
# GPS Workshop: Delivering Professional Services

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# Table of Contents

# GPS Workshop: Delivering Professional Services

## Conducted by Software Industry SIG – Oral History Project

**Abstract**:

This session discussed how the companies were able to tackle and successfully complete the often complex projects which they bid for and won. How did they recruit and train their technical personnel to meet the technological capabilities needed for each project? How did they organize their technical personnel, by project, by discipline or by functional organization? What project management techniques were used to plan and staff the various tasks needed to carry out the projects? How did they adjust to changes in the requirements or to unforeseen problems? How did they insure that quality was not short-changed while schedules were maintained? What was the nature of the operational interaction with different customers and markets?

**Attendees:**

| 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 |

  

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| Doug Jerger | Software Industry SIG, Computer History Museum |
| Luanne Johnson | Software Industry SIG, Computer History Museum |

**Staffing the Projects**

**Burton Grad:** Okay, this is session three and the subject is delivering professional services, delivering whatever it is you contracted to do. I'm interested primarily in the delivery of the services that you have agreed to perform, not in delivering the hardware or other aspects of the contract. I'm going to start with something which I assume is basic which is people. How did you staff the projects? When you bid the projects, did you have the people there? I expect in most cases you didn't, so how did you go about staffing, how did you go about training, how did you go about recruiting? Let's talk about those kinds of things. This is very heavily a people business for most of you.

**Dan Bannister:** If it was a brand new project and there were not incumbent staff, that's one situation.

**Grad:** Let's talk about that.

**Bannister:** Well it varies all over the map but first you start with hiring the program manager who has responsibility to staff the project and you line up as many people as you can. Often you have to provide resumes in proposals. Back then, it was probably 100 percent of the time you had to provide resumes, I guess. Representative resumes of the key people, not every employee.

**Grad:** How could you provide resumes if you didn't already have them on staff?

**Bannister:** Well, you would get people's resumes who don't work for you, but you would also steal people from other projects that you have.

**Grad:** This is something that's always puzzled me because you have it somewhat in the commercial business. But here you bid a project which is of a fairly substantial size. To bid it you had to have some people there with the skills to get the project, didn't you?

**Ed Bersoff:** If it's a substantial contract, there's going to be a key personnel clause in the RFP. They'll want to know the top three, four, or five people. They'd better be on your staff, or you'd better have a contingent offer to them. They'd better be known to the client, that relationship thing we were talking about before. So typically they're in your company somewhere. They have the right skill set. They may have been briefing the client six months

before, just kind of one of your marketing trips. So you have that core team, and then the rest of the staff you hire.

**Grad:** What bothers me is it's sort of a chicken and egg situation. You speak of coming in on the Naval side, and here you're starting to sell but you had no people working with Navy skills.

**Jack London:** My personal experience is that I guess the first four or five deals of any consequence, I didn't have anybody. We had a job to do a development plan for the logistic system for the Trident submarine and it was my IT background and logistics background, but I hired a marvelous supply corps commander, retired after four or five years in the industry, who basically was a five-star hit on that job. So it was scrambling. I always wound up scrambling, finding people and pulling things together and I almost ad-hocked on that basis for the first two or three years.

**Grad:** I'm asking that question. I really want to hit it with all of you. Those early contracts, it was whatever skill you represented. If you got something, how did you get it if you didn't already have the people on board?

**Stan Gutkowski:** As we said, you have to have at least the core group on board or you have access to it. In our case we were a small part of the large organization, so the way we attacked the market and the way we were successful is we took the best in our commercial practice area. So, for example, if we were doing work in the Department of Education in the student loan business, we tapped the person in our commercial loan practice that was available who was the best person for that job.

**Grad:** So you had access to skills, okay.

**Gutkowski:** We viewed staffing as a global function and were able to reach back into all kinds of organizational elements within the company to bring the right skills to the job.

**Grad:** I don't think any of the rest of you had that same possibility, did you?

**Walt Culver:** You mean in the early days or what?

**Grad:** They had the whole damn Arthur Anderson company to draw from. They're a little piece of a very big company so they could pull people from the commercial business into these Federal contracts.

**Culver:** Are you talking about the early days?

**Grad:** Yes, I'm talking about the 1960s and 1970s.

**Bannister:** Wait a minute. There's a key factor here. The government did not expect you to have all those people on your payroll when you bid a job. You had to provide a staffing plan that told the government how you were going to group the people, and how to fill the spaces.

**Dan Young:** I'll give you an example of that. In the late 1970s, there was a heavily competed program called Splice, which is a navy logistics system, and the solicitation went on for about five years. When we started we had 48 people in the company, and the contract was awarded for $550,000,000 which in those days was an awful lot of money to be awarded to a 50-person company. But the plan we put in place was to provide 500 people during the life of the program, so we sold the initial talent with some resumes and we hired the rest.

**Culver:** But one of the keys to this, which I think somebody already mentioned, is the staffing plan.

**Grad:** Did you do something similar at PRC? The staffing plans were key?

**Wayne Shelton:** Yes.

**Culver:** The staffing plan has to be very credible and it's usually supported by other contracts you've staffed successfully where they can do a reference check on you.

**Grad:** Dan, is that pretty much consistent across the board? Judy? Any thought on that?

**Judy Huntzinger:** Yes.

**Bannister:** Yes, often the major consideration in the award was the validity of your staffing plan.

**Luanne Johnson:** A little earlier we were talking about the lack of barriers to entry, but this sounds like a pretty substantial barrier to entry into this business if you have to have a track record of that kind.

**Bannister:** You have to demonstrate some knowledge and some experience in whatever field you're bidding in.

**Culver:** Yes, time and time again, commercial hardware companies have said, "We want to get into the Federal sector." It's sort of a three- or five-year cycle when there seems to be a lot of money there. Almost none of them have ever succeeded that I know of because they don't have that experience. They're commercial companies. They don't know how to write a staffing plan that's credible, you know, with the right mix and the right matching to the statement of work.

**Young:** You had to have certain qualifications and you had to show a track record of success and programs of a similar nature.

**Bannister:** Which is not the case today.

**Grad:** Did you train the people or did you have to get people who were already trained or had the skills that you needed?

**Young:** Both.

**Huntzinger:** Depended on the position.

**Bersoff:** You mean the technical skills?

**Grad:** I'm talking technical skills. Judy?

**Huntzinger:** It depended on the level of the position. Certainly the senior people on the job needed to have the skills. You could bring in some junior people that you could train.

**Grad:** You were willing to invest money in training the junior people?

**Huntzinger:** Definitely.

**Grad:** Was that pretty much across the board or were you always looking for experienced people?

**Bannister:** But you also could put in your proposal how you're going to train the people.

**Huntzinger:** Right.

**Shelton:** In the history of companies I've been associated with there were major contract wins that allowed you to bring in and fuse in the company new technologies, new capabilities. They

then, were the springboard to other contracts. And so you sort of sprung from one contract to another in terms of finding the staffing and the skills that were needed to bid the next job.

**Staffing Issues on Lost Proposals**

**Grad:** Suppose you lost on one of those proposals that you had been banking upon. Did you just let go of the people? What did you do?

**Bannister:** You mean if you were the incumbent?

**Grad:** I'm still dealing with new. You bid something new, you did the proposal, you spent the energy and effort. Now you lost. You have five people who were working on that.

**John Toups:** You don't hire new people before you get the contract.

**Grad:** No, but you had five people who were working on that proposal. That's what I'm trying to get at.

**Toups:** But you got them out of your staff already. You put them back.

**Bannister:** Or you hired proposal writers. And nowadays there are companies who will come in and write your proposal for you.

**Culver:** Or they go on to the next proposal.

**Huntzinger:** Right.

**Culver:** There are options.

**Grad:** You keep them going. So you weren't just dumping the people. If proposal X didn't make it, you didn't dump them.

**Culver:** You wouldn't get anybody if you did that.

**Bannister:** No, you always have a pipeline of proposals and work.

**Young:** But it's really painful to lose a three- or four-year competition if you spend a million dollars or more.

**Bannister:** Yes.

**Young:** You're going to lose two out of three.

**Culver:** That's right. You're going to lose more than you win anyway. That's built into the system.

**Grad:** Let's keep going on that. So you then go out and hire staff. Did you use outside recruiters, or did do your own recruiting?

**Bannister:** We used to do our own because outside recruiting was too expensive.

**Grad:** It was too expensive to use third party recruiters?

**Bannister:** Except perhaps for the top-notch, top-level management people.

**Grad:** How about the rest of you?

**Bersoff:** For a couple of hires you might use a staffing group but internally you had your own HR department that would do the staffing.

## Organizational Structure

**Grad:** You had your own HR who did that staffing. And the training? You did that typically yourselves? How did you organize your technical staff? You would hire these people with skills. Did you organize by project? Did you organize by function? Did you organize by geography? How did you organize your projects, your technical staffs?

**Bersoff:** The problem is we probably all did all of that at one time or another and nothing ever worked. Nothing worked. The matrix organization is kind of theoretically the best organization around but you've got to have superstars to staff a matrix organization.

**Grad:** Tell me what a matrix organization is, in your opinion.

**Bersoff:** Well, if you're a software company for example, you'd have a group of program managers that respond to customer requirements that were the interface with the customers. Then a programming or a software engineering organization that would get farmed out to staff the various projects, but each of the people in that matrix would then have two bosses: their functional boss, the software boss, and the project boss. And they almost always were in

conflict with one another and there were turf battles and all sorts of stuff like that so it usually didn't work, but that was kind of the ideal that many of us tried to institute.

**Grad:** Did anybody really have a successful matrix structure over a period of time?

**Gutkowski:** Yes. Accenture has a matrix structure that may have varied over time, but our entire existence has been as a matrix organization and, typically, the various components of the matrix will have organizations that perhaps house specific skills. So an SAP organization, for example, that supports the programs in each of the industries. So we have a good market organization that might be industry-based: government, financial services, manufacturing. We have a support organization, finance, HR that supports all of that. We have various skills-based organizations and we make it work. You know we made it work for over 50 years.

**Bannister:** We organized by function and geography, international business was in one unit, and then IT services was a separate unit, marine services, aviation, whatever the others were.

**Grad:** So basically by geography when you speak of these other ones, marine services. Do you think of that as a geographic cut?

**Bannister:** No, that was a function. Any international business was in one organization regardless of what the function was.

**Grad:** How about PRC? What did you all do?

**Shelton:** Mostly functional organizations. We were highly organized by projects and having substantial projects, within the project was in a substructure.

**Grad:** But your project was your primary thing.

**Shelton:** Yes.

**Grad:** Judy, how did they do it there at BDM?

**Huntzinger:** In the early days it was geography first and then within the geography by functional area or service being provided. So there was an operation in Albuquerque, an operation in Washington for example, and then within those organizations there were, you know, what the services were that were bring provided to the customer. It was organized that way. In a lot of companies, the way that you get promoted and increase salary and increase responsibility was by moving into management and operating people and being responsible for

people and performance appraisals. BDM did it a little bit differently where they did identify key technical people, and those technical people could be promoted and have increased responsibility, increased titles without managing people.

**Grad:** There was a technical chain.

**Huntzinger:** There was a technical chain that was a little bit unique there. There was a technical chain and a management chain, but mostly organized around the services that were being provided to the various customers.

**Grad:** Dan, your stuff was highly geographically dispersed from what you described to me.

**Young:** Yes, it was, and we found a combination of functional organization and matrix seemed to work the best in the areas of business development, proposal development, and marketing. We operated in a matrix environment. Operations was basically a functional organization where the various typical organizations inside of operations would exist. And then we had a development organization which was engineering, high-tech development, new software development, interface development, and that was matrix so we found that combination worked the best.

**Grad:** Walt?

**Culver:** The only true matrix organization I found that ever worked was an aerospace company I was the CEO of for a time and I had a manufacturing component. Of course, the manufacturing engineers, production folks, engineers, software folks, and they were all in their own compartments. And on a product by product basis they would come out and form task teams and then go right back. Those were all short term assignments. At CSC in general we had very big long-term projects and people would be transferred right into the project. When a project was over, you found new jobs for them. As long as the company kept growing, there were always new projects to put them on. Only in those areas that had by very nature a collection of short-term R&D-ish type things funded by the customer did you end up with a functional component. You might have an Internet group who would tend to have six-month tasks and that Internet group would do those little projects within there and they'd be matrixing and doing whatever they did, but that was not the greater part of the company. The greater part of the company was very much project oriented.

**Grad:** Let me focus on one thing. You built up a staff. You've got this major project going, and now you lost on the re-compete and the project has ended. What did you do with the people?

**Culver:** As long as you're growing, just put them on the next deal.

**Grad:** Was geography an issue in this case though? Because a lot of you were doing projects all over the world, right? That was the nature of your business.

**Gutowski:** It would depend on the people themselves. If we had a project, say, in Birmingham that ended, we'd offer those people positions elsewhere. Some wouldn't want to leave Birmingham, well, that was their decision. I say as long as your company is growing there's always a place for them. We're resource constrained in terms of growth not demand.

**Bannister:** You move people around a lot.

**Grad:** That was another major thing. They had to be geographically mobile, didn't they?

**Losses on Re-competes**

**Culver:** The only time that didn't happen is when you lost a re-compete. I mean you lose re-competes so rarely that you don't build a plan around that.

**Grad:** The number you gave us is an interesting one. With maintenance on software everybody renews the maintenance contract. If you ever get below 95 percent renewals on your maintenance contracts, you know your business is in deep trouble. These are on software projects.

**Culver:** I think the probabilities are actually much, much higher than 95 percent.

**Grad:** Really? Higher than that?

**Culver:** Yes, I think so.

**Grad:** So that's not a big issue.

**Johnson:** Wait a minute. A re-compete, doesn't that mean that somebody else is bidding to take that away from you?

**Culver:** Oh yes.

**Johnson:** Why would anybody bid against somebody that's an incumbent then?

**Bersoff:** Because sometimes they win. There are some big jobs at stake when there are major re-competes.

**Culver:** There are occasional losses, but typically if you go back and do a post mortem of an occasional loss, it's because you screwed up as the incumbent. And you screwed up in a couple of different ways. You become so arrogant that the customer is no longer feels they have a partner, that's one way. Second way is when price is not a factor. The incumbent convinced himself that price is unimportant. They're going to buy us no matter what, or they're going to give this to us because we're AT&T or IBM. That's how you lose those contracts.

**Bannister:** And if you're a bidder going after a contract that has an incumbent on it, if you do your proper work on marketing analysis you can find out from the customer whether or not they're really satisfied with the incumbent.

**Huntzinger:** One of the things you're sniffing out is the cases where the customer is not that happy with the incumbent anymore and that looks like an opportunity.

**Bersoff:** Also there's turnover in leadership of those customers. Sometimes the client that you've been working with for 20 years retires and somebody else comes in and they don't see it the same way. Even though you're doing great work, they don't see it the same way that their predecessor did.

**Culver:** But again the incumbent doesn't recognize it. It's the incumbent's fault because they don't recognize there's a change.

**Bannister:** Yes, I agree. But there's always a prevailing attitude, not everywhere, but generally a prevailing attitude in the government that these guys have been here too long. So you've got to watch out for that.

**Bersoff:** Term limits.

**Grad:** Yes, I've wondered about whether you get that view. This is the fifth they've won. Isn't it time to see if we can get some new blood, some new ideas?

**Culver:** Well, but there's where the incumbent should recognize that and sit down with the customer well in advance of the RFP and say, "Look, we're thinking about changing the program manager and these technology guys because we're moving from mainframes to PCs. What do you think about that?" And they would respond, "Yes, who do you have in mind?" And then you show them the resumes. Then when the RFP comes out those resumes show up in the proposal. The losses all go back to the incumbent doing something wrong.

**Project Management Tools**

**Grad:** Next item: project management tools. You bid this thing, it's long-term, it's complex, there's a lot of technical challenges in many cases. How do you manage it from the people and the tools standpoint? I would like to hear some of the thoughts on that. Who would like to start? Do you do anything on project management? Go ahead, Wayne.

**Shelton:** Well, there are certain information tools that the project manager needs to get, and not all project mangers get all of the information that they really need to be able to manage the project both from the standpoint of progress towards specific tasks or mix of people, or a burden or overhead that's being billed or connected with the program. So I think that's key, to train program managers to provide them with the information tools to manage.

**Grad:** What are the kind of tools you use to help them manage?

**Shelton:** Utilization reports. What the utilization is of each member of your project team. The mix of the labor categories or the cost items. Budget reports against planned budgets for other expenses including labor.

**Young:** You remember the old technique called PERT.

**Grad:** That's what I was wondering. Did any of you use critical path techniques and so forth?

**Young:** Sure we did, because if you're managing multiple partners you have to time everybody's completion of their development work and the integration process, and so PERT initially became a tool that we used regularly. And there are still forms of PERT being used even today.

**Grad:** Microsoft has Microsoft Project or whatever it's called nowadays. Everybody uses it to start with to lay out the initial plan. Does anybody ever maintain it?

**Culver:** Maintain what?

**Grad:** With PERT, critical path, everyone sits down and lays out the project plan all out. And I've never seen anyone religiously maintain the thing over the course of a year or two year project.

**Young:** That's generally a deliverable. You have to have the original plan, and then you report monthly or quarterly, whatever the contract calls for, on the progress along the way.

**Culver:** You don't have a choice.

**Huntzinger:** Right.

**Grad:** And you have to keep it maintained.

**Young:** Yes, sure.

**Huntzinger:** And not only that. If it's a fixed-price contract and you're a publicly traded company, you've got to have that information so you know the proper revenue recognition. You've seen all the stories coming out of the SEC in the last couple of years, but even way back then, it was required, I know, on the financial side of the house that anybody that was operating a fixed-price contract, on a quarterly basis, had to give me a detailed analysis of what they spent, what their estimate was to go, how that compared to their original budget. So there was some serious stuff.

**Bersoff:** And that's become institutionalized lately with this Earned Value Management System that many agencies are now promoting. You have to get certified that you have an Earned Value Management System that works. It goes back to the days that we were just talking about when people did these project plans and did budget and cost-of-work schedule and work performed and all those kinds of things. But now there's more rigor in the system, there's more tools in the system but it's been around for a long time.

**Young:** We had a motivation to do it because being a fixed-price contractor, how we got paid was the milestones along the way, and so we wanted to be paid as early as possible. And since we were giving labor away as part of the system we wanted to make sure those milestones were clearly identified and the customer approved it and we did that through a form of PERT.

**Bannister:** Does your question address the use of technology tools?

**Grad:** I wasn't thinking of that but that's a good angle. I was thinking more of the management for measuring scheduled progress, cost control, and quality.

**Bannister:** All right.

**Culver:** Any company that's keeping their customer happy keeps that information going and, in most cases, will share it with the customer. In most cases it's required contractually, but even if the customer is not smart enough to ask for it you provide it online to them these days.

**Bannister:** Yes.

**Culver:** Immediate access through a portal on every step of your progress.

**Bannister:** Let me tell you a quick story. I'm trying to remember what year it was. It was in the 1980s or in the 1970s. Probably the 1980s. In any event, it touches on unseating an incumbent and how to get a competitive advantage. We decided to bid the operation or maintenance contract for the Strategic Petroleum Reserve again. We had bid it once and we lost by a long margin. We just didn't understand the project or the customer, so the next time it came up for bid we looked at it and decided we were going to go after it again. This was a very expensive proposal. Cost us a million dollars, the first million dollar proposal we ever wrote.

And we said we've got to figure out what our competitive advantage is. How are we going to convince the customer to award this thing to us? So we looked at how the customer managed the resource. The Department of Energy has about 60 people down there, as I recall, who oversee a contractor who does all the work. So the 60 people merely monitor what's going on in the Strategic Petroleum Reserve and they make the decisions about filling or selling or that sort of stuff, and then they oversee the contractor. What we saw was a system of management where the head guy who's responsible for the whole Strategic Petroleum Reserve got reports from his management by telephone calls or faxes from the five locations where the reservoirs are.

It was an archaic system, obviously, so we decided that we would introduce technology. First time we probably ever on a big scale decided to offer a technology-related management tool. We designed a system that would monitor by placing sensors on the pipelines and all the various structures. It would monitor what was going on. So instead of the manager getting a phone call on Tuesday morning saying "Guess what? We got a pipeline leak over in the Texas facility and we've got to fix it", it would detect it and automatically report it.

We designed a reporting system and when we went to the oral presentations, we brought in two or three television sets, set them up in front of the evaluation team members, and we had seemingly the entire Strategic Petroleum Reserve facility put it in the computers. As part of our presentation, we pulled it up and we showed the manager how if there was an oil leak over in the Texas line or wherever it was, he could just look at his screen and he would know it at the same time as the manager of that facility out there.

When I look back on it, it was not much compared to what happens today. But back then that was a pretty big deal. We finished our oral presentation and I was watching the team watching us and you could just see that they were really impressed. We finished our oral presentation and we left.

We won the contract. The biggest contract DynCorp had ever won up to that point, $642,000,000. It's still going on today and it's now much larger than that. But later after we won it, at the celebration party I was talking to the guy who ran the entire Strategic Petroleum Reserves. His name was Hoot Gibson. I said, "Okay, Hoot. I got a question for you. Why did we win?" And he said, "Well, it's really very simple. You guys came and gave that presentation. After you guys got up and left the room, we sat there looking at each other and I went like this <thumbs up>. And everybody nodded. We folded our books. We decided you had won the contract." And they hadn't even seen the last presenter.

**Grad:** Wow, that's a pretty impressive story.

**Bannister:** That's an example of how providing a management tool to a customer will give you a competitive edge.

**Grad:** Any other stories about project management? Quality measurement for doing programming. Have you all introduced special tools to enable you to know what your bug levels are?

**Culver:** Be careful with "special tools" and "quality management" because you get into a quality check on the tools. So be very, very careful about introducing something to measure quality that we haven't used for years and years and years and everybody else has and has some confidence in.

**Grad:** Acceptance tests, were they a part of everything you were doing in software and programming? You're shaking your head, Dan.

**Bannister:** I'm going like this <swaying>. I'm thinking of some projects.

**Bersoff:** You open a very large potential can of worms. I mean there have been companies that have been destroyed because of bad acceptance testing processes. The problem here is oftentimes the client doesn't understand how acceptance of the software projects is done, doesn't understand what the requirements really were. The requirements creep over time. Potentially, if you don't have a smart customer, it becomes a nightmare in terms of getting a product accepted. So upfront test planning, up front requirements analysis, pinning it down, not having a change without configuration control is a huge part of that.

**Changes in Specifications**

**Grad:** That's leading into that next item. What about changes in specs? I was particularly concerned with those of you who have fixed-price contracts. How do you manage if the hardware is going to change over time, if the customer says "I want something different," how do you deal with that on a fixed-price contract?

**Young:** We love it. We love it.

**Bannister:** Yes.

**Grad:** Tell me why you love it.

**Young:** Well, because that's an opportunity to re-price. Usually the customer has no idea what he wants but in the time period we're talking about the solicitations took so long that when the customer wrote the specification, technology changed at least once maybe twice before the award takes place. So, as a result, the technology the customer buys is obsolete. And the customer is not dumb, he knows that. And so when you price it, you price what the customer expects to have delivered. And invariably you have an opportunity to re-price that at least once or twice, maybe three times during the life of the program.

**Grad:** Now we know that because of Moore's Law the price of everything has been going down, performance is going up. That means you cut your prices consistently?

**Young:** Certainly. You give the customer a good deal. I mean it would be a negotiated arrangement. That's true on services. Of course we bundle our services inside of our hardware and software so we would negotiate a new price. Oftentimes back in those days, there would be changes of scope in the contract. That's a bad word now, but back in those days changes of scope were very, very common. It would go from 100 offices that you were providing network services for to 600 offices and you re-priced them.

**Grad:** I wasn't being totally facetious because I remember that there was some expectation that we would deliver less expensive hardware in a bundled contract than they were asking for at the beginning. We could give them better price performance and yet we would have enough money to cover, and that would give us some new spread. Is that true elsewhere or was that just a special case?

**Culver:** No, that's pretty much true. Many business process outsourcing contracts are priced on a fixed-price per transaction basis which is a little twist on this. In order to win those contracts you have to build in a learning curve so that by the time you get two or three years out

your price per transaction has dropped maybe 20 percent or so. Now you have to have sufficient understanding of those transactions to know which ones are going to drop and which ones are not. Things like opening envelopes for example. At the National Visa Center up in New Hampshire, SI International would receive 10,000,000 envelopes a year. Opening the envelope is not going to get more efficient, especially when a certain percentage of those envelopes have money in them, bribes where there's a special process you have to undertake. And maybe five percent of them have bribes in them. And that's a very complex process. You have to handle it in a certain way. However when it comes down to things like processing visas in the stages of checking out whether or not this is a miscreant, whether it's a terrorist trying to get into the country, there we took advantage of assumed learning curve and technology, knowing pretty well we could access certain systems if we asked, and with time we expected that would very much increase our efficiency for finding the bad guys. And so typically in those contracts we had four or five or six percent efficiencies per year, and usually do better than that and make a large profit.

**Grad:** For the CPFF [Cost Plus Fixed Fee] contracts, was this a nonissue as far as change control? You had to manage the changes but from a pricing standpoint it was a nonfactor, is that correct?

**Young:** No.

**Bersoff:** No.

**Grad:** Tell me why not.

**Bersoff:** The problem is that it's a fixed fee, that's what CPFF stands for, so if your costs go up your profitability goes down. Unless you can negotiate a change that would add scope to the contract.

**Grad:** You're back in the same ballgame then, you're saying.

**Culver:** Yes, and there's also a limitation of costs clause. In other words you cannot just spend with the throttle wide open. The customer can say "I've got no more money to cover it. It's up to you now."

**Grad:** So it put a cap on the thing.

**Shelton:** The concept of a CPFF contract is that your customer shares the risk with you. And so if the costs go up you'll get reimbursed. But many customers don't accept that. They

look at a CPFF contract as a fixed-price contract and they'll give you a hell of a time to get a change.

**Huntzinger:** And there's also the perception that if you can't manage your cost on a cost-side contract and you go back to the customer and say, "I couldn't get there within the original amount of funds. You need to give me more." then you get a black mark.

**Grad:** But can't you always point to the changes that have taken place in their spec or their requirement?

**Huntzinger:** If there is a substantial change, and you notify them at the time it's happening, your odds of getting a change are relatively decent. But if you wait until you're out of money and say, "Eight months ago this change happened," that doesn't work.

**Grad:** Okay, let's take one other kind of contract where you're doing T&M [Time & Materials]. Is it a factor there or not?

**Culver:** No. Typically what will happen in T&M in terms of changes is that the customer has a new requirement. Let's say it's an Intelligence client and you've won it in a certain area within NSA and it requires certain types of analysis, but now a new threat arises so you need a new class of people. Then you provide them the prices for those classes of people. It's only if you really mis-bid in terms of what you think your costs of hire are going to be that you get in trouble and you don't get changes for it.

**Grad:** I've been involved recently with a company that I can't name, but it's a substantial company in a field which is not represented here. They've been doing a lot of major projects in other countries on a fixed-price basis and they're getting their head handed to them. They're just getting creamed.

**Culver:** You never bid a fixed-price development project. If you're delivering airplanes, you can deliver them fixed-price. But if you're going to deliver services overseas, and you're taking fixed-price, I guarantee you're going to lose money.

**Huntzinger:** Then there's the issue of whether you are getting paid in US dollars or foreign currency.

**Grad:** They hedged that. On that part they're okay. How about the rest of you?

**Young:** Well, the Federal Government provides a set of rules that we operate under and that permits us to be a fixed-price business and we know what we're bidding. In the commercial market, that's not always true. And it is certainly not true in foreign markets.

**Grad:** These happen to be foreign governments.

**Culver:** Yes, they're worse than commercial.

**Grad:** Is that right?

**Culver:** If you're bidding in the UK or in Canada and maybe Germany, you'll find the contracting rules could be comparable, but if you bid in Italy you don't know what you're getting into.

**Bannister:** Or the Mid-East.

**Culver:** Mid-East is probably worse than Italy.

**Bannister:** Yes.

**Bersoff:** Judy and Wayne were, I think, on the right track. It doesn't matter what the form of your contract is with the government. They all expect it to be fixed-price so there may be a cost plus, there may be a T&M, it may be fixed rate but if they give you a million dollars, they want the job done for a million dollars and you better be prepared to do the job for a million dollars or give them a very good reason why you can't.

## Stories of Disasters

**Grad:** To close this session I would like to ask a horror story from each of you. Tell me a case where you bid something and because of either technology change, functional change, or something that it really turned out to be a disaster, it really cost you money. Should I go around the room or who wants to volunteer?

**Bersoff:** You want one from this year or last year? Last month?

**Grad:** Pick one that you remember too well.

**Huntzinger:** In my tenure we had two very large firm fixed-price systems integration jobs. One was with the Federal Government and one was with the State of Missouri. It was a matter of

interpretation as to what was written in the contract and what the requirements were. On the one with the Federal Government, I think it was a $40,000,000 job and we were concerned we were going to have a $10,000,000 overrun. We got out of that with about a breakeven scenario. With the State of Missouri – and we had numerous jobs with various state governments – that job had a potential $40,000,000 overrun. We tried every tactic to work our way out of that scenario from addressing our technical side with their technical side trying to get there. We got nowhere. Then there was the political to the political with the congressmen. We tried every aspect of working it out. You asked the question earlier, "Do you have your attorneys go in and help you with contracts?" And we said, "We have contract specialists." And I think, honestly, that a pivotal part was having the contracts person from each side eventually sit down and work it out.

**Grad:** You did negotiate something then finally?

**Huntzinger:** Yes. And we agreed as to what the intents were and that type of thing, but I think our biggest horror stories were definitely the firm fixed-price systems integration jobs.

**Grad:** Dan, ever have a horror story?

**Young:** <laughs> Anyone who doesn't have a horror story hasn't been in this business very long. Yes, we bid a contract to Social Security in the late 1980s and the contract was to rebuild the entire Social Security network response system. The software, hardware, integration of all of that stuff, and it was a long-term contract in which there were quite a bit of services, but I recall specifically there were ten large mainframes that were to be delivered. The guy who bid it, bid on the assumption that the customer was going to the latest technology. And he didn't. And he held our feet to the fire to deliver old technology to the tune of about an $8,000,000 loss. Back in the 1980s that was a big number, and we delivered.

**Grad:** He wouldn't take the more modern equipment? He wanted the old equipment?

**Young:** No, he knew exactly what he wanted. But I will have to say he has subsequently become a good friend; he became one of the best customers we ever had, and gave us truly a sole-source contract to wire the entire United States, all the Social Security offices, and then he said "We're even now."

**Grad:** John or Wayne, do you have a horror story to share with us?

**Toups:** I don't have any horror stories in the IT world. He would. I've got it in the engineering world.

**Grad:** Let's do an IT one.

**Shelton:** We had a contract with the state of Rhode Island to automate their income tax system and through some mismanagement of staffing the job by the company that we had acquired we were not able to deliver the job on time. The state informed us that they could not collect the state income tax on time so they felt that we were liable for all of the lost taxes and the costs that were incurred with a fax that couldn't be delivered. It cost us something but we finally delivered late.

**Grad:** That's a contingent liability clause that you never let in if you possibly can. How about you Dan?

**Bannister:** I'm trying to think if we had a real major one. Big numbers like Dan said. In fact we had three. We took a contract in Mexico of all places to put in some systems in banks. To make a long story short, there was a total misunderstanding of what the scope of work was, the equipment that we were delivering, and the services that were supposed to go with it. I don't remember how much we lost on that, but we quickly decided that we're not going to do business in Mexico. And, interestingly, we took a contract with the State of Virginia to establish and staff and equip about a half a dozen offices around the state that would monitor and control payments to welfare recipients. To make a long story short, what we thought we were supposed to deliver and what the state thought we were supposed to deliver were two entirely different things including the equipment that we were supposed to deliver. I'll tell you that lesson taught us that we weren't going to be in the state or local government business. And I'll bet you if you went around the table here everybody would have a similar experience. It's a totally different world.

**Grad:** That's a comment I was going to make because I've heard many more horror stories about state and local. At Federal they seem to say we're going to keep doing business with you over a long period of time and somehow we have to work these things out.

**Bannister:** Do you know what the difference is? It's the inexperience of the state people who are buying these services.

**Huntzinger:** You can implement one service in one state and go to another state and do the same thing and they want something entirely different. There's no uniformity from one state to another.

**Gutkowski:** There's nothing that protects the contract. In some states, it's like the Wild West. I mean, there are 50 of them and they all do business differently. In the Federal Government there are some nuances – DOD, civilian – but at the end of the day there is more commonality

than differences. And there is a whole history of law. The Federal Government honors their contracts. State governments? If they don't like the terms maybe they think that's not really what we said. And your recourse is very limited. Very.

**Grad:** While I've got you here, what's your horror story?

**Gutkowski:** Well, as a matter of fact, to carry out the state government focus, Accenture made a decision a number of years ago. Most of our growth – about 95 percent – has been organic. But we decided a number of years ago to get into the elections business and we bought a little company that had a little piece of software and we decided to basically rewrite it.

At the same time, there was a lot of activity in the elections business because of some legislation that was passed that had some deadlines, so we got into the elections business. We won some work in a number of states and at the end of the day, we had some trouble delivering our new product on time. But more importantly, the customers each had a different perspective on what the product should deliver. They each had different ways in which they ran the elections process, and state politics just in general are interesting. And when you're working in the state elections system, you basically have a target on your back in terms of the level of press, so minor things tend to get magnified. So we actually got out of the business. Got into the business, decided to forget about it, and exited the business.

**Grad:** Ed?

**Bersoff:** I'll tell you a Federal one although we have some stories in the state and local market also. We were bidding a contract – a very large one -- with the army to supply computers and peripherals and systems for the entire army. Our program manager. Looking to differentiate ourselves from our competitors, offered the army a life-time guarantee for all products. Which got through the process of review and all that. The question of what did that mean kind of reared its ugly head about three, six months into the contract. It took a visit with the Commanding General of the buying organization to convince him of the inequity of that situation. The fact that it was a competitive bid, that we won competitively, made it very difficult because that could have been perceived as the edge that we had, so we had to give some consideration in return for the removal of that. But, you know, one word can make a huge difference.

**Grad:** That's why the exact wording is so critical in these contractual things.

**Bersoff:** Exactly.

**Grad:** Walt?

**Culver:** State and local is almost as bad as doing business in Italy and which I've always avoided even though I'm half Italian. The worst case was, just before I took over part of the Washington area, Computer Sciences Corporation had bid a whole series of subway jobs putting interior communications in all the subways under, I think, the presumption the subways would be largely the same all around the country. We won a series of contracts, one right after the other for maybe 95 percent of the subway systems that were being built. And the worst of all things happened – each subway was sufficiently different that there was a good deal of development for each subway being done remotely from where senior management could oversee what was going on. Some of the subways had hidden faults in them like, for example, Buffalo. Buffalo being below the water table, they had a great deal of water coming in which was not in the spec and the Buffalo program manager said, "We only get so much money from NFTA and you should have gone in and checked out all the tunnels before you put in the stuff." We had moss growing out of switchboxes and all kinds of stuff. The end result was that I closed the business down finally, but maybe there were $25 - $30,000,000 of contracts won and I think out of $25 - $30,000,000, we lost $20,000,000. That's the kind of problem with State and local.

**Grad:** That's a good percentage. Thank you. We're going to take a break now.