up, we consolidated the data center, moved it to Santa Clara. We built a brand new data center, which was a palace, absolute palace. It brought in so much more business, it really did, and we worked our way up to $30 million, and we got into many, many divisions. The most profitable division we had was our venture capital division. We had nine divisions.

Grad: You had enough money by then to go into venture capital?

Stein: No. No, it's another mousetrap. It was just amazing, absolutely amazing. Burt, imagine yourself going on an airplane ride and you walk down the gangway. And you go sit down, you're one of the last people to sit down, and the door closes. And you look around in the airplane, and there are six empty seats there. They can't sell those seats; the door's closed. The jets are on, they're flying away. So if they could have, before that door closed, got a buck, 50 cents, $5, that's how much they would have been ahead on that flight, even for all six seats, okay. We knew how much capacity we had that was unused, all the time. We watched it very carefully. We did deals with emerging companies where they could have those excess cycles, and define it as capital, or notes payable to us, okay. So we would give them, like, $150,000 worth of computer time over six months. And we would get stock in the company, or we would get a note, or we would get both.

Grad: You've got to be kidding.

Stein: I'm not kidding. Well, I'm not finished. You know what else we got? We got an ironclad contract that no matter what, they had to process with us for a minimum of four, five, six years. And the thing was that for each of these situations, the information processing side was key to their business. Other than their personnel, it was key to their business.

Grad: Unbelievable.

Stein: So, worst case we ended up with a discounted time sales contract, worst case. Most of the time what we did is we ended up with the stock, and they bought the stock back, and we made a lot of money on it.

Grad: What percentage of the companies that you did this with failed?

Stein: Zero.

Grad: How come?

Stein: Because they needed the computer time all the time.

Grad: In other words, you felt that they were reasonable businesses, though.

Stein: They were reasonable businesses, and they had, they had to have information processing.

Grad: So you weren't really a VC in my normal sense of the word.

Stein: We were a VC.

Grad: But you used your computer time to buy your shares not money.

Stein: We paid for it. And you know what else happened? The Greek guy from Chicago, who ran Comdisco, what's his name [Kenneth Pontikes]? A real smart guy, he sent his senior guy out to us and interviewed us, and they set up Comdisco Ventures.

Grad: Same kind of deal?

Stein: Same deal, but they had to buy the hardware. They had to do out-of-pocket cost for every deal. We didn't have any out-of-pocket cost.

Grad: Well, that was my point. You had no out-of-pocket cost.

Stein: But we did.

Grad: Implicitly you had cost, of course.

Stein: I understand. We were just smarter with our approach.

Grad: You treated it, though, as though it was real money, and you put it on your books as though you had spent that money.

Stein: Oh, well, the bookkeeping would be a little bit different, because we didn't want to inflate our earnings. Because where we made our money is when we had the payday.

Grad: So basically it was zero cost, all capital gain.

Stein: Right. Yes. That's the way we did it.

Grad: Okay, smart.

Stein: Thank you.

Grad: That is an incredible deal. You mentioned direct mail, what was that?

Stein: Okay. We had online transaction processing, we had time sales. We had application development, we had data entry, we had the venture capital. We did telephone accounting for all of the pay telephones. By the way, when we got our own data center in 1977, Pacific Bell paid $120,000 a month to do all of the accounting for their pay telephones.

Selling the Business

Grad: You decided to sell the company in 1989. Did someone come to you, or did you go to somebody?

Stein: We were approached all the time. And I had a certain way that I would talk with them all the time, and so they were very serious. And what I wanted to know was how they would pay for it and, how they determined what the value would be. And I said, "Okay, fine. This is my price, take it or leave it." And it ended up, working out that way.

Grad: But to quickly summarize this so we have it in one place, how much did you sell the company for?

Stein: I think they paid like $17, $18 million for it.

Grad: And your revenues at that point were around $30 million?

Grad: And this was in 1989?

Stein: Yes. But we almost lost the deal, too, because the Loma Prieta earthquake happened, and we were far along in due diligence, we were starting to do contracts and everything like that, this is in October, and we sold it in November. We had the earthquake, so as soon as the earthquake happened we picked up and we called Santa Clara, because that's where the data center was. "Are you okay?" "Yes, we're fine. Everything's fine. We had a couple of things fall off, some tape drives or whatever, but everything's fine." Fifteen minutes

later Texas called and said, "Are you okay?" "Yup, we're fine." "Okay." And the deal went ahead.

Grad: Wow. Okay, you said there some glitches at the last minute in the paperwork, but fundamentally it was a closed deal?

Stein: Yes. Right.

Grad: You're now out of work? Did you stay on to run the company or not?

Stein: I stayed on until March, which was probably about three months too long.

Grad: Really? Why was it too long?

Stein: I never wanted to stay, and they never really wanted me, but we all pretended that we did.

Grad: So it was a transition.

Stein: Darwin Deason is a king where he runs everything, and I just didn't fit into that style at all.

Grad: And what was the name of the company that bought you?

Stein: Affiliated Computer Services.

Convene

Grad: You have done so many more things in your career. Talk to me about Convene.

Stein: Okay. In 1993 I saw the Internet coming, and I wanted to set up an asynchronous collaboration network for people to collaborate, and do group discussions. So we got ministers, 15,000 ministers around the world to use our system for collaboration.

Grad: How did you make contact with 15,000 ministers?

Stein: Well, I found someone who had this software, and he was helping. We bought him and it just exploded. However, there wasn't going to be any real profit in making that out, and we had other we were dealing with, franchises, and these are all disparate groups. You've

got to take a look at 1993 and 1994, compared to today it's totally different. A virtual classroom is a disparate group. And online distance education, it's all done on your own time, so the software fit perfectly for that. We empowered the University of Phoenix and built that up. We had 110 universities using it. The Internet bubble broke, and so it went away.

Grad: So Convene ends in 2000, you just closed the business down?

Stein: A little after I left, about five months after I left, it just went out of business.

Grad: You say you left because business had tanked?

Stein: Because we brought in some shareholders. It was becoming a struggle; everything was getting more and more compressed. They felt they had a better way to do it. And I put in $5 million in five years. They put in $6 million in five months.

Grad: So what did you get out of it when you closed it down?

Stein: Oh, I didn't close it down, they closed it down. I got zero.

Grad: You had just been paid your salary?

Stein: Yes, right. I got zero on the investment.

Grad: What a shame. University of Phoenix is a big operation.

Stein: Very big operation.

Grad: And some of the others are also.

Other Personal Information

Stein: Right. But there's more than University of Phoenix. Everyone thinks the University of Phoenix is totally online, but they're not totally online. A part of their business is online. So then what I did is, I've been mentoring companies under Peyton Investments, I'm on several boards. And all of the mistakes and good decisions I made, I'm helping other companies. Now I'm working with my son, and we're buying ecommerce companies, ecommerce Web sites, and building them up, pooling all the resources and building them up. Hopefully both sons will take over the business.

Grad: You've been married for how many years?

Stein: If I make it October, it'll be 40 years.

Grad: Terrific. You have how many children?

Stein: Three.

Grad: Two sons and a daughter?

Stein: Boy, boy, girl, yes.

Grad: And they have families? Are they in this area?

Stein: No, they're not even holding hands with anyone, Burt. They're great kids.

Grad: What ages?

Stein: Thirty-six, thirty-five, and thirty-two.

Grad: Are they all in this general area?

Stein: The boys are right here in the Bay area, and our daughter lives on the Island of St. John, in the Virgin Islands. And I think she's got it really wired. It's very quiet, it's warm, there's water, it's beautiful, not a lot of traffic, not a lot of “tsoris.”

Grad: Did they all go to school in this area here?

Stein: Yes. But not our daughter, she went to school back East, too.

Grad: So you're working with both boys?

Stein: I'm working with one of them, and I think probably later the other one will come and join us.

Grad: Capital, you got money for yourself, a considerable amount, out of the sale of online business.

Stein: But I lost a lot on Convene. And I lost a lot on the stock market, too.

Grad: So you're no longer as wealthy as you were at one point in time?

Stein: Right.

Grad: Do you still ride motorcycles, or not?

Stein: No. I gave that up a year-and-a-half ago, I miss it. We have a boat. Anyway, I keep on doing other things.

Grad: You seem to be involved in a lot of organizations in various roles, the World Presidents' Organization, there's a whole series of things. Is there any theme behind those personal involvements? Are they religious based, are they structurally based?

Stein: No. They're all kind of my profession or business. But there are some social things I belong to, also, yacht clubs, and a community club, too. But, no, nothing religious, no theme with it all.

Grad: Between 1990 when you sold On-Line Business Systems and 1993 when you get Convene started, what did you do during those three years?

Stein: Traveled, I spent a lot of time on my personal computer, became an expert at personal computers, played golf, I just took it easy. I was very, very, very, very focused running On-Line Business Systems for 20 years. I never got it out of my mind. The first few years I never took a vacation. The last five years I was probably out of the office maybe 90 days a year on personal matters.

Grad: So you had more family time and so forth?

IT History Society

Stein: More family time, more travel time. I had more time for WPO. And then there's the IT History Society, too.

Grad: I was going to come to that. That's what I want to close on. So just quickly, with Convene did you start with your own money, or did you have outside investors to start with?

Stein: Oh, yes, it was all my money. And then later on we brought in investors because everyone wanted to get on the Internet bandwagon. That's the first time I actually had outside shareholders.

Grad: I'm not surprised. Given that time period, people wanted to put money into anything that smelled like Internet.

Stein: Uh-huh, and we got it.

Grad: But you didn't get it personally. You didn't get back your money. That's what you said with Convene, that you lost money in that.

Stein: A lot of Internet businesses went out of business.

Grad: Yes, but there was a period of time where you were the 100-percent owner. So, any money you got you put into the business, you didn't use it to well your own shares, is that what you're saying?

Stein: No, the Internet business needed money, and I supplied it.

Grad: Okay. So then your new shareholder money you got was to move the business...

Stein: Move the business more, Because everyone was build, build, and go, go, go, expand, expand, expand. That’s a game I'm not used to.

Grad: You're using Peyton Investments, then, as your frame to invest in companies, or to assist companies?

Stein: To assist companies, and then also to buy these ecommerce sites.

Grad: Talk to me about the Charles Babbage Foundation, and the about IT History Society.

Stein: The Charles Babbage Foundation basically was formed many years ago as a vehicle to raise money for the Charles Babbage Institute. And finally, as time went on, the Institute became more established at the University of Minnesota in Minneapolis; it was a great place for preserving the history of the IT information industry. And over time many of the donors said, "Why should we give money to the Charles Babbage Foundation when you're going to turn around and give it to the institute? We'll just give it directly to the Institute." The Institute

became more and more independent. The University or Minnesota was helping out more. So we had no reason to be around anymore. So the board met and I was asked by George Glaser to be a trustee. Then I was asked by Bernie Galler to be the treasurer. We had a board meeting, we were either going to close it down, find a new director, or do something else. No one wanted to do anything, and they thought we'd close it down. I said, "Well, I had this idea, and I'll take it over if no one else wants to do it." They bought the idea, and I became chairman of the board.

Grad: And you renamed it the Information Technology History Society.

Stein: IT History Society.

Grad: And you have how many people involved?

Stein: We have 550 members now.

Grad: Companies and people.

Stein: Yes, a lot of companies, we have a lot of people, and a lot of institutions. And half of our membership is outside the United States. And we're not even two years old

Grad: It's free membership though, which is interesting.

Stein: It is free, yes.

Grad: It has a different model, for sure, than most people have done. It's a very interesting Web site you put together...

Stein: Thank you.

Grad: The advisory boards have some wonderful people on them; that is very impressive.

Stein: Thank you. Yes, I've had help.

Grad: You worked with Bill Aspray, I believe, in starting this thing.

Stein: Right. We work together, right.

Grad: And Paul Ceruzzi has been supportive as well.

Stein: Paul has a blog on our site.

Grad: And a number of other people I see blog on there as well. How much of your time are you spending doing this nowadays?

Stein: It depends, but pretty much on average it's about less than a day a week.

Grad: What kind of things do you do as far as this is concerned? What is your work in it?

Stein: Well, I'm the one who's really moving the whole thing ahead. But what I'm trying to do is position ourselves where it becomes working more on its own, and we're accomplishing things that are really, really of value. We want to add more content to the site; we want to go on a campaign to promote the benefits to IT corporations to preserve their history. We want to be a place where many disparate IT organizations or people of IT historical interest can interchange information. We want to be a place where there are resources to help people in the archiving historical area to do a better job at what they're doing. We're on the verge of creating a database of where all sites are located.

Grad: This is what I was going to ask you about. One of the new initiatives you started within the past two months, was to reach out all over the world to where are the archives, the places in which the information has been preserved, and what kinds of information is there. Not a detailed finding aid, but at least descriptions so that historians, researchers have some idea where to go look for this information. I think it's a wonderful objective.

Stein: Thank you. It's going to be a difficult one, and it's going to take time.

Grad: Where did the idea come from?

Stein: Me.

Grad: It's a super idea, and I like it very much.

Stein: Thank you.

Grad: The other question, since you don't charge any fee for membership, how do you expect it to become self-sustaining?

Stein: Well, Burt, we have very little overhead. We don't have any physical premises, or virtual. I don't get any money for it, but we have some consultants. The board has been generous. We have some members that have been generous. And I would hope that in four or five years that the corporations would maybe donate something every year to sustain it.

Grad: So you see it as no advertising, not that kind of a model, or no kind of a service model where you'll provide service for a fee or anything like that at this point?

Stein: No, right. I don't see it that way.

Grad: That's a very interesting model.

Stein: Yes. What I've modeled everything off of was AFIPS [American Federation of Information Processing Societies]. And we'll have an annual conference, and maybe we'll have some exhibitors, and that's really the model I copied.

Grad: Are you working with people at the Computer History Museum?

Stein: I'm a member.

Grad: But there are no direct joint activities?

Stein: No. There's very, very little interaction with the members. We have a social network I want to get launched. It works, but I can't find anybody to really start using it. Again, there's only so much time in the day.

Grad: Would there be a benefit to you, I don't know, working with a particular university, for example?

Stein: Maybe.

Grad: Would that add any value?

Stein: Maybe, but one of the important things is, is that use a word that was used yesterday. We want to be Switzerland.

Grad: In what sense?

Stein: We want to be agnostic, neutral to anything that goes on. Our members are the ones that do all the work, and they do it their way. All we're trying to do is just be this loose federation and provide a point where we all can pass through. But we don't want to collect anything; we don't want to embark upon anything that's going to interfere with any member at all.

Grad: So you're not competing with anybody.

Stein: We don't want to complete with anyone at all.

Grad: That's a wonderful story. You've had a very interesting career and done some really exciting things.

Stein: Thank you.

Grad: As always, we always run out of time on these things.

Stein: Well, maybe I talk too much, but wish I would have been able to do more. Some of the guys in here, the last few days, I mean they really made some great accomplishments; they really did [at the Timesharing/Remote Processing Services Pioneer meeting].

Grad: They built a very different kind of company. You built a company that certainly made you a very nice living, gave you a chance to do good things, but you didn't build the $400 million companies that they were trying to. It's a different model.

Stein: Right, Yes. A much different model.

Grad: And the model you had was a very profitable and very smart one. We'll draw this to a close here.

Stein: Thanks for your time.

Grad: Just one more thing I would just add. The first model you created, On-Line Business Systems, were there other companies around the country that had a similar kind of approach, sort of a modern service bureau?

Stein: Right. That's really what we were. I didn't admit that. I never admitted it.

Grad: But it really was.

Stein: I wanted people to have the perception that we were doing something really, really different.

Grad: But were there others doing that? I don't remember many.

Stein: Very, very few.

Grad: Some of the service bureaus did convert to a model not too different from what you had. One guy in Washington, a couple of others, who switched their companies from the old line service bureau to this new model.

Stein: Yes, there was one in Washington.

Grad: Yes. John Rollins is his name; he did that. And there were a couple of others.

Stein: What was the name of Rollins' company?

Grad: [It originally was AZTECH] He changed the name a couple of times. But he was very active and adept. But there weren't many of them. Most of them just sort of closed up shop. They never saw what you saw. And I congratulate you on having that kind of insight.

Stein: Thank you. But in a sense what we had was nine marketing arms to keep the computers busy. They each had their own identity. The fact is that those investments in those companies you think didn't cost us anything, it did.

Grad: You found ways to take advantage of the time that was there, and to get money out of that time. Thank you very much for your time in this interview.

