

An Interview with
BERNARD GOLDSTEIN

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Conducted by David Allison

on

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Charles Babbage Institute
Center for the History of Information Processing
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Bernard Goldstein Interview

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Abstract

This oral history with software industry pioneer Bernard Goldstein documents his early education at the University of Pennsylvania and Columbia University, his service in the U.S. Navy, and his entrepreneurial activity with Computech, United Data Centers (UDC), and National CSS. Computech, Goldstein's first venture, was formed to solve a variety of business and scientific problems by the application of computing technology. The company processed employee payrolls and market research data, and developed applications for the Johnson Development Center and the U.S. Navy. Computech was eventually sold to the Control Data Corporation. Goldstein then went on to found United Data Centers, a national data processing chain operation. This company merged with Tymshare, a timesharing company. Goldstein then joined National CSS before it was sold to Dun & Bradstreet. The oral history also describes Goldstein's involvement with ADAPSO, the Computer Software and Services Industry Association, challenges from IBM in the marketplace for data services, and the federal government's role in the computer industry.

Preface

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

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

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

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

**ADAPSO History Program
Bernard Goldstein Interview**

David Allison: This is an oral history recording on May 3rd of 2002 with Mr. Bernard (Bernie) Goldstein as part of the ADAPSO oral history program at the Monarch Hotel Washington, DC. Bernie, I thought we'd talk initially about your background and your education, where you came from and how you moved into the software industry.

BACKGROUND

Bernie Goldstein: I did my undergraduate work at the Wharton School of the University of Pennsylvania and I received my Masters from the graduate school of business of Columbia University. And I did that at night. I was probably the last night student to get a degree at Columbia. I did it because I was then participating in my first venture, which was Computech.

Allison: What city did you grow up in?

Goldstein: I grew up in New York. And still live in the area.

Allison: Did that environment shape your interests as a young person?

Goldstein: No, I'm not sure it did. I got into information technology after spending three years in the Navy in the latter period of the Korean War. At that time it was known as the Service Bureau Industry. I think that the reason I did it is that I had two friends who were engineers. We had a total capital of \$5,000 between us and we felt this was an industry in which ignorance could survive. It wasn't an industry yet but simply an idea. We were all bachelors. We moved into my mother's apartment. She fed us and we went down to our little office and engaged in self-exploitation, started a company called Computech, very early in the industry.

Allison: But your interest was always in the business side. Is that true?

Goldstein: Yes. I'm not a technologist and that served me very well. The pace with which technology moves in information technology leaves the technologist at great risk for being obsoleted rather rapidly. On the business side of the industry, I was able to survive, change, grow and prosper with the industry.

Allison: Now you said you have spent three years in the Navy. Did that shape you and your interests in some significant way?

Goldstein: Not at all.

Allison: You were ready to get out?

Goldstein: I never got aboard a ship. I was at the Naval Air Station in Brunswick, Maine. And I really had no exposure to the computer technology there, which was principally military of course.

STARTING THE FIRST COMPANY

Allison: Was the work that you did in your business school good preparation for what you did later?

Goldstein: No. The only thing that served me well in terms of preparation was that I realized that I wanted to be in business for myself. I was an early stage entrepreneur and did not want to be part of a large company. We were able to enter this business because we were able to rent our equipment and the capital requirements were low; I really had no exposure to the technology whatsoever.

Allison: So set the scene for me. There's three guys and five thousand dollars. Is that what you said?

Goldstein: Five thousand dollars.

Allison: And you were entrepreneurs before being an entrepreneur was cool, right?

Goldstein: We were entrepreneurs before the Harvard Business School graduates decided they wanted to be entrepreneurs. And that was characteristic of the University of Pennsylvania. Harvard at that time was graduating superb managers and Penn was graduating a lot of entrepreneurs; guys who were too neurotic to work for somebody else or driven to be independent. I was one of them.

Allison: So there were three of you?

Goldstein: Yes. The second person was also a Penn graduate, a fellow by the name of Tony Fennelli. The third was Donald Pierson who had been at Notre Dame. They were the technologists and I was the businessman and the salesman.

Allison: I'm just trying to get the scene. There's three of you. Are you sitting up nights trying to figure out what you're doing or what business you want to go into?

Goldstein: Well, they came to me with this idea of starting this company and tapping the computer to solve business problems and scientific problems. And I said to them, "Gee, I'd like to do this. Do you have room for me?" And, you know, we became partners. It was really as simple as that. It was. No vision at that point as to how big this industry was going to become. We became close friends and started the company.

TYPES OF EARLY COMPUTING WORK

Allison: So, you set up shop and you incorporated right away or was it less formal than that?

Goldstein: No, no, we incorporated right away and we set up in the Tin Pan Alley area of Manhattan because rents were cheap there, and we took whatever business we could get. And the timing of our going into business was concurrent with IBM manufacturing its first digital computer, the IBM 650. So while there were earlier players in the business they were principally working with what was known as EAM (Electronic Accounting Machines) equipment, we were able to harness the computer to solve some of our client's problems. That made us unique because IBM produced this 650 computer thinking that they were going to sell maybe twenty of them, or fifty of them. But it was viewed strictly as a scientific device, and we started using it to solve business problems. One of the business problems we used it to solve when we were in Tin Pan Alley was royalty distributions for music publishers. It was a terribly messy time-consuming process, and we were able to harness the computer and develop a system that eventually many music publishers adopted.

Allison: Did you rent time on a computer or did you own one?

Goldstein: We rented.

Allison: And so your two partners did the programming and the management.

Goldstein: They did the programming, the running. We would rent computer time, whenever we could get our hands on it. IBM had datacenters in which they had this equipment available. In the early days, these datacenters were run by the Service Bureau Corporation which was part of IBM and subsequently became part of Control Data. We rented time and supplemented the computers with EAM equipment. We prepared the cost analyses, prepared the reports and built a little datacenter and serviced our clients out of it.

Allison: So were you doing the sales at the outset?

Goldstein: I was doing the sales. I was doing the payroll.

Allison: You said you started working on things like the rights in the music industry very early. I think the company was invented in '58 is that right? That's the date that I had, I wanted to check that.

Goldstein: Yes, yes.

Allison: Okay, so you set up your company and you're knocking on doors. What are you telling people? I mean they don't know what computers are.

Goldstein: That we'll do anything. We're telling people that we'll do anything. If it was a problem that involved the massaging of a lot of data or the collection of a lot of data, we would do it.

Allison: They didn't contract out this kind of work in those days generally?

Goldstein: Well it took an imaginative businessman to award us a contract. Certainly if they had a Dun and Bradstreet on us, we would never qualify, but we produced results, and we were very cheap for the services we rendered. We didn't know what to charge. We were

inventing. All of this was in the stage of inventing a business that utilized this equipment to solve numeric or scientific problems.

Allison: But you largely stayed on the business side, the payroll, the backroom office types of things?

Goldstein: We did scientific work too. We got a couple contracts from the US Navy and the Johnson Development Center in New Jersey and we then developed software to process market research data. Remember, if you think about market research and music publishing, these were New York based industries, so we stayed as close to home as we could stay.

Allison: So you mostly focused on small businesses? You said you had some big clients like the Navy?

Goldstein: We had some big clients. Union Carbide became an important client for us. And each event tended to drag us into another opportunity. This was very early in the business. Dick Clark, the disc jockey – you know Dick Clark?

Allison: Yes, he hasn't gotten older at all, right?

Goldstein: No, he's the same age as he was then. He was accused of being involved in payola. There was a big payola scandal. As a matter of fact, the Committee on Legislative Oversight of Congress began investigating it, and Clark's lawyer found us because we were doing work for the music publishing industry. This is an illustration of just where you are dragged into during the process of trying to survive in a new business. So we took on the assignment of attempting to establish that Dick Clark did not favor those songs in which he either owned the record company or managed the artist. We compared the number of plays on his program to his secondary economic interest to the various relationships he had in the music business. Then the next thing I knew I was subpoenaed to appear before the committee on his behalf and came down and testified. All of a sudden this became a big story and there I was on the front page of what was then *The New York Telegram*, a newspaper in New York. It doesn't exist any longer. So we moved from event to event.

Allison: Now you were financed initially just by your own capital or did you have investors?

Goldstein: No, we were financed by our own capital. My mother lent us a bit of money and then we took a \$50,000 investment from an investment bank called Oppenheimer & Company and that helped us. Remember, we were bachelors. We didn't have a lot of expenses because we didn't have time for expenses. We were typically working sixteen-hour days, which was very characteristic of the business at that time.

Allison: So, what were the first couple of years like? What was the climate in those early days? Were you growing right away or was it up and down? Were you without work or was the growth pretty steady?

Goldstein: No, I would say that we were lucky. We had virtually no competition, or very little competition and we were able to eventually pay ourselves a little more. We got married.

That became much more demanding on us in terms of attempting to make a profit. We hired people. When a client was coming to the office, we would frequently have the wives come in and sit around as if they were secretaries of the business to establish some heft in the business. This is what it was, this early period of friendship and camaraderie. Eventually with that success, we then began to deal with the realities about whether the business was going to survive. My partners were very pessimistic about the long run prospects of the business and concerned with issues such as bank competition and that type of thing.

Allison: Would that have been in the early 1960s? I'm trying to get a sense of the time.

Goldstein: Well yes, that would be early sixties. They were very concerned with those issues. I was very optimistic. With that conflict if you will, we had the good sense to say to each other and then ourselves that if we could not see a single purpose and direction of running the business, let's be smart and sell the business to somebody else who will give us that singular sense of direction. And that's eventually what we did. We sold the business to Control Data Corporation, which was an early competitor of IBM.

Allison: Now remind me of what year that was? That was before you created United Data Centers?

Goldstein: Yes. So this was probably 1965, when we sold the company to Control Data.

Allison: So how big was it at that point?

Goldstein: Well, we probably had 15 employees. We had moved to much more established offices which were still in Manhattan.

Allison: And at that time had you started to own your own equipment or you were still renting?

Goldstein: No, we were renting the equipment.

Allison: But you had it in your office.

Goldstein: We had it physically on our premises. But still, if we needed a large scale computing facility, we would go out and rent time on it. It was heavily IBM. IBM dominated the market.

Allison: Right, well I assumed that you didn't have any others but I thought I'd just get it down. You've now got more technical people but also more sales people.

Goldstein: We had more technical people. We were doing programming and developing systems for our clients. We were doing processing services, selling the results, be it an accounts receivable report or a music publishing royalty distribution report. Market research became a specialty as I mentioned before. By the accident of first a client coming to us with a unique problem, we saw that the problem was perhaps not unique to that client but unique

to an industry. We then took the solution and marketed it to other firms in the industry. This was typical of what firms did in this business.

Allison: So you said you started off with little or no competition and now we're in the 1960s. Had competitors started to emerge then?

Goldstein: Yes, competitors started to emerge. We were atypical. The typical competitor in this business was a manager of an internal data processing center in a firm. He decided he was going to go into the business or convinced his owner that they should spin off, the data processing operation and he should be allowed to run it and provide processing services to others. So small companies, generally terribly under-capitalized, began springing up in the business. You can tell how many companies were in the business by the discovery that we had a category in the yellow pages. That was the first recognition that this was an industry. The yellow pages had a data processing section. We would find each other there, and we would occasionally compete with each other for clients and that's when we began recognizing that a new business was developing.

Allison: An industry was forming.

Goldstein: An industry was forming. This was New York but it was happening elsewhere too.

ADVERTISING

Allison: How did you advertise? You talked about the yellow pages but were you advertising in the paper or magazines or was it word of mouth?

Goldstein: Well, the yellow pages was the first advertising we did. When we got successful we did silly things, like we bought half pages in *Time Magazine*, local editions of *Time Magazine* which never generated any business for us. But we tried.

Allison: Did it make you feel good?

Goldstein: Sure, it made us feel good to see our name in *Time* Right.

MERGER WITH CONTROL DATA

Allison: Well, you know I'm interested in this merger with Control Data because mergers and acquisitions became such an important part of your later career. I'm thinking about that first decision. It must have been a tough decision.

Goldstein: It was tough.

Allison: How do you look back on it?

Goldstein: I didn't want to do it. I told you I was optimistic about the future, but it solved a difference in a point a view. My two partners took their share of the proceeds and really left the industry. I stayed on as New York District Director for Control Data and ran

the datacenter and then built a branch of the datacenter in Boston. This was a logical thing to do and it was really my first experience in working with a larger company. It was very good for me because I had never been a professional manager and this was a couple of years in which I could learn to be a professional manager.

Allison: How did they evaluate this merger? I mean did you learn something from seeing how they operated? Did you think that they made sense or didn't make sense?

Goldstein: They wanted to be in New York. They were headquartered in Minneapolis. They had datacenters in a couple of spots. They wanted to be in New York so they found us, and we were delighted that they found us. They paid, if I remember the number right, \$900,000 to buy the company, and we felt terrific about that. Divided that by three, we felt this was enough money to retire on.

Allison: Your ship had come in.

Goldstein: Yes, in terms of yield we could have retired if we wanted to. Control Data bought the business because we had a computer orientation and we were in New York. Of course at that time they were manufacturing computers. They were an early competitor to IBM, and they recognized rather early that services was going to be an important part of the business. That's why they later settled their anti-trust action against IBM. They settled that anti-trust action with IBM by accepting the Service Bureau Corporation from IBM as consideration. It was IBM's arm in the services business at that time.

Allison: So from a strategic standpoint they did understand what they were doing. They thought about it. Were you sort of watching that from a distance at that time?

Goldstein: Well I was watching from a distance. I mean they weren't very professional, nor were we. We weren't good sellers and they weren't good buyers. But it was my first taste.

Allison: Right. That's why I'm interested in this. Is whether this, this is something you thought, how could they be so stupid, or were they wise? I'm interested.

Goldstein: Well, think of that. They didn't pay a lot as you can tell from the price tag, but it was my first taste of selling a company and it was something of a narcotic for me.

Allison: You liked it.

Goldstein: Yes, it was exciting. I stayed on with Control Data for a couple of years. I felt that somebody who sells their business has a responsibility to pass the property value over to the buyer and give the buyer quiet possession of the business; that was important to me. I knew I wasn't going to stay with Control Data on any permanent basis. It taught me the responsibility a buyer has after he receives his paycheck from selling his business, and I did that.

Allison: And then you were ready to do something else.

Goldstein: Then I was ready.

Allison: You were born in what year?

Goldstein: 1930.

Allison: So in 1967, you're in your mid-thirties and you've built a company, you sold a company and now you're ready to do it again.

Goldstein: I sold a company and I worked as a professional manager and I wanted to get back in. This was good. And the business was beginning to produce a couple of successful companies. Automatic Data Processing was an early successful company. I wanted to get back into the business and start another company and sell it eventually. So it became a pattern.

INVOLVEMENT IN ADAPSO

Allison: What new opportunity were you looking at now or did you think you just had a better approach to what you'd been doing before?

Goldstein: Well, when I left Control Data Corporation after a number of years, ADAPSO was struggling to build up its membership and speak for enough firms in the industry. It wanted to build its budget so it could do all the things a trade association should do for its members. I was a member of the ADAPSO board at that time, and we were looking for somebody who was willing to travel the United States and sell memberships in ADAPSO and nobody would take that job. It was considered too undesirable a job. I looked at it and I said, "Here is an opportunity to travel the United States, not as a competitor or a predator or acquirer but as a volunteer to the trade association and speak about the industry, going from city to city". I could learn about the early pioneers that had essentially done what I had done in New York with my partners. That's what I did for about seven or eight months. I traveled the United States.

Allison: This was mid-1960s as I recall, 1966 or 1967?

Goldstein: Yes, and I signed up members for ADAPSO. It was very successful for them but it was also very successful for me because I saw the opportunity to re-enter the business and build what I called then a network of datacenters. It wasn't networking as we know it today, involving communications technology. It was chains of datacenters. I would hold dinner meetings with speakers. Three or four guys would show up because there were only three or four guys in the business. I got to know the industry and the early players in the industry got to know me. As a result of this experience, I decided that there was an opportunity to build a network or a chain of commercial datacenters using those contacts that I developed in the marketplace and as a result of doing this volunteer work.

Allison: Was this economies of scale or was it shared software? What was the opportunity? How would you characterize it?

CREATING UNITED DATA CENTERS

Goldstein: Most companies in the business at that time were generalists because they were servicing a local market. The local market wasn't deep enough in any application with the exception of payroll, and even then it wasn't very deep. They provided multiple services, usually with the financial processing base in the marketplace. But I felt if I could build a network of datacenters, there would be economies of scale to develop special software to hit industries that were national industries if you will. By doing that I would achieve: a) reputation; b) insulation from competition and c) the economies of scale, building at that time what we perceived as reasonably expensive systems. And I decided to do that but at that particular time there were others who were also building chains. Automatic Data Processing again, being a good example, bringing payroll service city to city. I decided I would be a good coward and build my market in the secondary and tertiary markets where I wouldn't have competition, that I could buy companies less expensively and I wouldn't have to face what was then the developing companies with financial strength, that didn't have the history that I had of starting companies, selling companies and becoming a professional manager. It's no mistake that I named this company United Data Centers because it was uniting independent datacenters.

Allison: So you would go as a federation rather than a corporation so to speak? Is that a fair statement?

Goldstein: Well, we owned them all so it was a corporation.

Allison: But in terms of how you managed them.

Goldstein: Each datacenter had its own president. That title was valuable to us to keep a sense of ego involved. We were hitting people who were beginning to see consolidation as part of the pattern of the industry. And so we acquired datacenters in Lexington, Kentucky, Wichita, Kansas, Birmingham, Alabama, and in other secondary markets such as Syracuse, New York, and began building scale and volume in each particular marketplace.

Allison: So you stayed in New York though, is that right?

Goldstein: United Data Centers initially was in New York but then we moved to Greenwich, Connecticut.

Allison: But the other companies that you picked up were not in the major cities?

Goldstein: Yes, that's right.

Allison: Was this self-financed at this point? Did you have partners? How did you do the financing of this?

Goldstein: Well eventually we went public. There was a very small public offering. You could do that at that time. I think it was called a Reg A Public offering, and we raised about \$600,000 from a public offering. I had contributed some of the initial capital and some of my friends had invested in the company. Going public was also a way of supplementing our

modest capital and creating the liquidity of a piece of paper that hopefully these independent datacenter operators would be willing to accept as they gave up self-determination. They got a degree of liquidity in the process of joining our network or somebody else's.

Allison: And that model took right off, or was it bumpy for a while?

Goldstein: No, we were pretty lucky. We made money.

Allison: From the outset?

Goldstein: Yes, our first year we made money. Not a lot, but it was enough.

Allison: So you say that \$600,000 dollars was not a lot of money, even back then.

THE BEGINNING OF TIME SHARING

Goldstein: No it wasn't. And then the rhythm of technological change came upon us next. Communications. The telephone line was married with the computer and large firms were beginning to emerge offering time sharing.

Allison: Had you seen that coming? I mean was that sort of a surprise?

Goldstein: No, it wasn't a surprise to us. We began to see that in early time sharing companies such as Comshare and Tymshare and others. And most of our work, virtually all of our work, was batch processing or offline processing. The time sharing companies in turn, while they married software into their time sharing systems, were largely selling raw machines. But they were delivering it by telephone. So they were able to create a margin by delivering it this way. IBM, who was the monopolist of this era in the industry, never made it easy for the independents, because as a monopolist they engaged in predatory pricing and monopoly pricing. The time sharing companies were able to exploit the pricing monopoly that IBM set up. They were offering raw machine time for firms to avoid installing their own computers and use time-sharing as a solution to their desires for computers. And even though we saw this coming, we didn't have enough technology or money to get into that particular marketplace. In turn, the time sharing companies were attracted to firms such as United Data Centers because we had developed software to provide solutions for marketplaces. They felt they could leverage their time sharing business if they could only have a company that knew what building applications, commercial applications, was all about. And we saw this as a way of not being obsoleted from the changing technology that was taking place in the business. It was at that point we merged United Data Centers with Tymshare.

Allison: So they saw applications in you. You saw their capability in terms of...

Goldstein: They saw applications in us, the ability to understand business applications and we saw technology in them, and greater resources.

INDUSTRY CHALLENGES – IBM, THE MONOPOLIST

Allison: You talked about some of the trends in the industry, but what were the struggles? What were the things that you really had to be concerned about? Was it regulatory? Was it competition? What were the challenges?

Goldstein: Well the challenges were, first of all, one that I mentioned, IBM as the monopolist and the arrogance of a monopolist in pricing in the marketplace. To give you an illustration of that arrogance, if you rented a computer and you wanted to upgrade it to be faster or have more memory or what-have-you, you would contract with IBM to do this and you would have a 20% increase in cost or what-have-you. IBM would send an engineer to your computer that was on your premises and take out a part of the computer. I can't think of a better illustration of the position a monopolist was in when you're paying 20% more for less, as he takes out a "governor" in there that was controlling speed and time.

Allison: Were you leasing the IBM equipment at that point or had you purchased it?

Goldstein: We couldn't afford to purchase it. Leasing was the principal source of IBM's income at the time. IBM of course became the dominant player in the marketplace for lots of reasons even though Univac was an early competitor and could have been a principal competitor.

Allison: There was Control Data. Amdahl came around at some point. But you stayed with IBM.

Goldstein: We stayed with IBM principally, although we also had Burroughs. We had Burroughs computers in some of our operations. We could get more time for the buck by borrowing or renting a Burroughs computer, but there were marketing problems associated with this and IBM was also very clever. Whereas if anybody rented a Univac computer, had a technical problem and wanted a program developed, Univac would send engineers in, or programmers in and do it for the client. IBM took that same budget and built schools. So if you wanted training from IBM you went to one of their schools. Remember at this time, software was free. It had no value. That was IBM's philosophy, that software was free and had no value. Univac was spending money developing applications and creating "cripples" for those who used its equipment. IBM took the application money and created disciples for its hardware. The disciples then moved on to new jobs and new influential positions. It was one of IBM's wisest decisions and they built dominance in the marketplace.

Allison: So their strategy on how to increase the knowledge of their systems was to spread that throughout the industry.

Goldstein: Right. So IBM became the first monopolist in the business. We subsequently have another monopolist in the business and IBM slipped and folded in terms of losing its position in a lot of ways. But that was one of the big problems we had to deal with. There were other problems. IBM salesmen were going around and selling more than firms needed in computer equipment, and then encouraging them to sell the excess capacity. You could make money by buying more than you needed in the marketplace. They did that with banking institutions for example. Banks became the first industry, in this new industry, the data processing service industry, that you had to deal with because the banks saw this as an opportunity to create demand deposits for banking. They would frequently advertise that

they would give free services which was a ridiculous concept. We knew how expensive it was to produce the result and how labor intensive it really was. So the first competitor that this industry had to deal with was banks created by government edict, charters granted by state or federal governments and with enormous resources compared to this industry. They were foolish competitors because they thought that this was a service that they could give away. That became, if you will, a rallying cry for ADAPSO. ADAPSO took on the banks as its first competitor from outside because there were beginning to be hints that this could be a real business. There were early public offerings such as United Data Centers, which I described to you. And not that these were frequent and not that these were the bubble that we've just lived through in terms of the Internet bubble. But it also became a rallying cry for the industry by which to attract new members to speak out with a voice hopefully that was loud enough to be heard as to why banks should not be allowed to do give away this service.

ADAPSO'S ROLE

Allison: Well this really gets us squarely into the ADAPSO issue and maybe we should transition to that because I think you're sketching why as a CEO of a growing company and looking at the market as you saw it, ADAPSO had some great attractions for you to be involved in.

Goldstein: Oh it was enormous.

Allison: Say a little more about that. How you saw that, why you saw a trade association like ADAPSO as important. What its goals were and why it was important to the industry.

Goldstein: Well the first thing ADAPSO did, even before becoming an advocate for fighting what it called unfair competition, was it first became an educational organization. Its meetings were a series of how to do it seminars because there was no place to go to learn how to run a business in this industry. The schools were awful. So ADAPSO became its own university. Its meetings, which were held four or five times a year, were enormous educational opportunities where we learned from each other, as to how to price, how to sell, what application specialties would exist in the marketplace, how to manage if you will, and that was the first role of ADAPSO. Then the advocacy opportunity came up for ADAPSO. For ADAPSO it was an opportunity to get new members. For me it was an opportunity to take one of the leadership roles in that activity. My willingness and ability to speak out about these conditions enabled me to become a spokesman for ADAPSO, in which I subsequently served as president and board member and had a long time involvement. On a selfish basis it gave me stature in the industry to continue to acquire companies and to build a recognized position in the marketplace.

Allison: So, in ADAPSO, you said you had the education; that was first and foremost. You learned individually. Other members of your company learned and then it became a way of learning about the whole range of companies that formed the industry.

Goldstein: Right.

Allison: Now not everybody belonged to ADAPSO. Some people elected to stay out. How did companies decide whether to become part of this consortium approach as opposed to an individualistic approach?

Goldstein: It's like any trade association. The trade association provides value for the dues and the time invested in it. It becomes worthwhile to be part of it. It also became a marketplace. With fast moving technology that has always characterized this industry, it became a place to meet one's competitors and conceivably for liquidity, a chance to be acquired. Being acquired in this business was not a sign of failure, it was a sign of success. There was no large company in the business that didn't have "growth by acquisition" as one of the principles of its strategy. There were very few independents who were immune to the attraction of having a payday, because these were men who were growing older and who were concerned about the pace of technology, about these external issues of competition, the IBM monopolist, bank competition and others soon to come. This was a place, if you will, to liquidate risk through the process of being acquired. So ADAPSO became a marketplace. First it was an educational center, and then it was a spokesman, advocate, and a marketplace for mergers and acquisitions.

Allison: Well, so many people say that your special expertise was particularly in that area, and it's hard as you look back, to imagine what the environment was like, the pioneer days, small companies sort of coming together. I have sort of a mental picture of you meeting other CEO's and talking whether it was good to get together. Can you sketch what that was like? How did it really happen back when you would meet people? I'm sure some people wanted to merge and other people didn't. How did it play out?

Goldstein: I wasn't the only one doing deals. My role had metamorphosed in this business, as I described it to you. First I was an entrepreneur, then I was a professional manager, then I was an acquirer as a principal for United Data Centers and subsequently Tymshare, and my final decision was to become an agent; an intermediary in mergers and acquisitions, in the business. So, you ask me the question, how did you do it?

I made an enormous investment in being willing to participate in trade association activities, speaking out. I wrote a column for one of the magazines in the business. I would publicize issues that were of concern to the industry. I began running mergers and acquisitions seminars on how to do it. I was a living example of the benefits of mergers and acquisitions because at that point I had built two companies and sold them successfully. I continued to do a lot of traveling and I became a source of information for independent companies in the business. There was nothing very unique about this.

Allison: I'm not sure. I'm trying to imagine. Are you sitting up in the evenings reading balance sheets, studying the trends of companies and trying to think which ones would fit together?

Goldstein: Well, there was some of that but that would be for a targeted company to acquire. In 1979 when I became an agent for mergers and acquisitions I took on a partner who was a former executive at Automatic Data Processing who had been the most prolific at acquisitions in the business. He had done the deals for ADP. Together we simply brought these skills and we became, if you will, the database.

Allison: Was this related to your previous ADAPSO experience?

Goldstein: Not directly. When I was going around the country in the 1960s for ADAPSO, I would go back to my hotel room and I would dictate a memo about the companies that I had met that day and the people. And these memos, as I go back and read them, are filled with minutia, unimportant things as well as comments about relationships and things that I had discovered. Frequently they would become a member of ADAPSO, would come in and we played the greeter role. This became very self-serving when I became an agent for mergers and acquisitions. This was a terribly lucrative business but it also was needed in this industry because this industry had gone through its early stage of proliferation of independent companies, and consolidation was a logical thing that occurs in all industries. The industry needed a resource to bring a buyer and a seller together, and to help them come to a fair value. It's not that easy a thing for a man who has built a business. It's very hard for him to really understand what his business is worth and the word of an agent is very important to him.

Allison: So as you looked at these companies, what would you look for? Was it the financials? Was it the people? Was it the technology? How would you assess that?

Goldstein: All of the above. Larger companies, as I said before, had M&A as one of their root strategies. It was a cheaper way to move into a new market, or offer a new product. And then what was happening in these larger companies is that they too changed. As they grew to be larger, they changed from technology companies to marketing companies. The emphasis changed too. They began to be led by successful marketers rather than technologists. The technologist was obsoleted, which is a point I made earlier. They began by developing product lines of their own, but they later found it very difficult to develop new products internally because they had become marketing juggernauts. Therefore, to bring new products into their portfolio, they found the best way was to identify them in the marketplace, measure what the national market was for those particular products and then acquire them.

MERGERS AT UNITED DATA CENTERS

Allison: We've gone over a lot of material. Let's go back to United Data Centers. I wonder if you could give me an example of one of the mergers that you pulled in there, as a way of giving us a sense of the deal at this time. Is there a good case?

Goldstein: Well, let's look at one case. We had acquired a company called Dynafacts. Dynafacts was a company that was headquartered in Wichita, Kansas, and was controlled by an accounting firm at that time, Elmer Fox & Company. It had a datacenter in Detroit that was originally developed by another accounting firm. These accounting firms would put two or three datacenters together. They developed a product, a computer-automated income tax product, that enabled accounting and tax practitioners to process tax returns by computer. They ran into financial hard times. The accountants didn't understand much about the business, and we found a company which thought this computer-automated income tax product was very interesting. The firm was headed up by Jim Mann who eventually became the executive vice president of United Data Centers and is now Chief Executive of SunGard

Data Systems, a 2 billion dollar company in this industry. We were attracted to him as a manager. We were attracted to the product, automated income tax returns. We were attracted to the multi-city structure, which was part of the United Data Center's philosophy, and we were attracted to the fact that the company was in trouble. And we were able to actually get these businesses because accounting firms were nervous that they had these businesses. After all, accounting firms that are supposed to be the paragons of business were all of a sudden exposed. So we developed a deal where they actually contributed capital to the company. We issued shares for United Data Centers. We used the capital to make settlements with their trade creditors, 50 cents on the dollar, 25 cents on the dollar. We brought these companies into United Data Centers, and it was a very successful deal. There is an example of a typical acquisition.

Allison: Yes, that's a good example. Was the board repulsed by this or did they see you as saviors?

Goldstein: They were relieved by this.

Allison: And you knocked on their door or how did the discussion start?

Goldstein: We found them. I can't recall how we found them. But we found them and we were attracted principally to the product. We thought it was a very good product, and today there are some massive firms in the business who provide that particular service. The accountants didn't belong in this business. They weren't ready for the rough and tumble of what this business was. It was ADAPSO who published the first brochure that I'm aware of, that said, the accounting companies that are going into this business were creating conflicts of interest, which was very dangerous to their independent services.

Allison: You saw some roots of the Enron scandal there?

Goldstein: Yes, it was always good for ADAPSO to have an enemy; be it IBM, the banks the accountants, and eventually Microsoft. Enemy is too strong a word as it wasn't targeted at people.

Allison: Sure. Gives it a reason for being.

Goldstein: Because ADAPSO was a feisty organization it gave it a reason for being. It was willing to take on the world. The first party they took on, the banks, were easy marks. We got legislation that was favorable to us restricting bank competition, and it was the success of having taken on the banks and surviving their free data processing services which gave ADAPSO the stomach to take on other battles, including Microsoft, which not even the Justice Department pursued.

Allison: Let me go back to the UDC days. Were there acquisitions that you went for that didn't pan out?

Goldstein: Growing by acquisition is a dangerous way to grow and not all the deals we did were successful deals. I wish I could say we never made a mistake. Of course we made mistakes. Anybody who grows by acquisition makes mistakes.

Allison: We sort of got a picture of a successful one. I wonder what it was like when something looked great but it didn't pan out. Is there a good example of that?

Goldstein: I've expunged those. Let me think. An acquisition. Well of course there were some that didn't work out. But because we had limited resources, we either merged another company into them to create scale or closed them if necessary. We didn't have a lot of money or need to save our egos by saying we don't make mistakes. If we made a mistake we would close it.

Allison: Now we talked about the path that led you from Computech to UDC and the merger with Tymshare. What is the story of going from there to your career at National CSS?

JOINING NATIONAL CSS

Goldstein: Right. That was about a two-year period. Tymshare was a west coast company located in Cupertino. I promised my family that we were not moving to the west coast when we merged with them. So I moved into Tymshare's office in Darien, Connecticut and I did the deals for Tymshare. Tymshare became aggressive at acquiring businesses, but I was sort of removed from the corporate center. Removed by three thousand miles. I was doing the M&A deals. There was a time sharing company in Wilton, Connecticut, right around the corner, which was very attractive and recruited me. Eventually I got seduced and I became chairman of that company. It was an increase in responsibilities. It was local and I had served out my time at Tymshare. This goes back to the principle of quiet possession once you sell the company. I performed for them and I was ready to move on. The comment has been made about me, I never kept a job very long in the business. This is part of the pattern you're seeing in this discussion. I joined National CSS and I enjoyed it very much. It was a well-financed company. It was quoted on the American Stock Exchange. Just as I described to you, the movement of technology, the rhythm of technology in this industry encouraged me to sell my batch processing, application-oriented business (UDC) to a time sharing company. What was happening in time sharing was that mini computers came on the scene. You had relentless downward pressure on the cost for computing. The time sharing clients that were using communications to buy a piece of a computer could now buy a whole computer but in a mini size. Another shift in technology occurred. I've survived and prospered in this business by being willing to move on, and so were the other officers and directors of that company. The Dun & Bradstreet Corporation thought if they bought a time sharing company they would solve their internal sloppy data processing, which of course never happened. They made an offer that was too desirable, too good to refuse, so we sold the company to Dun & Bradstreet.

Allison: At National CSS, I don't have all the dates here; let's see if we can remember. When did you go there?

Goldstein: Probably joined in 1977 and left in 1979. It was a two year span.

Allison: So you were at UDC, Control Data and Tymshare for a little more than a decade, isn't that right?

Goldstein: Almost a decade, yes.

BROADVIEW ASSOCIATES

Allison: And after Tymshare...

Goldstein: After Tymshare, I was at National CSS for two years and sold it to Dun & Bradstreet. At that point in my life I never wanted to look at a salary review again. I didn't want to be a manager. I didn't want to run a business anymore. I took the skills that I had honed in this career as I described it to you and became a dealmaker as an agent, and started Broadview Associates along with my partner, Gil Mintz.

Allison: What is the passion for you in the deal? What interests you?

Goldstein: Well, it's very heady; it's very exciting. You're at an emotional point. The seller is deciding to do something as dramatic as sell a company. When he started it, he never thought he was going to do it. It's very fast moving. The merger and acquisition business is a young man's business. You won't see many older guys like me in the business. It's a young guy's business. It's a lot of trying, and a lot of late nights. I succeeded as a dealmaker because I was always anxious to let the other side win some points in the deal process. It was never maximum price or get the maximum. My approach was to get the deal going where there were two winners, the perception of two winners coming out of the deal. It really served me well. My reputation had grown as a dealmaker and my presence on the side of the seller or the buyer added value. When a company is sold the fees are the breakage. So much money is generally passing hands that the seller or the buyer doesn't mind paying the breakage. The brokerage fees were enormous. I mean it's an outrageous business. Outrageous in terms of what people are willing to pay for advice and guidance.

Allison: Did you tend to work in face-to-face meetings? Did you work on the phone? Was there a certain style that you liked?

Goldstein: Face-to-face meetings were very important. I would also do deals on the phone. I once had a client who was paying this enormous fee and all I did was make one telephone call. He complained about the fee versus the work effort. So I said to him, "Sometimes I don't even make one telephone call and I'll get a handsome fee." It turned out to be a great business.

Allison: And your style was to try to show advantage to both parties, is that true?

Goldstein: Yes, yes. My style was not to win points but to try and understand why the seller was selling and what the imperatives were for the buyer to do this particular deal. This is not mystical stuff. Having sold a business I started twice in my life, you might say almost a third time in terms of National CSS although I didn't start that business, I knew what an emotional experience that is for the businessman to be selling his business. I was able to empathize with that, to deal with it, and to exploit it, if you will, in the process of making the deal. And it's had an enormous impact. I mean, I built an organization that eventually became 300 people, doing mergers and acquisitions only in this industry. This became the

most acquisition prone industry in the world. It wasn't just domestic US, it became international. This industry is an international industry because it can deliver its results in nanoseconds any place in the world. Applications have a commonality; not all of them, but there is a commonality between marketplaces. Smaller marketplaces in the UK or France or where have you, weren't big enough to develop targets. They didn't have niches big enough to get economies of scale to become specialists, so they were generalists. US companies were able to move in and deliver its product around the world. In an era where US exports may have suffered in other industries, this remains a major export industry for the US. The major firms in this business, with very few exceptions, are essentially US-based businesses. When technology develops in a foreign country, they will quickly come and develop a headquarters office in the US because the US probably still represents 40% of this market for information services.

INVOLVEMENT IN ADAPSO

Allison: Let's go back and talk about ADAPSO. The many people that I have talked to about you say in some ways you really were the leading light of ADAPSO in those early years, or at least one of the people. And we talked a little bit about it off and on but I think we should talk straight about it. You talked some about why you got interested in it.

Goldstein: Remember, I had self-interest. ADAPSO became a platform for me in terms of my merger and acquisition activity. I like fights. I liked taking on giant companies like Microsoft or IBM. It was good for ADAPSO, it was good for me, and I enjoyed it.

Allison: So the support you got for being a leader in ADAPSO was because you were willing to fight and because of your style in dealing with other people? How would you characterize it?

Goldstein: I think that while I ran companies mostly, senior companies, I gave ADAPSO a lot of time. I took my leadership role seriously at ADAPSO. I don't know who's told you that I've played this important role but you know a lot of it was self-serving. It served my goals.

Allison: Did you have the same win-win strategy for ADAPSO as with your mergers and acquisitions? Clearly you made it good for yourself. You've made no secret of that. But was your goal to make it good for the other members?

Goldstein: Yes, yes it was. I felt it was important. We needed a trade association.

Allison: Why would you say you needed it? In the early 1970s why was the leadership needed?

Goldstein: There were always issues that we were dealing with, whether it was an FCC inquiry in communications or it was accounting organizations thinking this was a proper activity for their auditing firms to do. We needed this combined voice and we were weak compared to other industries that had organizations like the American Banking Association, the AICPA, etc. etc. We needed a voice and ADAPSO served as that voice. We had a series

of presidents of ADAPSO and I was president of ADAPSO for two years. I became the first president of ADAPSO to serve two years. Most of our presidents served one year.

Allison: That was 1970- 1972 as I recall, is that right?

Goldstein: I don't recall when it was myself. I took the job seriously. What can I say? I was probably the longest standing board member, and then became chairman of the ADAPSO Foundation, which became its first charitable arm. I was active in the Association. We've had some terrific people in this business after all, a senator.

Allison: Frank Lautenberg?

Goldstein: Yes. We sent somebody to the Senate. We had a man in this industry running for president of the United States. We had a man in this industry become dean of the Wharton School. I mean we've produced some pretty good guys.

GOVERNMENT'S ROLE IN THE COMPUTER INDUSTRY

Allison: We haven't talked much about government in this interview. It's kind of surprising that it hasn't come up, particularly when you look at it from the ADAPSO perspective. How do you see the role of government and the industry in those early years particularly, the formative years of the software industry?

Goldstein: Well we had to fight for attention of the government. As a relatively small association, we didn't really know how to deal with the government. We got lucky in the bank situation, principally because of Wright Patman. He was a popularist type of chairman of the House Banking Committee. A grand old name, the Robinson-Patman Act. We also made an impact with the Justice Department about Microsoft's monopoly position that was developing. We've done fairly well with government. We didn't have a lot of patience for it and we didn't have a lot of budget for it. But we did fairly well.

Allison: In your leadership years were you on the hill a lot? Were you talking to congressional leaders?

Goldstein: I wasn't on the hill a lot. I testified before the Senate and the House committees, paid visits to government officials. We did all right with government because the government recognized that this was an export industry and that we had worldwide leadership. Parts of the government also felt that this country's knowledge about computing and software and data processing was a military advantage for this country to have.

Allison: Now we've mentioned government thinking about the banking industry, the issues of IBM and anti-trust. Another issue that comes up a lot in the history is the whole telecommunications industry, the role of government there. I wonder if you had some recollections about that particular role of ADAPSO with government.

Goldstein: That one I'm not sure I do because that occurred later, but there were others. The time sharing companies principally were interested in that and I know ADAPSO participated very broadly in the FCC inquiry which was a major study on the part of the FCC

in connection with communications and the like. But I really didn't have much involvement with that because by then I was running around the country doing deals and didn't have as much time.

Allison: As you went to the later phases of your career still doing mergers and acquisitions, did ADAPSO continue to play the same role for you or had you established a business by then?

Goldstein: It became less important. It began being seduced by big companies who were able to pay more than their share of the tariff and so companies like Microsoft became dominant policy makers or tried to become dominant policy makers. We could frighten them periodically and we did. Here was this coalesced industry that grew up from its early beginnings as I described it to you, but then it began breaking up by the interests of varying geographies, the interests of varying specialties within the broad definition of what the information industry was all about, for example big versus small. It all began to fracture. The unity that characterized the early years of ADAPSO disappeared. We had some new presidents who held office for a short while. So it became less important. Other trade associations developed in niches, new niches. The fact that this ADAPSO Reunion is taking place is absolutely amazing. A few people were able to reconstruct the past I guess. I think that tells you my story, doesn't it?

Allison: I think so. I just wondered if you had any parting thoughts on those pioneer days and how they appear to you at this time. Are you glad they are over?

Goldstein: I'm glad I participated. It was good to me. I've had more than my share of rewards from doing it.

Allison: Well this has been great. I appreciate your taking the time to sit down with me.

Goldstein: Thank you. I really enjoyed it.