GPS Workshop: Later History – Growth and Adaptation

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Abstract:

This session covers what happened in the 1980s after the GPS companies were well established. What were the marketing and technical differences among the markets and services among the various companies? What were the changes in organization and mission and how did they affect the positioning and success (or failure) of these companies? What happened to the independent companies after their first successes? How did they grow? What new financing did they require? When did they go public and what were the results? Did they venture into other business areas? Did they introduce software or hardware products? Was there more systems integration rather than in-house development? Who were some of the new competitors and what effect did they have on the nature of the business? Did the organizations and management have to change to accommodate these changes in the markets and technologies?

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: In this session, we're going to try and look at some different angles entirely. Almost all of you have mentioned going into the systems integration business in some form, shape or manner. Now, as I understand systems integration, you have to coordinate the work of a lot of other companies, a lot of other suppliers. So I guess, the starting question is are all of the companies that are still around in the systems integration business by that definition? CACI?

Systems Integration Business

Jack London: Yes, we are definitely. I think most of us are.

Grad: How about SI, are you in the integration business with SI?

Walt Culver: Well, SI's disappeared now. We were bought out on Christmas Eve or thereabouts.

Grad: I see. I can't keep track of these guys. Were you in the systems integration with SI?

Culver: Beyond the question of bringing computers together, a lot of our business turned into business process outsourcing. So the systems integration in many cases had to do with taking processes and integrating them and if computers or communications happened to help, you did that too, whatever was required. We used lots of subcontractors. If that's the question, subcontractors are the norm.

Grad: I'm not sure what the question is yet because this is what's tricky. In terms of ADAPSO, or later called ITAA, all of a sudden the systems integration piece became a very significant part of what was the Professional Services group. And I believe a number of new companies joined ADAPSO about that point in time, didn't they?

Luanne Johnson: At that point, they created a specific section or division for systems integration, yes.

Grad: This was the mid-1980s?

Johnson: A little earlier than that. It might have been 1982. [Ed. note: ADAPSO's System Integration Division was formed in 1982.]

Professional Services Council vs. ADAPSO/ITAA

Paul Ceruzzi: I don't know if this is the right time to bring this question up. Luanne represents ADAPSO but I believe everyone here was a member of another group called the Professional Services Council.

London: Yes.

Ceruzzi: How does that differ from ADAPSO, if at all?

Ed Bersoff: You're right, many of us have been with PSC many, many years. ADAPSO in the early days was more a commercial-focused and product-focused organization. PSC by its very name had the services element in it. And it was not only computer related services but also engineering services and other professional kinds of services.

Wayne Shelton: Let me comment on that. The forerunner of PSC was started by Bob Krueger, the founder of PRC. He started it because he wanted to ensure that the federal government would contract out more rather than doing it in house and also rather than going to not-for-profits. And the original name, which I can't remember, was a very long name

Bersoff: Yes, it had a very long name, but I don't remember either.

Shelton: It was a convoluted name like free enterprise against something or other.

Johnson: As I understand it, one of the major differences was that PSC was very focused on the federal government market.

Shelton: Absolutely.

Johnson: ADAPSO started out not with products, but with services, computer services and timesharing. But it didn't really play a major role in the federal government market until after the Systems Integration Section began. There had been prior activity in procurement. There was a Procurement Committee before that which Olga [Grkavac] ran that started the activity with the federal government on procurement issues. But it wasn't really until the commercial systems integrators formed that special division within ADAPSO and then that brought in the companies

that were systems integrators working with the federal market. That's when ADAPSO's direction began being much more focused on the federal market.

Grad: Something puzzles me. Wayne, the companies represented by AISC [Association of Independent Software Companies], were most of those companies government professional services companies?

Shelton: They were all professional services and information systems to some extent. And again, that was formed to a large extent to try to fend off the use of not-for-profits by the federal government in professional services. At the time I became president of the Association of Independent Software Companies, we were talking with ADAPSO and saying we have a lot of overlapping interests, so why do we need to each continue to have a separate organization. So we just merged AISC into ADAPSO.

Grad: That's what I'm trying to pursue because the ADAPSO members at that point were primarily service bureaus. Was AISC doing any lobbying other than trying to keep out the nonprofits?

Shelton: We were doing very low key lobbying. And, in fact, when we went into ADAPSO we became the services arm of ADAPSO.

Johnson: Originally what was the software group in ADAPSO was comprised of both software products companies and professional services companies in the commercial market. The companies that came in with AISC were the ones that were in the federal government marketplace. My understanding is it was primarily a matter of providing a small organization like AISC with an administrative infrastructure which ADAPSO had.

Shelton: Yes, that's true.

Johnson: There were also other organizations that came in. It was the same thing with the software products group which Larry Welke brought into ADAPSO. They were going to do their own thing and they said, here's an association that's close enough to what we want to do and they've already got a staff in place.

Shelton: Well, in the beginning the first Professional Services Council was really carried by and supported by PRC. And that's where all of the money came from for administrative support. When Krueger left PRC, then Earle Williams at BDM picked it up and supported it almost 100 percent although there were nominal membership fees.

Professional Services Council vs. Not-for-Profit Companies

Grad: What was the purpose of the Professional Services Council?

Bersoff: The core mission was to combat the intrusion or incursion of FFRDCs [Federal Funded Research and Development Centers].

Grad: Professional Services Council I'm talking about, not AISC.

Bersoff: I'm talking about Professional Services Council. That's exactly the same mission.

Grad: Both of them had the same objective?

Shelton: Same objective.

Bersoff: Yes, but then PSC took on a broader role to promote the private sector and procurement reform and also some other things that dealt with our industry.

Shelton: But PSC included engineering companies from the very beginning.

Bersoff: It was more than IT.

Grad: And they're still a very active organization?

Bersoff: It got merged with the Contract Services Association, CSA, about what a year or two ago.

Jeffrey Yost: What were the primary arguments against nonprofits, the MITREs, etc.? Was it greater efficiency?

Shelton: Unfair competition.

John Toups: They got sole source contracts.

Bersoff: It wasn't just the sole source contracts. We wanted our sole source contracts, but didn't want them to have them. (*Laughter*) They didn't have to be efficient. Their rates

were higher than ours. There were all sorts of inefficiencies associated with it and they got the projects without doing any work to get it.

Ceruzzi: And was there also a tax advantage at all?

Shelton: Yes, they were not-for-profit.

Bersoff: They didn't have any owners.

Dan Young: In a sense, the government looked upon them as government employees.

Bersoff: Right, yes.

Young: That was the bottom line.

Ceruzzi: Except they weren't paid civil service salaries.

Bersoff: Much higher.

Young: Substantially more.

Johnson: That's actually why some of them got formed in the first place, wasn't it, to be able to pay highly skilled technical people more than what was on the civil service schedule?

Shelton: The general feeling was that it was just to avoid the procurement cycle.

Ceruzzi: Wasn't RAND an FFRDC?

Shelton: Oh yes, indeed it was.

Toups: System Development Corporation was spun off from RAND.

Ceruzzi: Someone I interviewed for my book told me that MITRE would go in and say, "Well, the federal government told us we're the air traffic control people, therefore, we must get an air traffic control contract if there is one available." They felt that they had the first right of refusal for a contract.

Shelton: It was just easy, easy to procure.

Bersoff: But they did feel they had a right of some sort, which nobody else believed.

London: The weak side of it though was the lack of a competitive posture and that's what I always used to do when somebody would come to snatch my business. I'd argue the rates and get them wondering if they were getting competitive solutions not just stuff that they've got on the shelf all ready and you're going to get a dusted off copy. That was my argument. I don't know how valid it was.

Shelton: They didn't have to pay taxes and also because they were non-competitive they could pay much more and charge more.

London: Yes, that's the kind of thing.

Grad: That's another angle isn't it? Because you like sole source, Jack, certainly in your business.

London: My view of sole source was it was the most vicious competitive market there is because there were no rules. Everybody can go in and see the customer and get your deal or size your job. So I think my view was that it was extremely competitive, at least the little market niche I was in.

Professional Services Council's Missions

Grad: Let's stay on PSC. How many of you were members of the Professional Service Council? [show of hands] Practically everyone. What did it accomplish? What were the most important things that it accomplished over its 30-year, 40-year life?

Shelton: Well, Ed was the founder.

Bersoff: I was the chairman for a couple of years.

Grad: What did you accomplish?

Bersoff: It had a lot of different missions. The advocacy mission was first and foremost, but it was also a networking organization. In fact, there were at least two companies I acquired through connections at the PSC meetings. You'd have a retreat or something and you'd start talking to people about their companies and ended up acquiring them. So it was a great networking organization as well as an advocacy group.

Dan Bannister: You know what it also was? It was a single place for a government agency to go to be able to communicate effectively with the industry.

Bersoff: It was also cover for the industry. So if someone had a problem with a government agency, he could enlist the PSC to deal with the issue in a broader sense, rather than make it his personal problem. So yes, it was a place that they could come to us and speak to the entire group. And a place for us to air our issues with the organization and bring it forward.

Cliff Kendall: I might say as a member, I really did like the advocacy role. And one of the things that happened is as the Professional Services Council grew and acquired more members, I dropped out because I didn't think they would take the issues. There were small business set-asides for minority-owned firms, and they were giving small business set-asides to firms that were 500 and 1,000 people. I wanted the Professional Services Council to take this up but because of a few members, they backed away. I had another issue having to do with the Service Contract Act and they backed away. And I figured, well, heck they weren't advocating for the things our company was interested in and so I just dropped out. Because they said, "Well, we have other members who feel different about this."

Bersoff: That's the problem with a trade association.

Kendall: Yes, right. It was a very interesting time then. I can remember specifically forming a group myself of 10 or 12 firms, including some minority firms, who said, "SBA [Small Business Administration] is just doing a terrible job down there."

Bersoff: So what's changed?

Toups: I was president of the Professional Services Council in about 1975 give or take. It was much smaller then. One of the issues we took on was the inability of our types of companies to borrow money from the banks. We actually had several meetings with many of the bankers as a group here in this town and eventually got them interested. They didn't understand government contractors at all but over time, many of them started lending to our types of companies. So PSC had other purposes than just beating up against the MITREs and those guys.

Grad: Let me ask the contrasting question, how many of your companies belonged to ADAPSO/ITAA?

Johnson: CSC was a member for a long time. And PRC was too, but that was when PRC was owned by Black and Decker because Bob Laurence [President of PRC] was chairman of ITAA right after the name change from ADAPSO.

Grad: I guess what I'm trying to understand is the difference and what they expected to get from ADAPSO/ITAA versus what they were getting from PSC?

Johnson: I think that PSC was just more focused.

Bersoff: It was more complicated than that, too. I mean there was the American Electronics Association which also had a government contracting element to it. And the NVTC, the Northern Virginia Technology Council, also existed.

Johnson: Also CCIA [Computer and Communications Industry Association].

London: NDIA [National Defense Industries Association]. NSIA [National Security Industrial Association]. AFCEA [Armed Forces Communications and Electronics Association].

Bersoff: So you had a multiplicity of trade associations and you couldn't belong to everything. It was just too expensive.

Grad: Were having so many different ones counterproductive?

Johnson: Yes.

Bersoff: Occasionally. But some of them had niches.

London: Certainly overlapping too, though.

Johnson: Oh, yes. It was a problem all of the time. You'd go down there on some issue and there would be four different people in some staff member's office from four different trade associations and it was just so frustrating.

Young: And they either said what you wanted to say but if they did say something contrary, now you're really stuck.

Grad: Did you all find that a problem? Because they were advocating different positions and, therefore, you were less effective?

Shelton: They weren't opposing positions very much. They were just not necessarily parallel.

Johnson: Yes.

Bersoff: We were diluting our resources basically.

Johnson: The feedback that we got from the congressional staff people was, "We have a limited amount of time. We want to hear from one person representing this industry, not from four or five of you." The associations could never get together and pick one spokesperson.

Grad: Olga [Grkavac] was not able to join us today which is a shame because she has been involved in this area for a long time. I guess the question is, are some of you still active with the new ITAA or whatever its current name is? [Ed. note: ITAA merged with the Cyber Security Industry Alliance and the Government Electronics Industry Association to become Tech America in 2008]. And are some of the companies still active with PSC?

Ceruzzi: Yes, but if it's all Northrop Grumman now, their lobbying is on a completely different level.

Grad: In what way?

Ceruzzi: Northrop Grumman is one of the biggest companies in the world and they have an army of lobbyists that just do nothing but spend all day with congressional staff.

Grad: But the point they made before, isn't it more effective if you're a group of companies making the case rather than one company making the case?

Kendall: Yes.

Culver: It depends on the issue. If you're talking about what roles small businesses ought to have in procurements and whether some of the 8A rules make sense – and most of them do not make sense even for the 8A community – you're better off having an association handle that. If you're going in, however, to argue that certain types of procurements ought to be competitive as compared to not competitive, especially ones you're interested in, then sometimes you're better off going in yourself as a company. So it depends what the issue is. In some cases you want cover, like if you want to argue against American Indian firms – which, by the way, right now can get billion-dollar contracts sole source – it's hard to do it if you're one

of the major companies. CACI is not going to go in and get into that argument, but a trade association can.

Kendall: Today, things have changed a little bit in this area. We have tech councils, the Virginia Tech Council and the Maryland Tech Council. And I know our congressional representatives in Maryland come and ask us to go down and testify and I'm sure that happens in Virginia too. For most of our technology issues, I think the firms are using the technology councils as one of the sources. I assume that's true in Virginia.

Grad: How is that different though? How are those councils different from the Professional Services Council or Tech America?

Toups: Well, their membership is limited to a geographic area and it focuses on what's good for that area.

Kendall: And they're active in state, local and federal government affairs.

Bannister: Yes, but the tech councils tend to be more local. They deal with the state, for example, as you just said, rather than the federal government.

Kendall: In Maryland, we've been asked down by Congressional staff a lot of times to testify over the years on issues.

Tysons Corners as a Center for the Government Professional Services Industry

Ceruzzi: Burt? Would this be a good time to ask about why Tysons Corner? That's what I wrote my book about, but why did Tysons Corner become such a concentration to these firms?

Grad: Like Northern Virginia?

Ceruzzi: Well, Tysons Corner, and if you want to extend it, obviously, to other places in the Dulles corridor, but it seems like it's a unique phenomenon on the East Coast. It seems almost like a counterpoint to Silicon Valley.

Culver: Tysons Corner is losing some of its cache because its growth got out of control. For example, there are almost no sidewalks.

Ceruzzi: Today, yes. I'm talking about the 1980s.

Toups: What started it? Why in the 1960s and 1970s, which is when it happened…

Ceruzzi: Right.

Bannister: Well, if you look at the map back then, it was a natural because that's where there was that was available. And there were some enterprising people who decided to build buildings, some of them on spec.

Bersoff: I haven't read your book but is Jerry Halpin's name in there?

Ceruzzi: Yes, he's in there.

Bersoff: I mean he's probably one of the prime movers in making Tysons Corner because he bought up that land and he developed it. There wasn't anybody there and he built it and they came.

Ceruzzi: Well, I know we have a company here from Maryland but Earle Williams said he would never move to Maryland, no matter what.

Kendall: And if I started a company today I wouldn't start it in Maryland.

Young: Absolutely not.

Grad: Why do you say that?

Kendall: Our government, our state government is certainly not business friendly. I have three sons who started companies, different companies, and my oldest son was an accountant. He opened an accounting firm and 11 years later he was in my family room and my youngest son was getting ready to start a company and he said, "You don't want to start it here in Maryland" where I was living. He said, "You want to come over to Virginia. The schools are just as good or better. The taxes are lower. They're business friendly. And there's more business over there." And he came over here and started the business. And that hasn't really changed at all that I can see.

Culver: But there's another factor, too, and that is if you take a look at geography, Tysons Corner, let's say off hours, is 15 to 20 minutes from downtown Washington where major agencies are located. And yet, it's easy to access for workers coming in from as far away as West Virginia and as far away as Germantown. Not a great drive, but people do come from there. And some people even come up from down near Quantico and those areas. So when

we were looking for a new headquarters, when we were forced out of Tysons Corner – this was SI International – because we couldn't find any space to expand into, Tysons Corner out to Herndon was the corridor that we decided to locate in. We ended up in Reston. So part of it has to do with access to the talented employees we needed from various parts of this area. And part of it is easy access into Washington D.C. where the client is.

Grad: I've wondered about this chicken and egg issue. To what extent did they expand here because the people were here? Or to what extent did the people come here because the companies were here?

Toups: Let me comment. If you go back to the 1960s and 1970s the major companies were not headquartered here. They had satellite offices, PRC, CSC, Booz Allen. SAIC was not here then. EDS was not here then.

Kendall: Booz Allen wasn't even doing government business.

Toups: That's right, but they wanted to do government business and real estate out here was cheaper than being in the District. PRC had 10 offices scattered around Northern Virginia. I just think the Tysons Corner area made more sense than any other northern Virginia area or Maryland area or D.C.

Young: I think you can't ignore the impact of Dulles Airport. Dulles was built in the 1960s.

Bannister: Yes.

Young: And at that time, National was limited to the number of miles you could fly out of National without stopping. You could fly cross country out of Dulles. I know we set our offices with Daytran in Tysons Corner just because of the airport. And it was cheaper to live – to buy nice houses.

Bersoff: Well, you've just got to look where the Pentagon is. It's in Northern Virginia. And Tysons was the suburban location in Virginia. And the interesting thing is the biomedical world grew up in Maryland because of the proximity to NIH. And we used to say that Maryland was the place for the life sciences and Virginia the place of the death sciences because of all the work we did for the Defense Department. But Tysons was a great location because it was out in the suburbs and it was close enough, a 15 minute drive to the Pentagon.

Shelton: In 1989 Hughes Aircraft Company asked me to form a new subsidiary of Hughes and General Motors and it was a worldwide organization. I had $100 million business base

given to me and they said, “Locate the company anywhere that you want it, anywhere in the country, pick a location.” And I picked Reston.

Grad: Why?

Shelton: Because it was too expensive in Tysons at the time.

Grad: But you chose the Northern Virginia area.

Shelton: Yes.

Toups: The other factor, I think, that maybe accounts for some of it, we had Jerry Halpin, Milt Peterson and Til Hazel who were interested in land development and two or three other guys, I’m sure. And they made sure that when you needed a building, you could get a building.

Ceruzzi: Thank you. I hope that wasn’t too much of a diversion.

Grad: It was a diversion but it was a good one.

Ceruzzi: Well, I mean there’s so much that’s been written about Silicon Valley and the concentration there. And it sounds like this is a counterpart to Silicon Valley. On the one hand, you’re competitors but on the other hand you liked to be next to each other.

Culver: Well, more important next to the customer…

Grad: That’s what I hear.

Culver: We were a solution industry and the more you can talk to the customer, the better. In fact, even better to have them come over to your space and have their meetings in your conference rooms. I mean one reason these conference rooms are so complex, it’s not so much for us, it’s so it made your customer want to come there to meet with you. And that’s not going to happen if they’re going to have to travel two hours.

Grad: One of the problems in Silicon Valley, they tell me, is that literally the guys can job hop, boom, boom, boom. Didn’t you have that same issue here?

Culver: Well, that’s an advantage and disadvantage.

Kendall: Yes, whether you're hiring or losing people

Grad: So you didn't worry about the fact that your guy could walk down the block and pick up a 10 percent raise.

Culver: Well, they can't walk, that's for sure.

Bannister: They'll get run over.

Culver: It makes you pay attention to what's important to people because I think if you really pay attention, especially to the young kids who tended to be less nailed down, you could keep your turnover rates down in the low teens, somewhere between let's say 12 and 14 percent which is about what you need just to keep flexible. There was a time when you'd be up in the 20 percent ballpark but I think companies have learned how to keep people in the last 10 years or so.

Toups: The other factor is that by having several companies in a large mass, people from outside the area were comfortable coming here because if they came to work for me and if they didn't like me they could go to work for Ed or somebody else. And they knew that they'd have a job.

Grad: In Silicon Valley one of the arguments is there's been a ton of new companies start because people leave the bigger company they're working with and start up their own thing. Did that same sort of thing happen here to a great extent?

Shelton: Yes.

Bersoff: Yes.

Shelton: Very much so.

Young: Particularly in the recent years, very much.

Systems Integrators as Managers of Subcontractors

Grad: Let's go back to where I was before – systems integration and outsourcing. Let's talk about that for a bit. You were saying you had to get into the systems integration business because the government wanted one contractor to deal with instead of managing five or six or

10 contractors, is that accurate? Dan is nodding his head, how about the rest of you? Do you agree, disagree?

Culver: You know even if you could do it in one contract, they would prefer to have somebody who could take over more responsibility if it had to be put on top of that contract. Because in many cases they don't know what the long-term requirements are. For example, with anything having to do with homeland security, nobody could come up with a requirement that they're sure is going to be locked in for more than a year or two. They can define it in an RFP, but the threat is just as likely to change as the need to integrate new technologies into things. So how can somebody even do all of that?

Grad: How did that change your business? All of a sudden you were bidding on systems integration contracts rather than on the specific performance contracts. That obviously had to have some effect on the way you went about your businesses.

Shelton: Well, I think systems integration is a more expensive business. And that would affect your cost centers and how you allocate cost.

Grad: Why is it more expensive?

Shelton: Because of the type and the nature of skills that are required to oversee and integrate several different technical activities. And also you had to cover the contracting and the other oversight structures.

Grad: So it's an overhead component. Cliff, did you have a comment?

Kendall: It's also a more stable business because once you're in there and doing a good job you're in there for a long time. It's much more difficult to replace a systems integrator who's doing a good job and you can build on that.

Young: I think it's a more profitable business.

Grad: Why?

Young: There's a very definite limit of what margin you can make on pure services. Theoretically, in a systems integration business you've got more risk but it's certainly more profit.

Grad: Let's go over that; what are the increased risks? And aren't you still limited in whether it's a fixed price or a CPFF [Cost Plus Fixed Fee] or whatever contract you have?

Young: I have not seen too many integration contracts that are CPFF in my marketplace. It's almost all been fixed price.

Grad: So what are the risks? Why do you have higher risks?

Young: Well, you bid something. You find that you're bidding by the drink, for example, or you're selling by a transaction. You're not able to meet the efficiencies that you forecasted five years down the road. That's a high risk.

Grad: Is that because of your pricing structure though or because you're the systems integrator?

Young: Well, that's because of the pricing structure you *have* to bid because you *are* a systems integrator, that's what the customer demands.

Grad: What about the rest of you? Give me some feelings about your personal experience in the systems integration business? What are the pros and cons?

Bersoff: There's more value-add in the systems integration business. It's more intellectual. It's not just routine work like a straight services kind of relationship. So you have more connectivity with your client, more stickiness with your client. The probability that you'll be unseated in a low bid shoot out on a re-compete is much lower because the customer relies on you to get jobs done as opposed to kind of push paper. And so it's worth it.

Grad: But you don't have as many people on the project as you had. Someone was telling me the more people you have, the more money you'd make.

Bersoff: There are profit dollars and there's profitability. Integration business has higher profitability for the same dollar volume.

Grad: The margins are better.

Bersoff: I mean do you want a 1,000 person contract that gives you one percent? Or a one hundred-person or one person contract that gives you 1,000 percent? Those trade-offs are kind of what this is all about.

Toups: Well, Cliff said this earlier, he was the owner of a body shop and that's the lowest margin probably. And then you go on up the scale and systems integration is more difficult and not everybody knows how to do it well.

Grad: I'm not sure I agree that the T&M work is the lowest margin.

Toups: T&M body shop.

Kendall: Let me just say on systems integration, I think, the beauty of it is that it's called fixed-price and some of it is. Some of it is unit price, if you're a processor and doing things. And then some of it is T&M basically because what you're doing is you're providing people to handle a system for the computer center and things like that. And you have so much flexibility on most of those contracts. If you're really smart, you'll get in there and figure out how to do the job far less expensively than the way you bid it. You work that and then you start giving the client some things he didn't know he could get. And you develop a client relationship. And the profit margins are better if you work it the way you should.

Grad: Jack, what's your thought on this?

London: I agree with what my colleagues have said here. The jobs that we've worked though are much more complex to manage. You have to have a completely different type of configuration management control, recording systems metrics for progress. I mean. Managing a complex system integration job is much more of a challenge and therefore can lead you to problems like AMS had as opposed to these thousand-person services jobs where there's no complex integration or high technology. The other thing is I believe would be true for most parties here is you have to have a different kind of skill set. In fact, we began to do more of this. We tried, several times, to put in a small cadre of people that were sort of technology gurus in the company that would have the skill sets and the knowledge of how to pull these kinds of jobs together and manage them effectively which is, as I've said, a challenge compared to services.

Grad: The question, though, you're now having to deal with some number of subcontractors, right, and they're yours. And when you bid that project, if any one of those screws up you're on the hook, aren't you?

Young: Absolutely.

Kendall: Yes.

Grad: That to my mind was the big risk.

Culver: But I don't regard that as additional risk, necessarily, because your job is to manage that and there are processes by which you could determine if the sub is doing what he's supposed to be doing or not doing what he's supposed to be doing and you can fix it.

Grad: How do you fix it if it's a sub? You don't control them.

Culver: Yes, you do.

Young: Yes, you do.

Shelton: You better control them.

Kendall: Oh boy, you control them.

Grad: It's their management. It's their people. If it's your own people you can fire a manager. You can't do that with a sub, can you? How?

Shelton: Sure you can.

Young: It's your money.

London: You can terminate the contract.

Culver: You've just got to terminate the contract, or hold up payments. You know those are the draconian moves. The better move is for you to make sure that the subcontractor understands what his responsibility is. And you feedback to that contractor and require him to feed to you progress on whatever it is, some quality metrics. The metrics that Jack was talking about, you force on your subcontractor. They're using the same systems you use. If you see him deviating, you bring in the responsible people and say, "Hey, we agreed at the beginning you're going to do this, this, and this. You're not doing it. You've got to fix something. We suggest you fire your program manager and start over again." And they will.

Small/Minority-Owned Business as Subcontractors

Bannister: One important thing is these sub-contractors are often an integral part of your team. They're not sitting off by themselves doing something. And subcontracting today has become so commonplace. Every major contract, not just systems engineering contracts, any large service contract has subcontractors on it because that is the way the government can achieve their small and minority business contract award quotas.

Grad: Through the subs?

Bannister: Yes. You get a $100 million contract today you can be sure that there's going to be a clause in there that says, "You must subcontract out 20 to 30 percent of the job."

Culver: To small business.

Bannister: To small business.

London: Minority, small business.

Shelton: Systems integration management is a part of the system development process. And most systems integration contracts involve substantial subcontracting, equipment, people, et cetera. But the government does let some contracts that are just for systems integration management. And on those kinds of contracts you can't take a fixed price because the government has engaged people to do the development. And yours is an oversight management contract.

Grad: Any of you taken any of those kinds of contacts?

London: Yes.

Grad: And have they been successful?

London: Yes. I had work on the Trident submarine logistics data system where we did an oversight job.

Grad: Just an oversight on the thing?

London: Yes, for years.

Bersoff: In some cases, if the people you're overseeing don't do well and it's clearly not your fault as the overseer, it can lead to your actually doing the development later on. That's happened to me. You actually pick up the work.

Young: I don't think that's really systems integration. At least I don't think of it as that. That's more oversight.

Grad: It's systems management-- well, it's not even management is it.

Culver: Quite often they call it SETA contracts, Systems Engineering and Technical Assistance, where essentially you're an appendage of the customer to help manage his contractors.

Grad: It's like being his quality control group or his schedule control group.

Culver: All of that. The National Security Agency, for example, because they had a difficulty controlling their contractors, let two huge contracts about six months before SI International was bought out. SI won one of them. L3 won the other. And they were $100 million a year contracts.

Grad: Let me ask you a question from a different angle. As taxpayers now, as citizens of the country, do you believe that this mode of contracting by the federal government is both more cost effective and performance effective than the old mode?

Culver: Let me turn it around the other way, what's the alternative? The issue you've got is that roughly 40 percent of the government workers are going to retire or be eligible for retirement in the next four years, 40 percent. The government can't hire the replacements. Where are they going to get the people?

Grad: No, that wasn't my question. It's not about the government doing it. You guys did the whole project before. You found the skill sets. You hired them. You brought them in. You trained them. You supervised them. You rewarded, you recognized, you did all of those things. You had total control. My question was, wasn't that a more efficient model, a more cost effective and performance effective model than this current one which has a company here, a bunch of subs here. Or they hire an oversight guy to make sure it's run right because they can't manage it.

Culver: I don't think there's any difference.

Ceruzzi: I think the real alternative would be to have like a federal arsenal where everybody's a federal or civil servant.

Grad: It would never happen.

Ceruzzi: Well, it did up until World War II and to a certain extent it did in the early days of NASA where [Wernher] von Braun in Huntsville insisted that they do engineering in-house and that they actually had the capability to build things and do the systems in-house in Huntsville. NASA doesn't do that anymore. But I was thinking – again, forgive me if I'm going off course here – but I think there have been three Nobel prizes in the hard sciences awarded to scientists

in the Washington D.C. area recently and all three were north of the Potomac River in federal laboratories. Somebody at the NRL [Naval Research Laboratory], somebody at NIST [National Institute of Standards and Technology] and then John Mather at Goddard Space Flight Center. They were making civil servant salaries. I think they're paid more now. But at those places they actually build things or they make things.

Culver: Well, you don't get Nobel prizes for making things. You get Nobel prizes for breakthroughs. Take a look around this table. I don't know of anybody who would consider their company to do breakthrough work suitable to a Nobel Prize. And it's not the Nobel Prize work which delivers a social security check on time and in the right amount to 35 million people every month. I think you're mixing apples and oranges.

Ceruzzi: Okay, yes. I guess I was trying to get back to my point about whether you have the technical expertise in-house to design a system by federal civil servants.

Culver: The answer is no.

Bersoff: Without the profit motive, I believe, you can't do the kind of things you're talking about. You need to have the efficiency and the profit motive in order to be successful.

London: I agree with that.

Grad: Come on, you guys just earlier said that you were fighting against the nonprofits because they could do the work cheaper.

Culver: But not systems integration.

Young: No, we didn't say that.

Bersoff: In fact, quite the opposite. They were very inefficient because they had no profit motive. They had no reason to be efficient.

Grad: So they could do the work but at a higher price?

Culver: Not systems integration. They never took systems integration.

Grad: No, that's a different time period. I understand. What has me puzzled is that by putting in a layer of systems integration, have we added cost?

Culver: No.

Grad: You don't think so. You think, in fact, you save enough as a result of your skill.

Shelton: Well, if you add value.

Grad: You think it's actually value added, not cost. You guys know more about it than I do, that's why I'm asking.

Culver: I can give you citations for contracts I've been personally involved with where the government had been doing it for a number of years in a small scale. And the entities I was responsible for took it over and cut the cost in some cases by 50 percent.

Young: It's been my observation that government is not capable of doing systems integration. They don't have the staff. They don't have the skill set. They don't have the relationships, nor do they have the profit motive. And I can say, I believe that the government gets one hell of an economic deal from the IT industry.

Grad: Obviously, I'm sure you all think that, don't you?

Young: Well, compared to the alternative, does anybody have a better idea?

Grad: But I have not suggested that the government be the systems integrator. I've suggested, instead, that you as individual companies could have done the whole job, brought in the skills you needed and not had to have had six contracts.

Bersoff: But government procurement is about social policy in addition to efficiency.

Bannister: Yes.

Young: Yes.

Bersoff: And so it won't happen. I mean you're absolutely right. I think any one of us could take on a big job and do it more efficiently than this kind of multifaceted process we have now. But that's not the current social policy.

Grad: But that was my point. That it's because of social policy or something of that sort rather than economic efficiency.

Culver: But remember these things also quite often have significant telecommunications components for sure. And you don't see anybody around this table who pretends to be a telephone company or an Internet company per se. So if you're looking for providers of telephone or Internet service, you've got to subcontract it out because we're not that kind of company. We're not hardware providers in the sense of building the hardware. We buy it from IBM or whoever it comes from.

Grad: You buy it commercially. You bought the hardware unless there was some special design.

Culver: And the software.

Grad: You bought the software. Those were commercially available products you bought.

Culver: Yes, and no.

Kendall: You buy technical skills you don't have the same way. You buy them from somebody who has them.

Culver: But beyond that, in many cases, the procurements are open enough that you have to make the decision as to what hardware fits. So a lot of the value-add is deciding the most cost-effective hardware.

Toups: I think there's a role for subcontractors that would be better if the prime could make up his own mind whether you needed a subcontractor or not rather than being mandated to have as much as 40 percent of revenue going to one or more small businesses.

Grad: Well, that's a good point. When you respond to an RFP as a systems integrator, do you select your partners?

Toups: Oh yes, but they have to be for the most part small businesses.

Young: It's mandated.

Bannister: Or minority firms.

Young: You now have in the federal market the presence of IBM which, at least arguably, over the last 25 years is the most powerful computing IT company in the world. They cannot do it by themselves. They have to subcontract and have always subcontracted.

Grad: By law? Or because it's better business?

Young: Both. It's better business but now more and more of these social programs are entering into it where going in you have to commit to a 40 percent minority or small business component. And sometimes you have the partners as part of your proposal team and some of them you find them afterwards. It depends. But the subcontractor relationship is that often times they're part and parcel of the bidding process. They work on the bids. They work on the pricing. They're really in there with you.

Shelton: But many of the subcontractors are picked on the basis of capabilities.

Young: Right.

Shelton: They have unique or special capabilities or staffing that you need to fill out the full capabilities that are required.

Grad: But how difficult is that negotiation process? If they got that special capability, they've got you over a barrel don't they?

Shelton: No.

Bersoff: No. There are always two or three others like them that are out there.

Shelton: Yes, they've got some competitors at least.

Bannister: You have largely talked about large customers subbing to small companies. Also commonplace today is a small business subbing to a major corporation. It's the other way around.

Grad: Do you have some examples?

Bannister: There are hundreds of examples.

Bersoff: I'll give you an example. We had a bundled Coast Guard contract where we were one of two companies that were part of it. They bundled two projects into one, increased

the size to a $40 million contract, and set it aside for small business under $6 million. So a small business under $6 million in revenues then took on this job so it had to do 50 percent of the work. And the other two primes were now relegated to subcontractors to this small business. This was awarded in the last six months.

Grad: And you believe this to be?

B**ersoff:** Stupid. (*Laughter*)

Grad: I was trying to be polite.

Culver: There are those cases but there are also cases where a fairly large company will subcontract to a much larger company for various reasons. I'll give you an example. Back in the 1980s, we bid the Treasury network, turning the Treasury networks into a single integrated digital network. CSC won that. It had AT&T on its team as a subcontractor. The contract was worth, I don't know, $500 million. AT&T got $120 million for the subcontract. And that's a case where, in order to get the telecommunications access, we had to turn to an AT&T, a Sprint, an MCI something like that.

Grad: Let me switch and then we're going to cut this and have our final session. Outsourcing, are you all doing outsourcing now? Or are still fairly few companies doing that? How many of you are doing outsourcing at this point?

Bersoff: Well, there are a couple of different kinds of outsourcing. There's what they call the GOCO [Government-Owned, Contractor-Operated] model and the COCO [Contractor-owned, Contractor-operated] model. The government-owned model, you called facilities management before. In many cases, the contractor owned facility is where the contractor buys the equipment from the government, actually it gets delivered to them and then they own and operate and lease it back to the organization. The Department of Education is big into this. They have a major program that we're a part of that is a COCO model. It's happening all of the time and with greater regularity.

Grad: Are you doing any of that CACI?

London: Some. But I don't think along the lines that Ed was talking about. Pieces of things here and there, in the communications area more, operating communications systems.

Culver: Telecom which also supplies the Internet.

London: Yes.

Young: There was a concept that was popular a few years ago that Federal Data was deeply involved with called seat management. And essentially what you would do is take over the responsibility for all of the customer's computer and communications and requirements. You would own the equipment. And you would price it on the base of transactions or something like that.

Bersoff: That's COCO now.

Young: It's COCO, right.

Grad: Did you hire the people from the previous operation or did you bring your own people?

Young: We used our own people.

Grad: Because it was one of the things that EDS and some of the others did commercially where they would actually physically take over the IT department and hire all of the people.

Culver: That's true in commercial outsourcing but not in government.

G**rad:** Nothing comparable to that in the government, I assume.

Shelton: Well, sometimes you have to hire the government employees.

Grad: Oh really?

Shelton: Yes.

Young: You do if you can.

Shelton: Or they mandate that.

Young: Well, if they require you to do it, as the NSA did on defense mapping.

Bersoff: When it was defense mapping, the Alaska Native Corporation took over their facility and hired all of the government workers.

Grad: Did they pay them commercial salaries or government salaries?

Bersoff: I think they did well.

Grad: Cliff, any other thoughts on the outsourcing or…

Kendall: I think they've hit it in terms of the kinds of things that go on. Going back to the government contractors, though, with the subcontracts, one of the most discouraging things that happens is a firm will be doing a great job. And because the government agency has a requirement to issue so many minority contracts they will make it a small business or minority-owned requirement. And the next thing you know they're bidding the prime and you're the sub and this makes no sense at all except, I guess, for the social programs. But that happens more than I think most of us realize.

Grad: Are you lobbying against that in any effective manner?

Young: You can't lobby against the social programs.

Culver: The thing that protects you is the more complexity and the more value-add you provide the less likely that happens to you. If you're just providing bodies, it's very easy for it to happen to you. If however, you're a true systems integrator with all kinds of subcontractors, the customer is not going to go along with it. So that value-add thing is why to be a systems integrator. It's harder to find a percentage of your business erode in that way.

Grad: Okay. We're going to break and end session 5 and we'll then start session 6 and that will be our closing session for the afternoon. We'll change tapes and we'll get going again.

