GPS Workshop: Early History

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Recorded: March 31, 2009
Falls Church, VA

CHM Reference number: X5323.2009

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Conducted by Software Industry SIG – Oral History Project

Abstract:

Pioneers from eight Government Professional Services firms which were formed at the start of the industry discuss the formation and early years of the companies. The topics covered are who the founders were, their original impetus for starting the company, the source of initial and follow-on financing, and initial markets and technical objectives. The discussion covers the initial market positions that the companies were aiming for and how this was influenced by the presence of the other companies. This session covered five of the eight companies with the remainder covered in Session #2.

Participants:

Name	Affiliation
Burton Grad	Moderator
Dan Bannister	DynCorp
Ed Bersoff	BTG
Walt Culver	CSC
Stan Gutkowski	Andersen Consulting/Accenture
Judy Huntzinger	BDM International
Jack London	CACI
Bob Plouffe	CSC
Wayne Shelton	PRC
John Toups	PRC
Dan Young	Federal Data Corporation
Tim Bergin	American University
Paul Ceruzzi	Smithsonian Air & Space Museum
David Grier	George Washington University
Jeffrey Yost	Charles Babbage Institute
Doug Jerger	Software Industry SIG, Computer History Museum
Luanne Johnson	Software Industry SIG, Computer History Museum

Burton Grad: I'm Burt Grad and Luanne Johnson and I are the co-chairs of the Software Industry Special Interest Group which is sponsoring this meeting. The Software Industry SIG is a volunteer section of the Computer History Museum located in Mountain View, California. Material about the Museum and the Software Industry SIG are located in your handout package. This meeting is being held on March 31 and April 1 in Falls Church. The purpose of this meeting is to record the recollections of some of the Government Processing Services industry pioneers. These recollections wil be transcribed, edited and then posted on the Computer History Museum website for use by historians, researchers and anyone else interested in the history of our industry.

How many of you know of the Computer History Museum? They have the largest and most significant collection of computer hardware. What Luanne and I try to do is convince them that there was a major part of the industry that wasn't principally to do with hardware. It had to do with services and software and people and things like that. We've said that there should be focus on the businesses, not just on the technologies.

Dan Young: Some of the folks might remember that the Computer History Museum started back in Boston in the late 1980s and 1990s. That's really the start of the one which is now out in Mountain View, right?

Grad: They moved 17 truckloads of hardware and papers from Boston out to Mountain View. For any of you who go to the San Francisco area, please go visit. I'll give a short pitch for them. They have a replica of the Babbage Engine functioning there. It was built with money from Nathan Myhrvold, who was one of the early employees at Microsoft. They crank it to make it work. In Babbage's lifetime, he never built the machine, but he had all the designs and one of the curators at the Science Museum in London located his papers and they put a team together and built a version of it. And then Myhrvold had them build another version, including the printer that goes with it, which is at the Computer History Museum and they demonstrate that regularly with strong men cranking the thing so all those gears will turn. It's a good experience to see it work.

The Museum is also working on a major timeline exhibit and they put a whole lot of literature in the program handout that you're free to look at later on, not now. The Software Industry Special Interest Group is the sponsor of this meeting, and there's material in there about us and about the Museum.

We have the privilege of using this Executive Briefing Center thanks to the courtesy of CSC, and specifically Tom Anderson who helped arrange this. As you can see, it's a beautiful arrangement in a beautiful facility. We appreciate that very much. Doug Jerger is over there and he will help you with anything that you need. If you have any materials you want to donate or discuss, or you have things you might want to donate, talk with Doug about that.

Luanne Johnson: If I may interrupt, Burt, this is the tenth meeting of this type that we've done, focusing on different sectors of the industry, software products, professional services in

the commercial arena, etc. And this turns out to be the best way we've found to collect memories of what was going on at a certain point in time. We've done over 100 oral histories as well. But the interaction between people remembering things stimulates other memories, and we found this to be one of the most effective ways we have of bringing out what was really going on back in the days when all this started.

Introduction of Attendees

Grad: One thing I would like to go through very quickly is have each of you introduce yourselves. Please make sure that the mikes are close enough to you and that your tent cards are lined up and visible.

This is the tenth meeting, and we've been using these meetings as vehicle for covering most of the areas of the computer software and services industry: mainframe software, mini-computer software, PC software; and various kinds of professional services including the brokerage type firms, and the commercial firms. And now, thanks to you gentlemen and ladies, government professional services. We'll be doing processing services this spring to cover timesharing and remote processing, and then will do service bureaus. By that point, we'll have covered most of the major segments of the industry. This is never in-depth. You get what you can get in the one-day or two day meetings and then get some more depth through oral histories. So we encourage any of you who have memoirs, who have things that you've written, or going to write, we encourage you to please do it. We'll post it. If it's really good, we'll put it in the Annals of the History of Computing. Jeff Yost is the current Editor in Chief of the Annals, and Dave Grier is the previous Editor in Chief, and Tim Bergin was the one before that. It's thanks to their work with us and the work of other historians around the world that we've been able to make this happen, to get this stuff collected, preserved and communicated to a lot of people.

We're now going to start the meeting. Most of you know each other, but many of you don't know the historians and some of the other attendees. So we're going to ask you to introduce yourselves briefly – who you are, what your affiliations were, and that's about it. We don't want to know your hat size, or what color ties you prefer. And then the second time around, we're going to ask you to talk about the companies that you helped to found, or helped to grow, a little bit about their history. So, keep it short, a minute or so, but tell a little bit about yourself, what companies you worked with, and those kinds of things. And for any of those who are not with companies, tell about yourself anyway. Doug, please start.

Doug Jerger: I started with Arthur Andersen and Company when they were really good, back in the 1960s. And then on April Fools' Day of 1970, we started a software company in Chicago called Fortex Data Corporation. In 1975, we sold ourselves to Dun & Bradstreet. In 1977, we bought ourselves back. In 1981, we sold it to University Computing Company. Since then, I've

been doing various consulting kinds of things. I worked for Luanne at one point, at the trade association, ADAPSO, here in DC, which was the predecessor to the Information Technology Association of America, ITAA.

Grad: Is it now called Tech America?

Jerger: Yes, Tech America.

Grad: Doug joined with Luanne and me at the very beginning of this effort in 2000 to start the Software History Center, as we called it then. He was one of the first recruits we got to work with us on this. Jeff?

Jeff Yost: I'm Jeff Yost. I'm a historian at the Charles Babbage Institute at the University of Minnesota. I also edit the *Annals of the History of Computing*. And I'm currently working on a book on the history of the computer services industry, so this is of great interest to me.

Grad: Jeff has been one of our supporters from the very beginning, as has the Charles Babbage Institute. A number of the oral histories we've done are posted on their website. So that's been very significant. Dan?

Young: I'm Dan Young. I spent 25 years with a company called Federal Data Corporation. Prior to that, I had a very checkered career in various aspects of the electronics industry, Texas Instruments, and a UCC company called Datran.

Grad: Oh, really?

Young: That was a real pioneering company in communications.

Grad: Let me interrupt, if I may for a minute. This meeting is possible because of a contribution from Sam Wyly. He donated money to us last year that's enabled us to run this meeting and the others we're doing out in California. And of course, he was the founder of UCC and an extremely interesting gentleman.

Young: And he was the founder of Datran.

Grad: He got $50 million from that one from a lawsuit against AT&T.

Young: I think that he got $125 million. Sam did quite well, as did many shareholders as a result of the settlement with AT&T. Sam is an old and dear friend of mine. I grew up in Texas,

which is where I first met him. And Federal Data was a happy growing company. We subsequently were acquired by the Carlisle Group, and were part of the Carlisle Group for about five years. Subsequent to that, I worked with Carlisle on various boards. It's been a great ride!

Grad: That's wonderful! Dan, thank you. We have done an oral history of Sam Wyly. How many of you have read his book? It's called *1000 Dollars and an Idea.*

Judy Huntzinger: It's a great book.

Grad: It's a fun book. Sam's a very unusual character, I think that is a nice way to put it. Hell of an entrepreneur. Judy?

Huntzinger: Thank you. I'm Judy Huntzinger. I started my career at KPMG. After leaving KPMG, I went to work for BDM. I started with BDM in March of 1981, just a couple months after their initial public offering, and stayed with them until they sold it to TRW. So I spent 18 years with BDM. I was the Corporate Comptroller there. Since those days, I have been self-employed. I do consulting work mostly in the merger and acquisition area.

John Toups: My name is John Toups. You mentioned April Fools' Day. I happen to be a civil engineer. I'm sort of a misfit in here. I have a consulting practice, and on April 1 of 1970, PRC made me an offer to buy my practice. And so I joined PRC in June of 1970, and did various things, and became CEO in 1976. In 1986, we sold the company to Emhart, which was sort of a misfit. I don't know whether the CEO there knew the business. Because we'd been in play – somebody wanted to buy us too cheap. Emhart then got put in play, and got sold to Black & Decker. Black & Decker sold PRC to Litton which was owned by Northrop Grumman. So whatever is left, is in Northrop Grumman. And the man to my left worked there a lot longer than I did, so he can tell you more about it.

Wayne Shelton: I'm Wayne Shelton. I was recruited by the RAND Corporation in 1957 to be trained as a programmer/analyst at Lincoln Lab. The RAND Corporation had been formed in 1947 from Project RAND that was embedded in Douglas Aircraft. PRC was founded as a RAND-for-profit spin-off in 1954. So when I joined in 1962/1963, it had been going on for a while. And in the meantime, System Development Corporation, SDC, was spun off. So I got spun off. I came back to RAND and PRC used the RAND Corporation as recruiting grounds, and that's where they found me grazing. So I was recruited to come to PRC. I was at PRC for 28 years. I retired after John Toups, as the Chairman and CEO of a wholly-owned subsidiary then of Emhart and then Black & Decker. Subsequently, Hughes Aircraft Company and General Motors had decided they wanted to diversify, because they saw their electronics business going south. So they recruited me to do a study on diversification, and, of course, I suggested technical, professional services. They hired me and gave me a little chunk of the business; it

was a 100 million dollar a year division. They told me to go at it, and I was there eight years, and when I retired, it was almost a three billion dollars a year operation.

Dan Bannister: Well, good morning, everybody. I'm Dan Bannister. My career story is really much simpler than the ones you've heard so far. I was never bought or sold. I started my career after a four-year military service with a company that later became known as DynCorp, and the history of how we got there, I guess, is for another time. But anyway, I joined that company in 1953. And I became the President and CEO in 1985. And then became the Chairman in 1987. And by then we had grown from – well, when I joined the company, our revenues were about 30 million a year and when we sold the company in 2003 to Computer Sciences Corporation our revenues were about 2.4 billion dollars, we had 24,000 employees, and quite a diversified business base in IT, logistics support, technical services, etc. Since then I've been doing some consulting work and serving on boards. I'm on the CACI board, among others. And enjoying life and trying to learn how to retire, but I've failed at it three times now. Ed?

Edward Bersoff: Good morning! I'm Ed Bersoff. I started my professional career as a Military Detailee to the NASA Electronics Research Center, which at that time in the late 1960s was in Cambridge, Massachusetts. Our mission at that point was to design computers for deep space missions, and also for the space shuttle. This was in the late 1960s and I was working with NASA when we went on the moon in 1969, which was quite a heady time to be at NASA. When I left the military, I came here to work for a company called Logicon, which at that point, was a public IT company, headquartered in California. It was bought by Northrop Grumman several years later. I left Logicon to join a startup company called SeaTech, which, curiously enough, was bought by Northrop Grumman as well, but that was after I left that company. I started my own company, BTG, in 1982 and kind of grew that from scratch to a company that was public. We went public in 1994. Actually, it was the first company in over ten years to go public in the professional services industry. It preceded BDM, the second IPO, I guess, by about a year. We sold BTG in 2001 to Titan Corporation, which in turn, was sold to L-3 in 2005. About a year or so later, a group of investors and I started a special purpose acquisition corporation, a SPAC, took it public in 2005 and raised money to make an acquisition in the government services space, and acquired Advanced Technology Systems Corporation very early in 2007. And since that time, I've been running ATS, and another public company in the government IT space.

Grad: Thank you, Ed. Walt?

Walt Culver: Good morning. I'm Walt Culver. I got my PhD at what is now Case Western Missouri University in something called Systems, normally assigned to the EE Department. Some folks who know me would say I don't know anything about circuits and EE, and that's probably right. I joined the Westinghouse Defense and Space Center up near the Baltimore

Airport, and within about a year or so was running their Applied Math Department, and we were doing a lot of work with tracking satellites, and tracking Russian launches, which you couldn't do by hand. So, perforce, we started getting involved with computers. And at Westinghouse Defense and Space Center, in 1964-1965, with 10,000 people, there was exactly one computer. Now that may be inconceivable, but there was just one computer for 10,000 people to share. It was a Univac 1107, as a matter of fact.

In 1968, I joined Computer Sciences Corporation, and stayed with them for 21 years. I started out in Moorestown, New Jersey, in the Defense Systems business on the back of the US Navy's Aegis program. There's a little interesting history there. We put together a proposal with RCA for the Aegis cruisers and destroyers. And if they had exercised all the options in that proposal, CSC would have received a total of 11 million dollars for forever. It turns out that program is still running, and I think CSC is getting about 40 million dollars a year, even today, on that program. That contract was awarded Christmas Eve of 1969, so if you just put the numbers together, wow!

I came down here to Washington, DC in 1984, at the request of Al Nashman and ran most of the Washington area business from 1984 until about 1988, and helped move into this complex of buildings. Not this building, because this building didn't exist, but one just over there. And in the last couple years at CSC, I was responsible for all the Systems Integration Business reporting to Bill Hoover who, at that time, was the President and Chairman of the Board. Interestingly enough, the guy who's currently the President and Chairman of the Board, Mike Laphen, I hired into CSC as a fairly low-level finance guy up at Moorestown, New Jersey. And he's done pretty well.

I left CSC in 1990, and started up my own company. I did some consulting work, got involved with SAIC and there are some complex stories there. And then in 2006, Jack London's company bought me and my consulting company. I ended up working for a short period of time for a fellow named Ray Olson, who I hired at CSC 15 years before that. We both left in 1997 or so, if I recall, and very shortly started talking about starting a company, which became SI International, which we started when an investment banking firm in Chicago deciding to give Ray and me 31 million dollars to get started, based upon our buying up small companies and integrating them.

In 2002, SI International went public, and this last summer a British firm approached us and offered us 40 percent more than our public price. I was the last holdout on the board, but I finally gave in. I'm sort of like Jack London. I didn't want to sell the company. And just right after that, the whole market collapsed. But nonetheless, the deal was locked in. It was a 15 million dollar back-out arrangement that this British company would have had to pay. Plus it was still a good deal, even with the market conditions. It just took six months to get through the Intelligence Agency reviews. We actually had to sell off a small piece of the company, because even with all the protections, some in the Intelligence Agency didn't want any touch of foreign ownership.

And so on December 29th, the deal finally went through. They bought us out for around 500 hundred million dollars or so, if I recall.

Since then, I've been sort of doing nothing again, except I'm the Chairman of the Board of the Great Lakes Institute for Energy Innovation. So I'm trying to keep myself busy on that. And I'm still doing consulting work for our industry, particularly in new business and marketing activities.

Grad: Thank you, Walt. David Grier is another computer historian. We have four of the best-known, and I think, most successful computer historians in the world here. And we're very fortunate to have them.

David Grier: I'm David Grier and I followed Tim Bergin as Editor of the Annals. I preceded Jeff Yost. I'm a Professor of International Affairs at George Washington University. I joined the computer industry in 1955, because I was born to it. My father ran the Univac office in Dallas, Texas, and worked with Sam Wyly.

Grad: Now, don't quit right there. How about your books and so forth.

Grier: I have a new book out, which you should all rush out and buy, called *Too Soon to Tell.* It's based on, but it expands extensively my column for *Computer Magazine* about the computer industry. And my first book is about the people who did computing before we had machines to do it for us. I like to say that the most powerful computing unit in the known world in 1938 were 450 homeless people that the WPA employed to compute logarithms by hand. Not with an adding machine. With paper and pencil.

Grad: The name of his book is *When Computers Were Human.*

Grier: Yes, I share the title with Paul Ceruzzi who has written an article with that exact same title. I many have actually stolen it from him. My editor said, "Why don't you use this for a title?" I said, "Paul's used it." He said, "It's not copyrighted." I said, "Well, I have to live with Paul knowing this forever."

Stan Gutkowski: My career's pretty simple actually. I started with what was back then the Administrative Services Division of Arthur Andersen in June of 1973, following getting my MBA at the Tuck School at Dartmouth, which I refer to as kind of my finishing school. I spent the next 33-plus years with that organization and its successor. In the 1980s, we changed our name from the Administrative Services Division, to the Management Information Consulting Division. In 1989, we created the Andersen Consulting Strategic Business Unit. In 1998, we basically filed for divorce from our sister business unit, Arthur Andersen, and then went on our way and went public in 2001.

I spent 33 years in the same company, and saw that practice grow. When I started the Federal Government Practice, it really didn't exist as its own entity. It didn't exist until the mid-1990s. I spent most of my career in our government practice, primarily working with the Federal government. I ran the Federal Government Practice for a number of years.

Grad: The Arthur Andersen piece is very different, I think, as to where it came from, and how that evolved. I think the others would show a very different direction. These companies evolved out of different markets, different approaches, different backgrounds, different technologies. And I thought that would give us a very different point of view.

Gutkowski: For those of you who watch Sesame Street, there's a game called, "Which of These Things Doesn't Belong Here?" And I've made a career of being that odd person out, so to speak.

Grad: Jack London is next.

Jack London: Well, I see many friends and people that we've done business with over the years here, so it's a pleasure to be here today with you all. I started my career with the United States Navy in the aviation business. Not too long after I got into that business, I wound up in the logistics field, in the information technology business. We didn't call it that in those days. We called it ADP, and we called it MIS. So we have a little different nomenclature, reaching back into the early 1960s. I joined CACI in 1972. I think I was employee Number 35, or something. We had two or three million dollars in revenue at the time. The company was formed in 1962 off the back of the RAND Corporation, that some of you have already mentioned, with a product or simulation technology, a language called SIMSCRIPT. That was the company's founding technology. It was founded by Herb Karr and Harry Markowitz out of the RAND Corporation. I joined in 1972 and I'm still affiliated as Chairman of the Board. I had served 23 years as the Chief Executive Officer and President of the corporation. I stepped aside in 2007, and Paul Conofi, formerly of Computer Sciences, now is the CEO of our corporation. There are a number of CSC alumni in the room, I note. I became Chairman of the Board in 1991, when one of the founders, Herb Karr, passed away. I might mention that Karr and Markowitz had a fuss in 1968 and parted ways. Harry Markowitz went on to do other interesting and fascinating things on Wall Street, and we can talk about that a little bit later as well. We have here, John Toups, formerly of the CACI board, and also Dan Bannister who is on our board today. We are a public corporation, New York Stock Exchange, two-and-a-half billion or so in sales. We have built the corporation on focus, being where the customer needs us when we're needed, and through mergers and acquisitions. We've had 41 transactions and counting, and we have been very successful in that profile. So that's a little bit about who we are, and who I am.

Grad: Bob, you're next.

Bob Plouffe: I'm Bob Plouffe. I started my career with IT&T after I graduated from MIT. I was there about ten years and I put them into the digital business. It was all analog up until the time that I came aboard. We were very much involved in the SAC Command and Control System, for example. By the way, Al Nashman was in the company also. He came about a year after I did. IT&T was taken over by a new management – Harold Geneen was the president – that hated engineers. So after ten years of being there, I said, "This isn't for me."

A company up in Connecticut was looking to get me in there. It was called Stelma (???). You probably don't know that name. We had a nice little company. It was small. Nice big stock options and so on, and we achieved an awful lot there. At that point in my career, I joined Computer Sciences Corporation. And I found Al Nashman there again, because they had established part of IT&T in this area, and he was put in charge of that. I think we had a good company. We won a lot of contracts. We worked with some of the other companies around the table here. And it came to a point where I was not satisfied with the company anymore, and I asked Wayne Shelton if he needed somebody and he did. After the stint with Planning Research Corporation, I felt that I had had enough of that with the company and I joined ConTel. ConTel was looking for an executive vice president, and I joined there. When I left there, I decided to just do it on my own, and I got involved in some of the companies that wanted to be in the telephone business. The Telecommunication Act of 1996 put that in place, and after two or three sites, I decided to retire, and do my own thing, and I did quite a bit of consulting. So that's it.

Grad: Thank you, Bob. Paul? He is another one of our illustrious historians.

Paul Ceruzzi: My name is Paul Ceruzzi and I'm a Curator at the National Air and Space Museum, and I'm very honored to be here among such a stellar group of people. If you're wondering why I'm here, as you know, we opened up a branch of the Museum at Dulles Airport, and I was involved with the construction of that, and maybe some of you have been there. If you haven't, you really should.

I live in Maryland, and I'd be driving through Tysons Corner, and I'd see this tremendous activity going on, and I say, "What's all this?" And I thought about that line from *Butch Cassidy and the Sundance Kid*, "Who are these guys?" To make a long story short, I ended up writing a book about Tysons Corner, and MIT Press got very interested in the last chapter where I talk about the Internet management coming out of Herndon and Reston. They called it *Internet Alley*, but it's really Tysons Corner. I've talked to some of you before, but I'm very happy to be here, and I'm looking forward to just being in a listening mode.

Grad: Paul's book is available at Amazon.com.

Paul: Thanks for inviting me, Burt.

Grad: Well, you've been of great assistance to us all these years, Paul. Tim Bergin.

Tim Bergin: I'm Tim Bergin. I was on the faculty at American University after an 18-year career at the Veterans' Administration. I started writing code for the S/360 in 1966. I got that job when I was at a Christmas party and somebody said, "What are you going to do when you graduate with a degree in English from the University of Maryland?" And I said, "Maybe sell insurance or shoes." And they said, "Well, why don't you come work with computers?" I took a little funny test, and it was the IBM Programmer Aptitude test. I guess I passed it. I've been on faculty, as I said, since 1982, and I retired in 2001. I still work with the *Annals*. I have a paper coming out in the fall in a special issue on "*History of Database Languages*." Luanne?

Luanne Johnson: I'm Luanne Johnson. I started my career as a programmer in 1964. In 1971 because I was incredibly naïve, I decided to start my own software company selling accounting applications. I thought that if I had my own company, I'd have better control of my time.

Culver: You didn't talk to me! That didn't work out so well!

Johnson: Didn't work out quite that way. But the great thing that happened was that as a CEO of a software company, I got involved with ADAPSO, and learned to know a lot of people who really helped me figure out how much I didn't know about running a company, and really helped me learn the whole process. It was a very positive experience for me to meet all those people.

I sold my company in the mid-1980s to the employees and did some consulting, including some consulting with ADAPSO, and one thing led to another and I became President of ADAPSO in 1989. So I was there through the period when ADAPSO changed the name from ADAPSO to ITAA; that was on my watch. Everybody at the time thought that it was a PR type of a move, as did I. But looking back, I realized it was actually a much more significant transition. It really was the point at which the organization was changing from being primarily a support organization for small companies like mine, to becoming an industry advocacy organization. And we've all seen the trajectory it's been on now. It's become a very powerful one with the recent merger and becoming Tech America.

So I was there during that period when things were changing and shifting. It was a wonderful experience. I really loved working for the industry. It was also during that time that I realized that there was not much awareness of the fact of how the industry had gotten started. The focus was all on the PC software people. There was not much awareness that there'd been companies

that had been around since the 1960s which were very substantial companies and I became concerned that the history of the earlier industry would be lost. So one thing led to another and I ended up working with Burt on this project that we've had going now since 2000 to make sure that the records of this incredible industry are preserved and kept for the future.

Founding Dates of the Companies

Grad: Luanne, thank you. What we're going to do next, I'd like to know which of the companies that we have named here was formed first. It sticks in my mind that CSC was first in 1959.

Culver: Right, 1959.

Grad: And that's when there were actually three people involved. They've ignored Bob Patrick – according Bob Patrick. CACI is 1962?

London: 1962.

Grad: And that's with Harry Markowitz and Herb Karr, and there was a third person involved at that time. A financial guy, right? I'm just trying to get the dates. I'd like to do them in time sequence.

London: You'd have to say those were the two founders, though.

Grad: Yes, they really were. Any companies earlier than 1959 or 1962.

Shelton: PRC in 1954.

Grad: Okay.

Bersoff: And there was a company called Operations Research, Incorporated, ORI, and I'm not sure exactly when, but it was in the 1950s.

Grad: I mean, of the people here. Okay, so 1954 would be PRC. Okay?

Gutkowski: Arthur Andersen was actually started in 1913.

Grad: But they didn't do anything in this field until what, the 1970s or 1980s probably?

Gutkowski: No, actually, we go back to the 1950s. The partners who created the strategy for the consulting practice of what was Arthur Andersen said, "Computers. This is interesting to us. We should get involved." That was actually in 1954. And the people that actually did it were ex-servicemen. It was all happenstance; they happened to be hired into the company following World War II, and they had technical backgrounds.

Grad: Arthur Andersen worked with GE on the Univac I payroll application in Louisville.

Gutkowski: In 1954.

Grad: I worked on the manufacturing control application at that same time, 1954. Dan?

Bannister: Well, DynCorp's roots go back to 1946. But the company that later became DynCorp, Land-
Air, Inc., was formed in 1951.

Grad: Okay, so that's an early one, too. That's what's so exciting. This is fifty-some years later and while many of the companies have been bought...

Bannister: Some of us are still here.

Grad: Some of the people, too. Okay, BDM.

Huntzinger: BDM was 1959.

Shelton: RAND Corporation was actually formed in 1947.

Grad: And Federal Data?

Young: We're the new kids on the block, 1971.

Grad: Incredible. Who have I left out? BTG.

Bersoff: 1982, yes. Late.

Grad: Yes, you're a baby.

Bersoff: But Logicon was 1961.

Grad: But did you buy Logicon?

Bersoff: No, I worked there.

Early History of DynCorp

Grad: There were a lot of companies around in the 1950s and 1960s. Let's do this chronologically. That might be an interesting way to start. So, it'd be DynCorp? Start with them.

Bannister: Sure. How long do you want each person to speak?

Grad: About three minutes, four minutes. I want a brief summary.

Bannister: Oh, okay.

Grad: Let me tell you what the structure is. You may have seen the program. This is overview time to sort of set the stage. Then we're going to go into the topics. How did you market? How did you select markets? How did you deliver? How did you support? How did you train? We're going to try and cover the 1950s, 1960s, 1970s in the morning. And then in the afternoon we'll work on what happened afterward. As you all know, it's truncated. We don't get enough time. But I hope we encourage some of you to write more, to talk more, to do more to give us the background on things. Dan, tell us a little bit about how did DynCorp start, where'd the money come from? I have about five or six questions I was hoping you might address quickly.

Bannister: Okay.

Grad: How'd it get started? Who were the founders? Who were some of the other key players? Where did you get your initial money from? What were the initial markets or services you were after? And did you have any competition at that point in time?

Bannister: All right, let's see if I can kind of summarize, because the company was founded in 1946. It was actually founded by a couple Air Force pilots that came out of World War II. And they decided to start an airline. It was called California Eastern Airways. And their goal was to become a scheduled carrier. Back in those days it wasn't quite as easy as it is today to do that. But in any event, they started what we used to call a non-sched airline. And they began flying cargo from the East Coast to the West Coast. Then they got a contract with the government during the Korean War to fly the troops back and forth from Korea. And, coincidentally, I was in the Air Force during the Korean War, and when I flew home after I finished my tour over there, I

flew back on California Eastern Airways. Not realizing who they were, or that I would ever see them again.

Later, the founders of that company decided to diversify. In 1951 they bought a company called Land-Air, Incorporated. Land-Air, Incorporated had two essential government contracts. One was to do data collection and a whole range of other services at the White Sands Missile Range. They did data collection on the range, technical support on the range. They operated the high-speed sled track there. Some of you may know about it. It was a Mach 7 track where they developed ejection systems for aircraft, and did a lot of other experimentation. They also operated the largest chimpanzee colony in the world at the research center there. What was the first one that went up in space? What was his name?

Paul: Ham? Abe?

Bannister: I thought I'd never forget that! He went up in space, and he was trained by DynCorp.

Grad: Who was the customer, Dan?

Bannister: The Army. And, frankly, it was kept quiet because eventually the animal rights groups got hold of it, and they forced the end of that kind of experimentation. But I tell you, we couldn't have been in space if the United States hadn't done that program. The other anchor that the company had was a contract that was invented by another Air Force colonel who came up with the idea of upgrading the electronic systems in aircraft. In those days, they would fly the aircraft to some location, do the upgrade, and fly the aircraft back. He said that there's a better way to do that, and that's to equip teams of technicians to go to the aircraft. That would reduce the cost, reduce the downtime, and all that. And so he talked the Air Force into giving the company a contract for what later become known as a Field Team, because it was called Contract Field Team Services. The contract started with 11 people in 1951, and I mention that, because that contract is still in existence today. It has expanded. It was a sole source contract for the company for many years, and then some other competitors come along, and it now is seven contracts. It is exactly the same contract as it was back then, except it is very broad-based in the scope of work. You can do almost anything in the area of technical support, or operations maintenance, or IT services. It's available to any Federal agency. And that contract today for DynCorp, they still have it. They just won another ten-year recomp. It provides 800 million dollars a year to DynCorp on that one contract. So it's a good example of taking an 11-person contract and growing it.

The company struggled along in a variety of different businesses. And then in 1969, we decided to design a new company. We literally sat down, five of us sat down at a table, and designed a

new company. As a result of that, we went through a divestiture program, divesting some manufacturing operations, and some other commercial activities. We decided to build a company with three legs, building on the businesses we knew. We knew a lot about aviation, we knew a lot about government contracting. The company at the time, by the way, owned and leased aircraft to airlines and did commercial aviation overhaul out in Oakland, California. We also did pilot training for the Air Force. So we built on that foundation. We kept the government contracting business. And we built a business through about six acquisitions in the commercial aviation services business, which subsequently became about a $200 million a year business, operating at 58 airports around the United States, providing ground handling, and all kinds of other services to airlines: operating their ticket counters, passenger handling and so forth. And we overhauled the aircraft, I might add.

And the third leg was we wanted a commercial services business. So we went into the electrical contracting business, again with acquisitions. We acquired 13 companies, and created a company that was called Dynalectron, which became the second largest electrical contracting company in the United States. And then in 1987, we underwent a hostile takeover attempt by Victor Posner. By the way, we were publicly traded all that time. We went from the American to the New York Stock Exchange in 1985.

Grad: You're going further than I want to go at this point. We'll pick this up later on. I want to try and get this early history portion.

Paul: When did you move to Virginia?

Bannister: We were in Georgetown until 1976. We moved to Mclean in 1976. And then to Reston in 1988.

Early History of CSC

Grad: Thank you, Dan. Let's take one of the other early ones. Let's do CSC. We'll pick up PRC next. Just cover the early history. Try and keep it as brief as you can.

Culver: One thing you may be interested in, by the way, is for the 25th Anniversary of the company in 1984, it turned out a premier edition of the CSC News that has the entire history of the company back to the very first thinking about it. It's the only copy I have, but if you guys want to take it, and return the original to me, I'd be happy to leave it with you.

Grad: I have a question. Does CSC have copies here? Do we know? Let's check and find out. It's a 25th Anniversary Issue?

Culver: The 25th Anniversary Issue, published in 1984.

I'll summarize very quickly from it. I joined the company in 1968. By that time it was a 50 million dollar company, but it started out with two guys. One at United Aircraft, and one at North American Aviation. Both were involved in computer systems in the early days applying them to those businesses. They decided to join together in 1959 because they perceived the need for sophisticated software, operating systems and language software in the mainframes of that time. One of the early contracts they got was to build the operating system for what was going to be the Univac 1107, the Exec 1 Operating System. That was one of the major first contracts. And that carried the company to about 1964.

This doesn't explain the full history, but what happened in 1964 is a marketing guy, by the name of Vince Griddle (???), who some of us still remember, understood there were going to be some big contracts awarded by the FAA to redo the Air Traffic Control system in the United States. And so an office was established in Rosslyn, here in Virginia, to pursue that contract. After about six months or a year of fussing around, that contract didn't appear, so they started looking at some NASA quick call contracts that were going to be let. Multiple contracts to support NASA, basically on a telephone call: "Come in and solve our problem." And CSC decided to bid that. Won one of those contracts, and within seven, eight, nine, ten years was actually NASA's third-largest contractor. Although it built no space stations, it built no launch vehicles. It built none of that stuff. But it was the third-largest contractor. Interestingly enough, that original FAA contract that was pursued in 1964, wasn't actually awarded until 1990. So it was probably not a good thing to keep marketing it solely.

Grad: Does it say in there where the original financing came from, how much was it? Do you know?

Culver: It's not in here. The original financing was just a few hundred dollars from a couple of guys, maybe a couple of thousand. One of the original financing guys, I don't even know his name anymore-- I could probably find it-- cashed out about 1971 or 1972, and by that time it was worth 80 million dollars or 90 million, something like that.

Grad: What were the names of the founders?

Culver: Roy Nutt was the software genius, and Fletcher Jones was the marketing genius. Jones was the CEO. Roy was the Vice President for Technology. And on the West Coast, they attempted to maintain this operating system, compiler-like legacy. But the East Coast very soon outstripped it by a huge margin, and got involved in applications of various types. NASA was, for many years, its single largest customer. And those were all applications activities. No operating

systems, no compilers, nothing like that. The West Coast continued along, but got slimmer and slimmer and slimmer, and less and less an important piece.

Grad: The headquarters stayed out in California.

Culver: It stayed out in California until Mike Laphen, who's currently the CEO, whom I hired into CSC in 1972, made the wise decision to move the headquarters here. And essentially its West Coast presence is vanishing.

Grad: When did Bill Hoover step down?

Culver: Bill Hoover retired, I'm going to say, nine years ago. Maybe a little bit longer than that. He began looking for his replacement under the prodding of the board back in 1988. And there were three candidates. One of the candidates was a fellow named Van Honeycutt, who became the President and then CEO for a number of years. And then Mike Laphen was moved from the finance shop to take over operations. He took my old job in Moorestown, New Jersey, running the defense business, and did oversight from there.

Grad: It's an interesting company, because it switched from basically a very commercial operation, supporting the computer manufacturers – Honeywell was a major client and so forth. And it's become known, really, as a government professional services company.

Culver: That was true until 1988/1989 when Bill Hoover wanted to diversify out of that. I was working for him at that time and I helped integrate some of the acquisitions that were made in the commercial sector with consulting-type acquisitions.

Grad: We'll pick some of that up, because that was an interesting set of transitions that took place

Culver: By the way, I might just mention, like many other companies, CSC absolutely did not recognize the impact of the personal computer. And absolutely did not recognize the impending impact of the Internet. And as a result it made huge investments in Infonet, which was a worldwide timesharing business. Beginning in 1968, the year I joined CSC, they began investing what ended up being a huge amount of money. Infonet ran as a timesharing business until the PC pushed it out of business.

Grad: Totally aside, we are having a timesharing pioneer meeting out in California, and we are looking for who would be the best CSC representative.

Culver: Well, I would say Tom Hewitt, because he was the Vice-President of Marketing at Infonet.

Johnson: Oh, yes.

Early History of PRC

Grad: Tom Hewitt was supposed to be here, but wasn't able to join us. We'll follow up with that then. Thank you. Let's move ahead. PRC. Wayne and John, the two of you fight it out.

Shelton: I can take the first part of that.

Grad: Start with RAND, and then with PRC.

Shelton: In 1947, Project RAND became the RAND Corporation, which was a non-profit organization, and five members of the RAND Corporation staff in 1954 decided to spin-off a so-called RAND-for-profit organization. There were five founders. Four of whom came from RAND, and one who came from the University of California. The concept was that they would form a business that primarily did operations research, systems analysis and information systems as required to support those activities. Well, as PRC grew, they became much more oriented towards information systems, and the founder of PRC, Bob Krueger, set out to form a microcosm of what he believed to be technical professional services organizations. And so there were a lot of acquisitions of professional services organizations that were part of his plan to form this microcosm. There were probably a hundred acquisitions made by PRC, of which, my guess is that ten were successful. But I'll let John, now, talk about what came next, about one of the successful ones.

Toups: Well, as I said earlier, I joined PRC in 1970 when they acquired my consulting practice.

Grad: So in the 1960s, there is a heavy acquisition program going on at PRC, Wayne?

Shelton: Yes.

Grad: In the 1960s, what kind of projects would you do?

Shelton: Well, the companies acquired were: behavioral sciences, economics research, civil engineering, aeronautical engineering.

Grad: Much in the way of programming or computer related stuff?

Shelton: There were some acquisitions in the information systems area. There was one that dealt with state and local government, public administration, law enforcement.

Grad: So there were various specialties that they picked up through these acquisitions?

Shelton: Yes, but most of the information systems business was grown internally.

Grad: Oh, okay. Go ahead, John. I'm sorry.

Toups: Wayne's right. In the 1960s, PRC did some very significant major jobs. WWCCS.

Shelton: Worldwide Command and Control Systems.

Toups: And they had a lot of work at various Air Force locations. The acquisitions largely were either in commercial IT stuff, or in unrelated IT such as civil engineering or other things. We had about 8,000 people by the early 1970s, scattered around with maybe a fourth of them outside of this country working in the Mid-East and various other locations. We did do some computer work. We acquired a major computer company in England, by the name of Logica, which existed within PRC for a long time, and we finally sold it off. We had a funny deal with them. The owners were unhappy, and we were unhappy. We owned three-fourths, and they owned a fourth, so we wanted to buy them out, and we made them an offer. They said, "Well, if we can match that times three, will you sell at that price?" And they went to the British government, which had a financing program, and bought themselves out. And they've been a very successful company. But we did a lot of work in Europe through them in the IT world. We did a lot of IT work in Saudi Arabia through them, and through other parts of PRC. In the engineering business, all of us used IT to the extent that it was available, but it was not our core business.

Grad: But the projects were engineering projects in which the computers were a tool, rather than the computer software and the services being what you were selling directly. Is that a correct statement?

Toups: Yes. And of course, in the early 1970s, I couldn't even tell you what computers were used. They were not IBM. It was something else that we were using in my day in the area that I was involved with.

Grad: That's an interesting question before we go on. Did most of you end up using specialty machines because of your military connections, or were you using standard computing facilities?

Shelton: Standard.

Gutkowski: Both, standard.

London: All over the place.

Grad: A mixture of everything.

Culver: The shipboard computers of those days, with the Aegis system, were something called ANU-YK7, which was a Univac product, and had no comparable commercial component. And I mean, today, it would have the power of this iPod.

Grad: If that.

Culver: And that required its own operating system, its own compilers and so on. Computer Sciences Corporation developed most of those under the Aegis program, which was its first application. But there were also a lot of commercial applications. Then typically, you began getting into the Digital Equipment Corporation, mini-computers. Ken Olsen's company began overtaking the mainframes for many of our applications.

Toups: PRC used a lot of DEC equipment in the work that Wayne was talking about. Police departments, all of the 9/11 related stuff. We had a system country-wide that supported them, and we used DEC.

Grad: This is at a later time. Again, I'm trying to focus as much on the 1960s and1970s as we can in this first session. What was your company that was acquired by PRC?

Toups: A Civil engineering consulting business. I was a civil engineer. Still am.

Early History of CACI

Grad: Okay, let's move ahead. CACI, Jack, I guess you're going to be the only one.

London: CACI was founded in July of 1962. The founders were Herb Karr and Harry Markowitz, soon joined by a chap by the name of Jim Berkson, who might be the one you were referring to earlier, Burt, who was primarily the treasurer and secretary of the corporation.

Grad: He had five percent of the stock.

London: And is still with us. I talk to him from time to time. As I said, the company was founded in 1962. Herb Karr, sort of the motivator, the marketing guy behind it, got a hold of Harry Markowitz. Herb had been at RAND Corporation, but had left and gone over to work at PRC with a fellow by the name of Bob Krueger. And he was motoring along, doing some interesting things, and then wound up selling too many deals. And Bob got mad at him, because he would go out and sell these projects, and then Bob would have to recruit some people, and try to run them. So Bob wound up firing Herb. So Herb decided, "Well, that's about enough of that. I'm going to form a company where I can sell jobs and get people to deliver them." So he lashed up with the technical genius Harry Markowitz, who was the creator of a technology for the digital computer, SIMSCRIPT technology. It was focused on simulation, digital applications, models that could be built on the digital computer. And it was primarily created at the RAND Corporation.

But when they formed CACI, which was called in those days the California Analysis Center; they decided they would try to create a SIMSCRIPT compiler in a commercial venue. They raised money throughout Southern California from four or five different organizations. I remember them talking about Lockheed and Northrop and some of the other aerospace outfits that would put some initial startup money in to fund the development of this compiler, which turned out to be a successful project. CACI was born on the back of the simulation technology and the product called SIMSCRIPT. Interestingly enough, the corporation still markets SIMSCRIPT until this day, albeit it's what you would call a micro-niche product. It still has an active platform and applications. The initial money was out of the pocketbooks of the two or three founder folks. They liked to mention that they started out with a park bench, a public telephone booth, and a mail drop at their attorney's office. So that was their operating venue, which is great in the CACI folklore. How much truth is in that, I'm not quite sure. But that's another story.

Perhaps some of the interesting aspects of this is that in 1968, the company went public with a San Francisco brokerage firm and raised the incredible sum of $60,000. It went public on the over-the-counter market, traded on the pink sheets. Anecdotally, I joined the company in 1972 and was awarded 2,000 shares of the stock options at 25 cents apiece, which I held for many, many years and added to as I went along. But they did go public in 1968 for this $60,000 tranche.

Grad: Was Harry still there?

London: Well, no, the fuss came at about the same time. I'm not sure which predates, actually, Burt, but they had a falling-out over the direction of the company, and Harry left and went on to magnificent pursuits. In 1990 he was awarded the Nobel Prize in Economics for his stock price theory work. And he is one of the early creators of what's now called the Wall Street program trading systems. So Harry went on, and Herb continued to build the company. You were interested in the money sources. That was pretty much it. Funding was internal from then on up until the 1990s.

Grad: How did they swing over from the SIMSCRIPT product-oriented business where there was aerospace support, to being essentially professional services?

London: Well, they had a little bit of luck, and that's a good segue from the California Analysis Center. They found out if we're going to do business on the East Coast, being called The California Analysis Center somehow doesn't smell quite right; so they changed the name to Consolidated Analysis Centers, because now they had two offices, one in the Washington DC area, and the other one in Santa Monica where the company was founded and initially located. And so they got into the business of building MIS projects for the Federal government. I think the Economic Development Agency, EDA, was one of their first clients here in Washington, for which they developed a database retrieval product, called Quick Query. As a matter of fact, when I joined CACI in 1972, I had a manual for Quick Query, and a manual for the SIMSCRIPT, and I went out in the market and found out there was almost nobody interested in those technologies or products. So I rapidly reverted back to the platform I was familiar with – naval logistics and information systems and technology.

And lo and behold! There were more deals out there and projects than I could even list in my sales book! So we transformed the company, really, from a few million dollars to a corporation that did business with the United States government, primarily starting with the Navy. And I had a little bit to do with bringing in some of those jobs in. By the late 1970s, we were doing about 100 million or so on the back of Naval logistics, information systems for the Naval aviation community. And interestingly enough, there was also a project with the Saudi Arabian Navy.

Grad: You were in business with the Saudi Arabian Navy?

London: Yes, with the Saudi Arabian Navy, through the United States Navy. It was a foreign military sales contract effort that was extremely successful, because we brought a lot of US Navy supply systems and IT technology to the Arabian Navy on behalf of the United States government. It was a foreign military sales contract, cost-plus, run through the Foreign Military Sales program, and that was very successful, extremely successful. And it really was a defining platform for the corporation to build its business base broadly in the 1980s.

Grad: Let me stop here for a moment. We'll have to do one more, then we'll take our break, and then we'll pick up the stories as we go along. Paul?

Paul: Another question, when did the company formally move to Virginia from California?

London: 1966.

Paul: Okay.

Grad: The headquarters moved in 1966 to a new office?

London: Not the headquarters. We opened an office in 1966. The headquarters moved here in the early 1970s.

Grad: Harry Markowitz had worked at GE. I worked with him in the 1950s. He was working on simulation programs then.

London: Before he went to RAND.

Grad: He had been at RAND, came to GE, and then went back. Anyway, Harry's a very, very interesting man. Jeff Yost did an oral history of Harry Markowitz a couple of years ago.

London: He's still very active, I hear. I talk to him every once in a while.

Early History of BDM

Grad: Yes, he seems to be doing well. We'll do one more company, and then we'll take a break, and then we'll come back in. Judy, why don't you talk a little bit about BDM.

Huntzinger: Okay, I think mine will be brief, because unfortunately, I didn't join the company until 1981. I did go through some brochures that I had last night. And by the way, I found out about this on Saturday. So what I can tell you is that according to this brochure the company was formed in 1960. And earlier, I told you 1959.

So the firm was founded in 1960 by three individuals. Joe Braddock, Bernie Dunne, and Dan McDonald. They were three professors at Fordham getting their doctorate degrees as physicists. They had applied for and won a grant. As I recall, and I'm not sure this is precisely

correct, they received a million dollar grant at the time. It was with a customer in El Paso, Texas. I don't know who the customer was. Shortly after winning the award, the three of them picked up and moved to El Paso, Texas. They tell the story later on that their customer said, "Why did you move? We chose you because we wanted an excuse to visit New York." So they moved to El Paso, Texas in 1960. I believe they moved their headquarters to Mclean, Virginia in 1962.

Young: I leased a space to them in 1970.

Huntzinger: Is that right? Over on Aline Avenue?

Young: Yes.

Huntzinger: Okay. The company was originally formed as Braddock, Dunne and McDonald, Inc. And it used that name from 1960 to 1975. They changed the name to the BDM Corporation in 1975. And in 1979, they changed their name to BDM International, Inc.

Grad: What kind of projects were they doing, Judy? Do you have any record of that?

Huntzinger: I don't. At the time that I came in 1980, it was studies in analysis, and then moved on to systems integration.

Bannister: They were doing physics work for the nuclear community. And they worked out of Los Alamos, and all those places.

Huntzinger: White Sands. IDA [Institute for Defense Analyses] was a big customer of ours at the time.

Paul: But I think they also did missile defense at Fort Bliss which is next to El Paso. They bought the captured V-2 rockets from Germany and they were doing studies on how to defend against them. Of course, they're still doing studies on that. I think that's continued to be a big business for them.

Bannister: Yes, they launched the V-2s out of White Sands.

Paul: Right, yes.

Culver: Back in 1972, which is what, ten years after they were formed, roughly?

Huntzinger: Yes, twelve.

Culver: CSC made me sort of the czar for ballistic missile defense penetration, which I failed to do, by the way. But BDM was an important player in that community, along with SRI and a few others at that time. Until TRW acquired them, and probably afterwards, they still remained in that role. Not in the way of guidance and control. It was mostly in terms of physical effects, you know, blast patterns and things like that.

Grad: So a lot of analysis-type work, a lot of experimentation, measurement, that kind of thing.