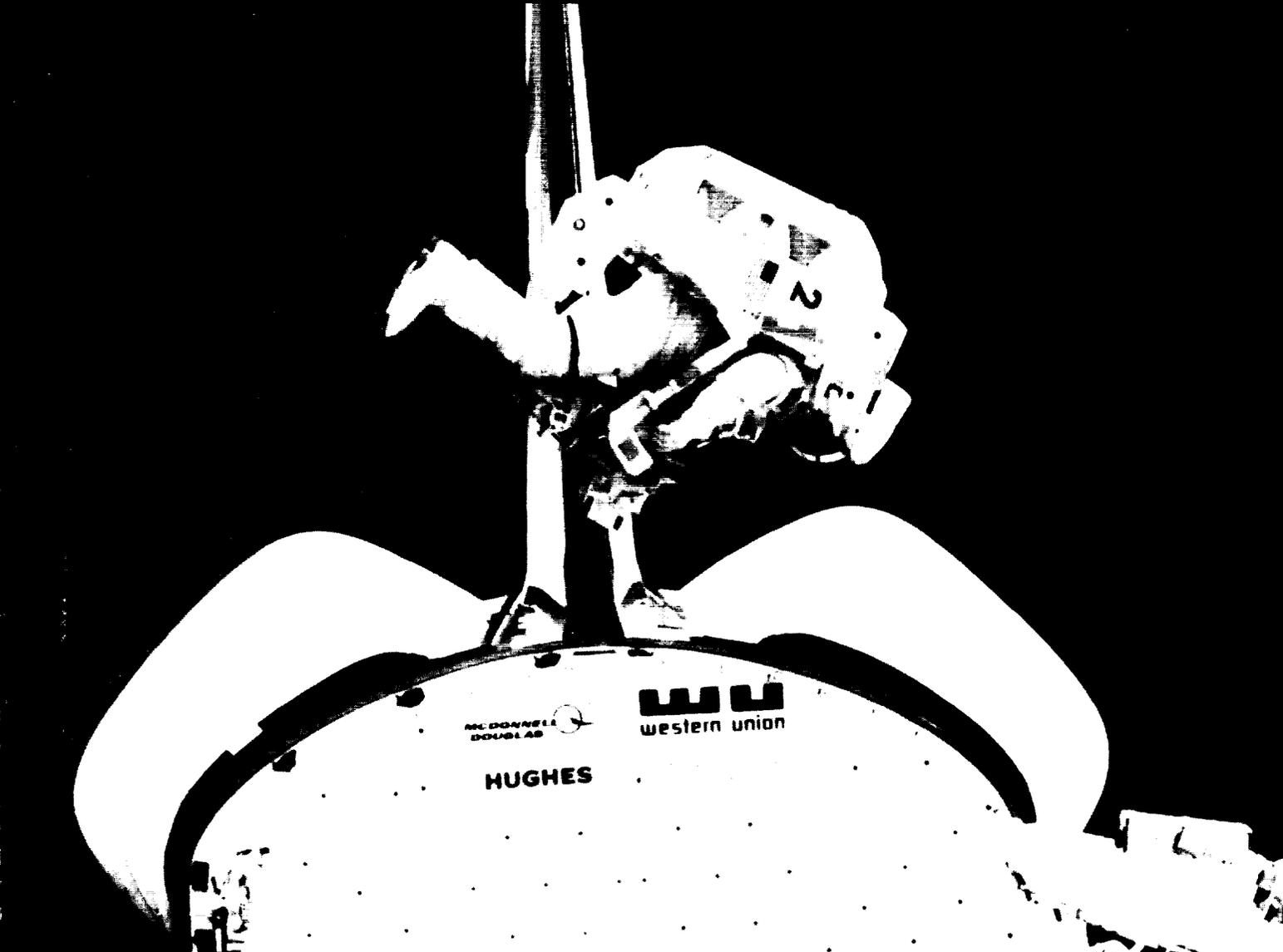


# Government Quality Conference Proceedings



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GOVERNMENT QUALITY CONFERENCE

P R O C E E D I N G S

October 29, 1985



## PREFACE

This Government Quality Conference was an attempt to bring together executive organizations and senior individuals in the Federal Government that have a desire for improving productivity. It was designed to provide an exchange of ideas based on experience, and to encourage individual management initiatives to tap the capabilities of the federal employee. Like the private sector, which has been responding to the foreign competitive challenges, the public sector has been studying approaches to increase productivity growth.

Productivity growth in the non-farm sector of the United States has seriously lagged behind all other western industrialized nations for the past 25 years. Reflecting the dismal record in productivity growth, the American standard of living has led only the British in growth since 1960. Our Nation is at a critical point in our history. As we respond to budget pressures in the Federal Government, we must make decisions that will affect the Nation's security and future well being.

Productivity growth is the measure of our ability to increase our relative output compared with our resource input. The success patterns of large organizations depend on their ability to invigorate the work force with a desire for constant improvement, the elimination of waste, and to focus on some common objectives. The productivity improvement programs described by the speakers are innovative and disciplined management initiatives that encourage individuals to constantly improve their performance and seek high quality results.

  
David R. Braunstein  
Conference Chairman  
NASA Director of Productivity

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**GOVERNMENT QUALITY CONFERENCE PROGRAM**  
**Tuesday, October 29, 1985**  
**Department of Labor Auditorium**  
**Frances Perkins Building**  
**200 Constitution Avenue, NW**  
**Washington, DC**

- 9:00 a.m.      **Welcome**  
Dennis Whitfield, Under Secretary of Labor, Department of Labor
- 9:05 a.m.      **Introduction**  
David R. Braunstein, Director, NASA Productivity Programs,  
Conference Chairman
- 9:15 a.m.      **Keynote Speaker**  
Andrew J. Stofan, Director, Lewis Research Center, National  
Aeronautics and Space Administration
- 9:45 a.m.      **"Perspectives on the President's Productivity Improvement Program"**  
Carole J. Dineen, Associate Director for Management, Office of  
Management and Budget  
  
Constance Horner, Director, Office of Personnel Management  
  
Brian Usilaner, Associate Director, National Productivity, General  
Accounting Office
- 10:45 a.m.      Break
- 11:00 a.m.      Questions and Answers
- 11:30 a.m.      **"Quality and Productivity, A Labor/Management View"**  
Stephen I. Schlossberg, Deputy Under Secretary for Labor-Management  
Relations, Department of Labor
- 12:00 noon      Lunch (Individual)
- 1:15 p.m.      **"Quality Improvement through Total Quality Management"**  
Commodore John Kirpatrick, USN, Commander, Naval Aviation  
Logistics Center
- 1:50 p.m.      **"Importance of Quality and Productivity in the Space Program"**  
Captain Bruce McCandless, II, USN, NASA Astronaut
- 2:20 p.m.      Break
- 2:30 p.m.      **"Management Commitment to Quality"**  
John J. Franke, Jr., Assistant Secretary for Administration, Department  
of Agriculture
- 3:00 p.m.      **Conference Wrap-Up**  
David R. Braunstein, Conference Chairman



## I. WELCOME

**SCHLOSSBERG:** Good morning, ladies and gentlemen. Welcome to the Labor Department. You will hear a lot of welcomes today. I am here only to take a moment of your time. Later you will be inflicted with my presence in more detail, but right now I would like only to introduce Dennis Whitfield, who is the new Under Secretary of Labor, having been confirmed on Friday of last week. We are very delighted to have him and I know that you will enjoy meeting him. He has taken hold of this job with a great deal of verve and excitement and he is here now to give you a welcome. Will you please welcome Dennis Whitfield.

**WHITFIELD:** Thanks, Steve. I will take just a couple of minutes again to say, "Welcome to the Department." I have taken a look at the program that the folks here at Labor working with your colleagues have put together and I think it is going to be an exciting day. It is the same old situation for some of us. We would like to spend the day with you to sit and listen and participate at some time, but as you can imagine, we are all involved not only here but throughout the Government in the budgetary process. I have to meet with the Secretary in a few minutes and see if we can make some decisions and begin our discussions with OMB. But let me say that I believe that the steps that you are taking today are right for the following reasons; number one, it is the right thing to do. Number two, seeking quality and efficiency in productivity in Government is even more important now, and in my view for the next 8, 10, or 12 years to come, simply because we are not going to have the resources that all of us in the various Departments and Agencies within this Government would like to have in order to do the things we would like to do. You have heard this expression many times before I am sure, but we have to find a way to do the things that are necessary to become more creative, to serve the people that we are placed here to serve, and do it in such a way that we get the biggest return for the resources with which we have to deal.

It is also right because it is what is expected of us by those people that we serve, and by that I mean the public in general and various constituency groups that each Department is responsible for serving. But I think more importantly at this point in time, it is the right thing to do because in my view the public servant in this country has been given a bum rap over the last several years. There are an awful lot of good conscientious people. We have discovered a large number of those types of folks here at the Department who really care about what we are doing, really care about the purpose, the mission that we hope to accomplish over the next several years. I think it is important to take this step, and I would encourage you to publicize and take credit for the things that we are doing here together because the bottom line is that this Government and this free society cannot function without people like you. And the more that we get out front and take responsibility for the way that we do our business, take credit when we do it in a correct and conscientious and effective manner, take stock of where we are, where we have been, and where we hope to go, and assume a leadership role in this area, I think that we will be able, over the next period of time, to generate a level of public support that would not only be deserved, but would also help us all to do our job better. Again, welcome to the Department. I think you are going to have a fantastic program. At this time, let me turn the program over so that we can get started without any further delay.

## 2. INTRODUCTION

**BRAUNSTEIN:** Thank you very much. I am very pleased to open this conference and to welcome you. It is a wonder we can get so many people to come and talk about productivity and quality. This Government Quality Conference is quite unique. It has been organized by managers in Government who are part of a productivity information network of Government executives. These executives meet informally to discuss trends and approaches to increasing productivity and quality in organizations. The adhoc group who volunteered their energy to organize this conference are listed in the back of the program. They are Polly Newton and Geoff Templeton from NASA; Don Fisk, Peter Husselmann, and Antoinette Riley from the Department of Labor; Mike Dulworth from GAO; Richard Mullins from OMB; Richard Power from DOD; and Brenda Brenadom from OPM.

As a result of their efforts, approximately 200 senior executives are attending this conference representing 25 different Departments and Agencies, and the Congress. This conference was actually conceived prior to the President's Memorandum to Heads of Executive Departments and Agencies dated July 31, 1985, asking for support for improving Federal productivity. It was originally planned with the intention of highlighting quality, since for the last several years October has been quality month in the United States. However, everyone who has studied productivity recognizes the inextricable link between quality and productivity. As many people have come to realize, you cannot have high productivity without first having high quality. Quality and productivity are simply different sides of the same coin.

Consequently, our program today addresses both the quality and the productivity aspects of management. Productivity and quality are extremely significant issues in the United States today. Last year when productivity growth rebounded in the United States, to 3 1/2 percent in the non-farm area, this rebound moved the United States from last place to next to last place. In other words, of the top 12 industrialized nations of the world, last year, our good year, we were next to last in productivity growth just ahead of Norway. And this is not a recent phenomena. Over the past 20 years our productivity growth within the non-farm sectors has lagged behind every other industrialized nation. As a result, in the last ten years our standard of living has not risen. So what we are talking about are the effects on the wealth of the country and its citizens. As you might suspect, the situation is similar in the quality area. A recent poll taken by the Washington Post and the New York Times illustrates the issue. Across the U.S., the public was asked to answer questions concerning the huge trade deficit. Two questions related to quality and management. With respect to whether the public felt that better quality foreign goods was the cause of the trade deficit, 82% felt that our quality was lower and that this was a major factor. And when asked whether they felt it was better management of foreign companies, 75% of those surveyed said the foreign companies were better managed and that this was also a cause for the drop in our competitive position. That is really quite incredible when you think about it.

This conference then was undertaken with the desire to get Government executives stimulated to take action to increase productivity and quality in their organizations. At NASA, for the past three years, we have had a formal program to increase productivity and quality. This has been one of our top eight Agency

goals since 1982. Our Administrator, Jim Beggs, chairs a productivity steering committee that has taken the time to review industry initiatives in this area, and this top committee of NASA executives has conducted a self examination of NASA's own management practices. NASA is presently concentrating its productivity and quality initiatives in four areas.

First, improving internal management procedures so that a climate exists that challenges our work force and creates a stimulating environment for that work force. Second, encouraging greater employee involvement so that we make sure that we give employees as much opportunity to contribute as possible. Third, involving our contractors in productivity and quality improvement initiatives recognizing outstanding accomplishments with the NASA Excellence Award and rewarding them in our contracts. And fourth, we are supporting national efforts to improve; first, in the secondary school arena, specifically trying to improve the math and science programs in schools; and secondly, to understand better white collar productivity by working with the American Productivity Center. After studying the issue and personally visiting the top corporations in the United States, I am convinced that management approaches, not cultural aspects, make the difference. Our quality is dependent upon our expectations for high quality and our recognition for the highest quality. Our productivity is dependent on our ability to build enthusiasm and to tap the talents of our work force.

Every study has shown that management leadership, and not the resistance of employees, is the key to high quality and productivity. Our speakers today have been chosen either because of their position to influence the climate for management action or because of their interest and involvement in taking steps to increasing quality and productivity. One of our speakers, Astronaut Bruce McCandless, depended upon 100% quality in his untethered ride in space outside the Space Shuttle.

### 3. KEYNOTE SPEAKER

**BRAUNSTEIN:** To begin today's activities, I would like to introduce our keynote speaker, Andrew J. Stofan. He is the Director of the National Aeronautics and Space Administration's Lewis Research Center in Cleveland, Ohio. He was appointed to this position in June 1982. Mr. Stofan began his professional career at the Lewis Research Center in 1958 as a Research Engineer. In 1970, he was in charge of the design and development of the integration of Centaur Upper Stage Vehicle with the Titan Launch Vehicle. In 1974, he assumed the role of Director, Launch Vehicles, and from then until 1978 he directed the launch of 16 spacecraft involving the use of Atlas and Titan launch vehicles in the Centaur upper stage. The success of the Titan Centaur, a major new launch vehicle at that time, was due to a combination of NASA/Air Force aerospace team efforts coordinated by Mr. Stofan.

In January 1978, Mr. Stofan came to Washington, D.C. He was appointed Deputy Associate Administrator for the NASA Headquarters Office of Space Science. In 1982, as Acting Associate Administrator, his responsibilities increased to include the overall NASA program concerned with the study of the universe. Following his tour in Washington, he returned to the Lewis Research Center as its Director. Mr. Stofan attended Hiram College in Ohio receiving a Bachelor of Arts degree in 1958, majoring in mathematics. That same year he received a Bachelor of Science degree in mechanical engineering from Carnegie-Mellon University in Pittsburgh. He received a NASA Exceptional Service medal in 1975 and the NASA Distinguished Service medal in 1981. In 1982, Mr. Stofan was awarded the Presidential Rank of Meritorious Executive. Ladies and gentlemen, it gives me great personal pleasure to introduce our keynote speaker who has firsthand experience as Director of a major NASA installation in putting productivity into practice.

**STOFAN:** Today, I would like to talk to you about the most important aspect of quality and productivity, "the human element." I think the "human element" is an underutilized resource we have within the Federal work force. We (management) are not getting the maximum productivity from our people. I want to tell you today about some of the things we have done and are doing at the NASA Lewis Research Center to create an environment to enhance productivity and quality.

First of all, a little bit of background: the Lewis Research Center was founded in 1941 as an NACA (National Advisory Committee for Aeronautics) aeronautical propulsion research center. From 1941 to 1958, Lewis built all of its major propulsion test facilities and expanded its area of research to gas turbine engines, basic and applied materials, and hydrogen-fueled rockets. In October 1958 when Lewis became part of NASA, we not only continued on as a aero-propulsion research center, but we also moved into chemical rocket and electric propulsion technology, space power technology, space communications, medium-class launch vehicles, and terrestrial energy research for the Department of Energy. Lewis is now a diversified Center responsible for both research and for carrying out major developmental projects. We have an annual budget of about \$850 million dollars and employ about 4,000 people (approximately 2,700 civil servants and 1,300 support services contractors).

A year before I accepted the job as Director of the Lewis Research Center

(in June 1982), there had been a threat of closing the Center. NASA had gone through a very difficult budget cycle with OMB and was threatened with a large budget reduction. One of the proposed options to the budget threat was to close the Lewis Research Center. When I arrived at Lewis, the morale was very low, as you can imagine. The Center was unsure of its future, and there was no clear set of goals or objectives. This resulted in a poorly motivated staff and a generally depressed environment. Also, Cleveland, Ohio, is a highly industrialized area and therefore heavily unionized; Lewis is also unionized, and includes both the white and blue collar work force, including secretaries, scientists and engineers, other professionals, and mechanics and technicians.

So, my challenge was to take a Center that was at a low ebb of morale and motivation and create an environment where the work force would feel that they know where we were going and were sure of their future. The senior staff (ten people) and I started in June 1982 a process called Strategic Planning. I think that it is important to understand the "culture" of the Lewis Research Center. The Center management had been, for the past 40 years, autocratic. If you wanted to get something done, you would tell subordinates what to do and how to do it. The "culture" is a reflection of the thoughts and ideas of senior management, especially of the Center Director. The management philosophy at Lewis over a long period of time had created an autocratic "culture."

One of my goals was to change the autocratic "culture" around to one of participative/consensus management. This has turned out to be a difficult task because the people (workers and management) had rarely been asked before what they thought. The senior staff had never been asked to participate in setting policy or have a voice in how the Center was run. I think that in any environment, it would be difficult to establish a participative management environment. First of all, management is worried that they are giving something up; and secondly, the people that are asked to participate think, "Hey, wait a minute, this is not my responsibility; that is yours, you are the boss, you make the decisions."

We have initiated a series of programs to change the way we manage and the way we interact with people. We started a pilot program for quality circles, which the Center never had before. Today, we have 350 people involved in quality circles. We look at quality circles as a form of participative management or as a method to learn participative management techniques. We are having some difficulty because people go to a quality circle where they participate in decision making and then return to their work units where they run into some of the old autocratic "culture." We are trying to transition the participative environment of quality circles to every level of line management at the Center.

We have an excellent relationship with the labor unions on quality circles. I am chairman of the steering committee that is made up of several members of management and the heads of the labor unions. We function as a participative, decision-making group on the quality circles program.

We have also started a series of educational programs on participative/consensus management. We did this because we found that there was (and is) a lot of confusion in people's minds about participative management, what decisions you participate in, and which ones you do not participate in. Is everything done in a participative manner or is this just another management style that one can use? The educational programs start out with first-line supervision where they spend a week learning about management styles and interacting with

our senior staff. I talk with every class about management philosophies, how you interact with people, and the future of Lewis. One of the things we are doing that is very valuable with this first-line supervision program is to have them work on a problem that directly affects the Lewis Research Center. A list of six or seven problems is provided to them to choose from or they can select their own problem. However, the requirement is that the problem has to be real and they have to come up with recommendations on how to solve the problem.

The groups then report back to senior management on the problem that they have studied. One group came back and said that we should have management courses for non-supervisors to teach them participative management, and we instituted a course for non-supervisors at the Center. Another group said, and not surprisingly, "Why don't you educate my boss? After the course, I know what I should do, but he doesn't understand me." At that time, we did not have a program for the next two levels of supervision in the Center (branch and division chiefs). We created our own program on participative and consensus management, working with the people at NASA Headquarters, and with university people. For the last three years, we have continued to modify these courses; and as we learn, they are becoming more and more effective. We are now educating non-supervisors and all levels of supervision. We are teaching the philosophy that people are highly motivated, they want to work, they want to participate, and they want to contribute. If one can really believe this, participative management is a very natural thing. If, however, management still thinks that people are not really to be trusted and have to be told what to do, then we will never enter into a new environment that can really turn people on.

An ideal way to see the participative management philosophy in action is to observe the first presentation of a quality circle. Some of our mechanics and technicians had never had an opportunity to make a presentation in their entire careers. They had never talked with senior management and were never asked what they thought. The people in the circle were told, "work as a team, define your problem, solve your own problem, then come in and make a recommendation to management." These people were so turned on after they did that. Their work life changed, and their attitudes about their jobs changed drastically when they went through the quality circle process. I always ask the circles, "On your way to solving your selected problem, how many other problems did you solve and implement without even involving management?" Between 20 and 40 problems were solved by every one of the circles on their way to working out their selected problems. One electrician said that he had never really talked to the other people in his own work area. They found out that when they start talking and working together on some common problems, they started resolving many problems that had affected them for a long time.

We are creating an environment where people can really feel that they are part of the institution and that they belong. They are making decisions that affect the future of the Laboratory, and are very proud of what they are doing. They are now far more productive in their day-to-day activities.

We also have several other programs to enhance participative management. I meet with approximately 100 people at a time, every other week in a relaxed, informal environment, at breakfast or after work at our picnic grounds with beer and pretzels. I talk to the group about my management philosophy, where the Lab is going, and what the vision of the future is. After their discussions, they know where the Center is headed and they know where they fit into the entire process.

It takes a lot of time (about a year) and a lot of effort to communicate with that many people, but it has had an impact on the way people view their jobs.

Another thing senior management and I have recently done that has caused a bit of a tremor within NASA is that we decided that there were too many levels of management at the Center. We are organized the way many industries are organized and the way other NASA Centers are organized. We have sections, branches, divisions, directors of, and myself - five levels of management. We thought the span of control should be from 6/1 to 15/1 (subordinates/supervisors). The first time we did this calculation, we came up with the solution to the problem: we were 3,000 people short! I said, "Well, maybe there is another solution to this problem -- fewer managers." It took a year and a half working with the senior staff to arrive at the conclusion -- that, indeed, we did want to eliminate one level of management. We talked to the division chiefs, and they said things were great. We talked to the branch chiefs, and they said we have exactly the right amount of management. We talked to the section heads, and 50 percent said that there was too much management. When we talked to the workers, 75 percent said we have too much management. It all depends on where you are! The senior staff and I reached a decision in a participative management style. After studying and discussing the problem and talking with companies that had flattened their organizations, we came to the conclusion that indeed we had one too many levels of management at the Center. So we set the policy that we would have one less level of management at the Center and as a result, increase the span of control.

We then went to the three levels of management below and said, "Okay, here is the policy, now you come up with an organization that meets the increased span of control." Their reply was, "Well, I didn't participate in the decision to have one less level of management." And I said, "That is policy, the people who participated and formulated the policy were the senior staff. It took us a year and a half of discussions to arrive at a consensus that was the right thing to do." Once the policy was established and accepted, we let the next three levels create their own organization. They participated by creating their own organization. The point is -- what type and level of decision do you participate in? Twenty-seven hundred people do not participate in every decision at the Center, because the Center could not function that way. You participate in the things which effect your immediate environment. About two-thirds of our organizations have implemented this policy. In another six months to a year, every organizational element will have one less level of management at the Center. We now have eliminated a level of management, and we believe that communications and participation will be greatly enhanced.

Even after this, we may still have too many levels of management. A year and a half from now, we will take another real hard look to see if we should go from four levels down to three levels of management.

Another thing we are asking our management to do is to take a look at how they manage. We are a research and technology center, and we analyze our technology problems from every point of view. Yet, management is taken for granted. We never stop and analyze our management style asking "what really is my job, why am I really there, what function am I really performing?" We now ask every one of our managers to analyze themselves and analyze the way they manage as they would analyze any technical or scientific problem. We are trying to encourage people to think differently, trying to create a new and different

"culture." Changing the culture of a Center is a real challenge because it is new and fertile ground with no text books on "how to." We are trying some things that have not been tried before, and we are trying to learn from others' experiences both inside and outside of the Government.

I have come to the conclusion that our relationships with our unions could be greatly improved. Not that I don't want the unions, I think the unions can and have been performing a very valuable service. They can be a valuable asset in helping carry out the policies and functions of the Center. They can provide a communications link as to what the working conditions are really like at the Center. However, that is not totally what the relationship is now. We are finding that the contracts we jointly signed are prohibiting us from interacting with each other the way we would like to. I have a part of my organization whose function is to interface with the labor unions. At times, I have people doing things that they would not be doing, and the unions have people doing things they should not be doing, and everyone's time is being wasted.

We will eventually evolve into a different type of relationship with our unions. I believe that basically what the unions want for the people at the Center is exactly what I want. I want to create the best possible working environment, I want the individual worker to have the maximum latitude, and I want him to participate in management decisions. I want his thoughts and his ideas, not just his arms and legs. There is an untapped talent of thoughts and ideas that is not being utilized. People know how to solve their own problems. They are our "human element."

I think that all of the changes at the Lewis Research Center are very exciting and will be positive. Looking to the future, we ask, "Can we have one great big quality circle of 2,700 people working together at Lewis?"

#### 4. PANEL PRESENTATIONS

##### "PERSPECTIVES ON THE PRESIDENT'S PRODUCTIVITY IMPROVEMENT PROGRAM"

## A. OMB

**BRAUNSTEIN:** Our first panel speaker is Carole Dineen. Ms. Dineen is the Associate Director for Management at the Office of Management and Budget. Assuming her duties in August 1985, Carole Dineen is responsible for implementing the President's management improvement program, or Reform '88. In addition, she directs the activities of the President's Council on Integrity and Efficiency (PCIE) which coordinates the President's Council on Management Improvement (PCMI), which addresses management priorities and problems Government-wide.

In her present position, Carole Dineen will be responsible for carrying out the President's Executive Order for improving federal productivity. In her previous position as Fiscal Assistant Secretary at the Department of Treasury, she played a major role in modernizing the Government's financial operations, focusing particularly on improving federal cash management practices. She also directed the performance of the fiscal agency functions of the Federal Reserve Bank and handled the investments of the multi-billion trust and other accounts of the Federal Government.

Carole Dineen served five years as Vice President at the Bankers Trust Company in New York, where she was responsible for money transfer customer service, deposit accounting and commercial account operations. Prior to that she spent ten years with Trans World Airlines, last serving as the manager of Operations, J.F.K. Airport in New York. She graduated from the Honors Program at Brown University in Providence, Rhode Island.

**DINEEN:** I am pleased to be here today, and I would like to say at the outset that NASA deserves special kudos for taking lead in becoming productivity conscientious. Some of NASA's arrangements with its contractors indicate that it is already putting into practice the principles that I will be talking about today.

I would like to give you some perspective on the federal productivity program which the President launched on July 31. Some of you may be familiar with it but many of you won't be, since the Executive Order and OMB bulletin are not quite ready for issuance.

As you may know, the history of productivity improvement efforts both in the public and the private sectors is rather checkered. The country moved from taking huge leaps in productivity for granted during war time and post-war prosperity to ignoring or discounting the importance of productivity in recent decades. In 1979 and 1980 productivity was down 2.2% nationwide, the first consecutive decline in the post-war period. However, moving into the '80's, companies began to view productivity not as a nuisance, but as a necessity--a means of gaining and maintaining a competitive advantage without increasing staff or other costs and without skimping on quality. In 1983, productivity rose 3.2%, the highest since 1976 and the second best gain in 11 years. Now it is a national priority in the business community. Numerous innovative techniques have been developed up through company ranks or borrowed from pacesetters like Japan. Examples abound, but I will only cite two.

At Texas Instruments, a quality circle of line operators increased output of an assembly line operation from 10,000 to 18,500 units per day, saving the

company 1.2 million dollars annually. A footwear manufacturer in Columbus, Ohio, organized workers into teams with specific goals and rewards for superior performance. Absenteeism and turnover dropped 50%, output jumped 35% and defective products were cut by two-thirds.

The Government needs to duplicate the efforts of the private sector. Government now accounts for 24.6% of the GNP, and the Grace Commission has estimated that more than 3 billion dollars annually could be saved by a major productivity improvement effort. The General Accounting Office, from whom you will hear today, in a November 1983 report confirmed that major savings could be achieved.

Government agencies have independently recognized the potential for productivity improvement. Over the past four years they have demonstrated that many successful private sector techniques can be transferred to the public sector. Recently, the PCMI compiled for OMB an inventory of productivity initiatives already undertaken in Government. There were close to 100 examples, but again I am going to cite only two. The U.S. Custom Service, and having served at Treasury I had to have a Treasury example, adopted an honor system of sorting passengers at Houston Intercontinental Airport, increasing from 400 to over 1,000 the number of people it could process in an hour. The bulk of the passengers can now go through Customs in about 15 minutes rather than the previous 1 1/2 hours--and all of this at no additional cost to the Government.

In one year, the State Department cut processing time for issuing passports from almost four weeks to ten days despite the fact that the volume of applications was up 20%. The Department accomplished this by setting production goals and automating approximately 60% of the process.

Through the productivity improvement program, we hope to extend these spot successes into a systematic, consistent effort across Government to make sustained gains over time. The President's new program will be designed to nurture a productivity culture in each agency. In other words, we want to assure that agencies build productivity improvement into their own planning, management and budget processes so that it becomes an integral part of the way they manage their work and achieve their missions. And let me point out that of all the Reform '88 projects, this is the most agency-driven one. Agencies will be selecting the areas to focus on, establishing the baselines, designing the effort, and measuring the results.

To launch the program, President Reagan sent a message to Congress on July 31 calling for a joint resolution making productivity improvement in the Federal Government a national goal. We set a goal of 20% improvement in selected functions to be achieved by 1992. That works out to about 3% a year--a modest increase, but with enormous payoff if we achieve it.

We will ask agencies to start with a manageable agenda by identifying three or four areas of high priority. These selected priorities have to meet three criteria. One, do they directly effect service to the public? Two, are they areas that lend themselves to measurement? Three, do they address problems that we have a reasonable chance of success at correcting? The agency's plans for improvement have to specify the measures the agency will use to determine levels of progress, describe the proposed action or approaches it will take, and spell out how it will encourage employee participation and involvement.

Because productivity is so dependent on employees at all levels, we will be working closely with OPM to strengthen and expand employee incentive programs. We will also be working to develop programs to minimize any potential negative impacts that might result from productivity improvement, including such things as re-training and job placement. We believe very strongly, as the President said in his message to Congress, that we must "draw upon the creativity and the ingenuity of all employees and properly reward any achievements in productivity improvements."

The experience in the private sector is overwhelmingly convincing on that point. If we attempt to achieve greater efficiency exclusively through orders from top management, we won't succeed. We have to provide leadership, set goals, and then turn to employees at all levels to ask them to help us find the best ways to reach those goals. Finally, we have to reward their efforts accordingly.

Now, I can't talk about productivity improvement without putting it in the context of our overall management program, which you know as Reform '88. Productivity is a primary tool we intend to use to extend the internal improvements of Reform '88 to external recipients, the American public. Let me explain.

Reform '88's success story, so far, includes such initiatives as cash management, debt collection, and reduction of fraud and waste. But this was the easy part of Reform '88. We have now begun the final and toughest phase, carrying management improvements to where they really count, services Government provides to the public. We can make more dramatic inroads by looking at service delivery instead of continuing to focus only on internal management processes. In my three-month tenure at OMB, I have spent my time going around town talking to the Assistant Secretaries for Management, and also to people within OMB, to get a clear understanding of the situation as it exists today, and what the next step should be. Those discussions have helped me to formulate some new directions for Reform '88 which I would like to share with you very briefly today. I think they are pertinent to how you proceed in your individual agencies regarding implementation of your self-designed productivity improvement program.

When we looked at Reform '88, we found some areas which frankly could be improved, and this is what you would expect from an evolutionary program. First, the list of initiatives have been expanded frequently, resulting in too long an agenda and in defused effort. We need to set clearer priorities and pursue fewer, but high payback, projects. A lot had been done to cut back on Agency reporting requirements but the burden is still significant, and something agencies still complain about. Finally, if Reform '88 is to succeed and to carry into the future, more needs to be done to institutionalize the process within the agencies. Having arrived at these conclusions, we sent out a management plan which I have gone over in detail with Joe Wright, and to some extent also with Jim Miller. It is based on four major strategies.

First, we need to do a better job of helping agency implementation efforts by making greater use of lead agencies. It worked when Treasury was lead agency for cash management, and there is no reason it cannot work for other projects as well. We are working with Treasury right now to take on a greater role in the area of financial management, including taking over the lead role for credit management, debt collection, financial systems and the like. We have asked GSA

to consider working with us as lead agency for any existing or new projects which fall under the umbrella of physical resources. One example would be inventory management. GSA is thinking of some concrete demonstration projects to pursue and will be ready with some sort of an announcement in the relatively near future. As I mentioned earlier, OPM has been asked, and I know Connie will concur, to support Reform '88 in the human resources area.

Second, we need to focus on priorities by developing a menu of projects--and I use the word menu advisedly--with clearly defined objectives. The menu would define and classify initiatives into broad categories that roughly correspond with the focus of the lead agencies. Agencies working with OMB and the lead agencies would select projects from the menu which have the greatest impact and payback within their given situations. We think we can accomplish more this way than by requiring all agencies to try to do all projects.

Third, we need to have a negotiated management agenda. By this I mean we need agencies to approach us with their management reform agenda rather than having all the elements of the management plan for a given year stipulated by OMB. It has to be a negotiated process, and it has to allow for a realistic blend of the easily accomplished projects plus those that are more challenging.

Fourth, we need to "deregulate agencies". Much has been done already. Data calls, at least from the management side of OMB, have been reduced, and can be reduced even more. Out of 57 circulars, for example, 19 have been or soon will be eliminated. Twenty-seven more are being revised. Several hundred executive orders are being revoked, with more to come. The PCIE and PCMI are working on a project to streamline A-123, which is the internal control circular. I would also like to assure you that in addition to these steps, any future circulars or bulletins that OMB develops, and again I speak for the management side of OMB, will consider the workload we place on the agencies. In short, we will be relying more on people like you who have hands-on expertise in the agencies to be the actual doers of Reform '88. We at OMB do not have the resources to try and do everything ourselves, but we are here to help in any way we can. And that is the close of my remarks. I understand I will be taking questions later. Thank you.

## B. OPM

**BRAUNSTEIN:** Our next speaker is Constance Horner; she is the Director of the United States Office of Personnel Management, President Reagan's chief advisor on Federal civil service personnel matters. Assuming her new duties, also in August 1985, she is responsible for recruiting, training, and developing the Federal work force. She is charged with administering civil service pay and benefits programs, including life and health insurance and the civil service retirement system. Prior to her new appointment, Constance Horner served as Associate Director for Economics and Government in the Office of Management and Budget. She was responsible for review of the budget, program operations, and legislative proposals of a number of Federal agencies including among others Treasury, Justice, Transportation, Commerce, Housing and Urban Development, and the Office of Personnel Management, and also General Service Administration and the Small Business Administration. She previously served as the Director of VISTA, the Federal Domestic Anti-poverty volunteer program, and Acting Associate Director of Action, VISTA's parent agency.

In 1981, she also served as Deputy Assistant Director of Action for Policy and Planning. As a member of the Department of Education transition group on the office of President-elect, Mrs. Horner helped prepare reports on the Department's role on elementary and secondary education, and educational research. During 1980, she was a full-time volunteer in policy coordination and development, the George Bush for President committee, and then in the Research and Policy Development Section of the Reagan/Bush committee. Mrs. Horner is a graduate of the University of Pennsylvania and holds a Master of Arts degree in English Literature from the University of Chicago. She has contributed articles on public policy for the Wall Street Journal, the New York Times, the American Spectator, and other publications. She has also taught at secondary school and at universities abroad.

**HORNER:** I was interested by a couple of Carol's references to the management side of OMB. I don't think that it is any secret in this room that there is a rivalry between the management side of OMB and the budget side of OMB from which I am a recent refugee. I guess I should not say a rivalry; actually it is a brutal struggle to the death, especially at this time of year, and I was always one of those middle-of-the-road types who saw the management point of view even though I was on the budget side and, of course, took the anticipated heat for that broadmindedness. But when I was thinking about this gathering this morning and the subject of productivity, I found as a sudden epiphany presented to me by one of my staff the resolution of the differences between the budget side and the management side and that is productivity, and obviously its impact on budget. OPM is projecting to spend about 24.8 billion dollars in FY 86 and someone pointed out to me, some mathematician at OPM, that that comes out to about \$786 a second, and \$47,000 a minute. So obviously I have a strong interest in improving my agency's level of productivity because of the stark horror involved in those numbers, and the stark horror involved in all of our numbers and in the deficit. Productivity can have a significant impact there, I think, especially over the long haul. Productivity is not a new subject in Government; I am sure that this conference had its forebearers last year and the year before and ten years ago. As Carol indicated, interest has heightened in productivity recently, not only in the Federal Government but also in the nation as a whole for a very good cause -- we need to improve it. I think it is important today more than it has

been for a long time for two reasons. First it is important for the economic health and welfare of the entire country with a debt that is approaching two trillion. It is clear we need to do everything we can to get Federal spending under control. And also productivity goals are important because they will assist us in achieving the same service or better service, better service for the same money or the same service for less money.

Second, as Director of OPM I am concerned about the relationship that has developed in the last ten years or so between the public and the civil service. I have a special sensitivity to this, I think, because I come from a family of civil servants at the State and local level. I don't think there is too much difference in the relationships between civil service and the public at those levels and at the Federal level, and I have grown up hearing about this relationship and the problems that exist within it. I think, at this point, there needs to be something of a rapprochement, a healing or a correction between the American public and our Government workforce.

We have undergone massive economic changes over the last ten or fifteen years -- deregulation, high interest rates, and then the disruption that occurred as we managed to get high inflation and high interest rates under control. All of these things have made management and employers, in general, acutely conscious of the need to be competitive, and not just nationally competitive but internationally competitive. Therefore, the work forces had to become conscious of productivity as a whole. This has created a difficult situation within the Federal work force because it is a work force which has experienced some sense of tenure or of entitlement to jobs. And, therefore, it has not felt itself required to be responsive to competitive needs. I think some of the changes we are making in regulations and encouraging pay for performance especially have startled Federal employees because of the disruption of their expectation of tenure, in the interest of focusing on a nexus between performance and productivity on the one hand, and job retention and promotion on the other hand. It is a phenomenon which is being experienced by the national work force, not just the Federal work force, but naturally it is more disruptive in the Federal work force because it contravenes ingrained expectations. Now what do we do about this and how do we enhance productivity in the face of this condition? We have taxpayers who are very resentful because they have experienced a lot of disruption in their own work lives. They look to a Federal workforce which has job protections that the private sector doesn't always afford and, therefore, some of the public feel resentful even though these job protections are certainly not uniformly available in the civil service, as we have discovered over the last few years. And all too often politicians use these public resentments to fan flames that serve their own electoral purposes. This is bad for the public as well as for the civil service.

One of my goals for my tenure as OPM Director is to try to diminish this sense of grievance on both sides and encourage some mutual understanding and some education to encourage the public to understand the valuable work the civil service does and to stop expressing major contempt for the civil service. At the same time I want to help members of the civil service to understand the fiscal and economic realities that the public has been experiencing over the last five or six years which it views the civil service as having been relatively exempt from. I am talking about massive lay-offs, more lay-offs in an automobile company, one of them in Detroit, in a year, than the Federal Government has experienced over a five year period with a much larger work force base. And this is something I think that we in Government have to understand colors the perceptions of the public.

Now the public has heard only negative things and that is very bad as I said; it has got to start hearing some positive things and that is why productivity is so important, because from enhanced productivity we get not only the real benefits, the real improvements but also more respect by the public for its government. In this town we often hear the expression "people are policy." I think we have to realize that people are more than policy, people are crucial to productivity. In any discussion of productivity we must not lose sight of the central truth that it cannot exist without having the right people, in the right jobs, properly motivated to get those jobs done in a creative and efficient and effective way.

At OPM we have just over 6,000 people concentrating on helping the Government perform those two basic functions -- that is, getting the best qualified people that we can into Government and then assisting and motivating them to perform at their best levels. That is why I am very happy that OPM is slated to play a role in the President's Executive Order for productivity improvement which Carole eluded to, currently in draft form. In the order OPM is given the responsibility to review incentive plans and other personnel practices that relate to productivity to insure that programs, including re-training and job placement programs, minimize the effects of job loss resulting from productivity and to implement training programs that will help Federal employees perform tasks that improve productivity. I think we have very good people in our Government. That has been my experience over five different jobs in three different agencies in the last four and one-half years. I think we have a fair, open, honest and unbiased selection process for our Federal employees. Therefore the area where we have concentrated our effort in recent years has been in motivating the work force towards excellence. I think we need to continue in that direction as the executive order suggests, because changing our attitudes and behavior is going to be a gradual process.

Training and other less formal education are involved, but at least we can see that the process is now moving in the right direction.

I think there are two basic ways that we as Government managers can motivate our workers toward better performance. One is by paying them for it with money and the other is by recognition, by giving a word of praise for people when they perform in an outstanding way and by more systematic methods of recognition. Both of these methods add up to performance management. I would like to focus on that for a few minutes, because I think it is vital to any discussion of productivity. Performance management has been something of a buzz phrase, but the essence of the concept has been with us at least since the Founding Fathers. The concept of performance is firmly rooted in the Pendleton Act, which gives us a merit based civil service system. Since that time there has been a gradual expansion of the concept of merit. With the passage of the Civil Service Reform Act of 1978, the merit principles were made explicit. It is largely been through the strong efforts of many of you in this room today that the Administration has been able to meet with success in implementing those principles through performance-based pay and retention based on performance.

The concept of pay for performance, merit based pay, is not one that arose over night. I remember my father, who was a high school teacher in northern New Jersey for 40 years, hotly debating this subject in the "50's when merit pay was being introduced into his school system. It was an agonizing and wrenching experience for the system, and I cannot recall the ultimate resolution of the debate, because I was too young and only vaguely aware of it. But I do remember there

was a great deal of grumbling about various aspects of that system as it was put into place. Performance management responds to a very legitimate sense of necessity, the frustration that Government managers have felt in trying to accomplish major jobs and not being able adequately to reward and retain their best performers and the frustration that the American public has increasingly felt over an insufficiently responsive Government, a less than well managed Government. And so today for our managers we have a performance management recognition system. I am sure many of you are laboring with it. It was created to increase the level of reward and to improve the payout methods used for the one hundred thousand merit pay managers Government-wide.

To be sure, in developing these new methods, we learned from our experience and ironed out some wrinkles in the way we applied merit pay early on. Some of you will remember that experience back in 1981 in October. The key problem with the system then was that it did not reward the best managing and the best performing managers well enough because there simply was not enough money in the till to do that. And two weeks before implementation, GAO issued a required change in formula which resulted in not enough funds to make the cash award meaningful to managers.

The Performance Management Recognition System went into effect last October tenth, and it has met with much greater success. It has more money in it, so now we can afford to reward more managers with bigger payouts. Naturally, OPM, having to demonstrate the merit of the system, was one of the first agencies to use the cash awards aspects of it. Under this program also, 57 percent of our eligible managers received awards this past fiscal year, compared with 33 percent the year before. And we gave greater performance awards at the top end. The top award for two years was about \$4,400 and it went to just one employee. Under the new payout method, 21 OPM managers earned that amount or more with the highest award over \$7,600. And, of course, the cash awards are only one part of the system that also includes merit pay step increases as performance awards.

The managers at OPM have by and large been quite pleased with the new performance management recognition system, and other agencies have generally reported to us good results with it. Of course, we know it is not perfect and we continue to seek improvement and advice on how to make those improvements. There is some criticism that too much rests on the performance appraisal as the basis for performance management. It is not easy to appraise the performance of employees at any level, but having worked with Federal managers for the last five years, I believe that they are as responsible and fair and decent group of appraisers as you will find anywhere. Obviously, Federal managers can do at least as well as private sector managers who are accustomed to using raises and bonuses as an integral part of performance management, and with fewer employee protections built in to the private sector systems, I think, than we have in the Federal Government.

In order to work best, of course, performance management should not be restricted to managers. OPM receives some complaints from managers whose pay had been stifled under the old system while those in the General Schedule were still receiving automatic increases. As many of you know, the regulations were implemented in July for the General Schedule's Performance Management System. We have re-published those regs and have received comments during the comment period. As a result we are making some changes based on those

comments. There has been strong evidence of agency support for the Performance Management Recognition System. The large number of agency comments requesting that the General Schedule system be made similar to the Performance Management Recognition System, I think, is the greatest agency vote of confidence in the Performance Management Recognition System, and a greater vote of confidence than perhaps the anecdotal or conversational comments that we sometimes get.

I think it is important, too, that we put our government experience with performance management in the global context. Many private sector firms are grappling with the same kinds of forces as the Government. On the one hand there has been strong effort to hold down recurring costs as the nation has worked its way out of recession and as we lay the foundation for continued growth. When inflation was running at ten percent and more, it was easy for a company to give an across-the-board increase of ten percent, passing the additional costs on to the consumer. But now that inflation is under control, the raises are in real dollars, making substantial dollar increases more attractive to employees yet more difficult for employers to give across-the-board. Thus, performance based pay has become a significant way to offer better pay raises to the most productive employees, while challenging the entire workforce to perform at its best.

A second reason for the upsurge in performance management relates to the tenor of the times. As a nation, we are becoming increasingly aware of our multiple options in nearly everything and increasingly sensitive towards individuality and the fulfillment of individuals at work. In part, this may be a result of the enormous investment in education we made in post World War II years. Massive higher education helped instill in millions the attitude that it is not enough to have a job that gets an income that supports your family, that the quality or content of one's work are important too. Whatever the reasons, I think we can all recognize the psychological aspects of this trend. We are talking about more than pay when we are talking about performance management. In a recent report by Daniel Yankelovich and John Immerwahr entitled, Putting The Work Ethic To Work, we see the results of intensive interviews with hundreds of American workers as they recovered from the recession. Contrary to popular belief at that time, the study showed the work ethic to be in very good health, in fact to be growing in strength. I think we can testify to that from our personal lives. However, the authors reported that the work ethic is not giving us the productivity results that we might expect from it because, they say, the American workplace is structured in ways that undermine productivity, undermine the work ethic. This is appalling news.

The report identified several problem areas. One of them is that the link between pay and performance has been undercut. Seventy-five percent of the people surveyed in the study said they saw no relationship between how well or how hard they worked and what they got paid. Even more important, the same three-fourths said that they were not working up to their full capacity in large part because they failed to see a correlation between work effort and income.

The second problem, according to the authors, is that managers do not motivate. Well, how can you motivate employees if you don't appraise their performance and don't reward them either financially or verbally for good performance? People work harder and are more productive when pay is tied to performance. And the business community is waking up to this fact after a long sleep and the dream that basic human nature had suddenly changed in the 1970's

after several millennia of work. It had not and we now know that and we now recognize a very old truth, which is "reward enhances productivity."

Examples of performance management abound today in the private sector. Already companies as big as General Motors, Ford, and Atlantic Bell have set up new performance management systems and more are on the way. Last November, Bell Atlantic notified its 23,000 management employees of a new performance based pay system. Some 50,000 white collar employees at Ford are now on a pay-for-performance system and the reaction from workers has been very positive. AT&T has been using performance pay to become more competitive after its break-up. Control Data Corporation uses a performance appraisal system which in many ways parallels ours in the Government. A five year review of that system shows the vast majority of the users are very satisfied with it. They are most satisfied with the perceived improvement in work oriented communications--which makes sense. Any good performance appraisal system gets employees to think about and to discuss what is expected of them. Perhaps most important in the Control Data experience is the fact that those who were part of the performance appraisal showed a dramatically higher satisfaction level with the performance appraisal concept than those who were not part of the system, who had not been exposed to it. I offer this by way of encouragement to you because there are those who do not like it, and it would seem in the private sector at least that familiarity breeds acceptance and respect rather than continued resistance.

The forces promoting performance management are not confined to our own borders. I can tell you from my first-hand experience at OPM. We have an international liaison office which keeps detailed records of visits by foreign government officials to OPM. Usually these are officials who work in agencies that oversee the civil service in their countries. Last year alone more than 250 officials from 64 foreign nations visited OPM seeking information to help them manage their civil services more efficiently and effectively. The clear majority of them were eager to hear all about performance management and how Americans were implementing it in Government. Many of the mid-sized and smaller governments were interested in learning from our experience with performance management so that they could structure more effective down-scaled work forces, instead of following the painful experience of all too many Western nations in building overly large and expensive bureaucracies which these small and mid-level countries could never begin to afford.

All of this is important beyond the mere issue of pay and the mere issue of productivity. How productive we are and well we do our work affects the confidence American democracy has in one of its chief underpinnings--its strong, impartial, honest, and competent civil service. With this much at stake we cannot afford to be retrogressive. The American people are catching us, American business and industry are watching us, to see how well we implement performance management and improve our productivity. They know it should work, human nature tells us it should work. They know that it can contribute to a renaissance for American business and Government as our historic work ethic is joined once again, uniformly across the public and private work forces, to systems of rewards that work, that increase productivity, because they are grounded in the better, stronger, and more creative part of our human natures. I thank you and look forward to working with you all in your agencies to get on with these tasks.

## C. GAO

**BRAUNSTEIN:** Our final panel speaker is Brian Usilaner, the Associate Director for National Productivity at the General Accounting Office. Brian has been with the GAO for ten years, the last seven as Director of their productivity office. Brian has a tremendous reputation in productivity and, therefore, was one of the first people I visited when I became the Director of Productivity at NASA. Prior to joining GAO, he served ten years with OMB, both on the budget and the management sides of the house. So he is very familiar with our process. Before joining the Government, Brian was a professor at George Washington University. Brian.

**USILANER:** It's a pleasure to be here today to speak on one of my favorite subjects and to share some insights and views on productivity and the Presidential Productivity Improvement Program. GAO has been focusing on productivity for several years, including establishing a separate group to look at productivity in Government and also Government policies, programs, and regulations that impact the private sector.

First of all, what is productivity? We define it as the efficiency with which resources are used to produce and deliver services or products at specified levels of quality and timeliness. It is very important to keep productivity in the context of efficiency, timeliness and quality.

One of the things that we find in our work is that we are constantly able to identify targets of opportunity for significant dollar savings in the way programs are operated. Once these targets are identified though, we have problems getting the necessary productivity changes implemented. It is apparent from talking to operating managers that they recognize improvements in productivity can be made. However, it is also obvious that this is of little concern to them. They feel there are more disincentives than incentives for them to improve their productivity. They are not getting signals that productivity improvement is a high priority item and, therefore, their main concern is on timeliness, with little concern for the efficiency of cost aspect. We could continue to identify targets of opportunity, present them to Congress, and try to convince agencies to make changes, but this approach is not effective.

In 1982, we had a request from the Senate Governmental Affairs Committee to look at productivity management in the federal government, and to identify approaches that private sector organizations use to improve productivity. We conducted a government-wide study and visited several private companies that had launched significant productivity efforts. Let me briefly share with you some of the findings of that effort.

In general, we found that federal managers had not developed effective productivity improvement efforts to help reduce the cost of government. We found a number of productivity efforts and projects on-going, but they operated outside management's mainstream, received limited top management support, were narrow in scope, and were disjointed.

There were two principal reasons for the relatively low priority placed on productivity management. First, government managers viewed their role from a short-term perspective, emphasizing budget reductions and short-range results,

with minimal emphasis on long-term efforts. Accordingly, managers generally do not give productivity sufficiently high priority. Therefore, it is not surprising that the savings we identified amounted to less than one percent of payroll, as compared to the private sector's average savings of 5 to 20 percent of payroll. While a few managers initiated productivity improvement efforts in recent years, the programs tended to be isolated from the decision making processes of the agency. Consequently, they were ignored, if not forgotten, with changing administrations.

Second, federal managers lacked encouragement or assistance in addressing the numerous barriers and obstacles they face in improving productivity. Neither OMB nor OPM directly supported the agencies that wanted or needed to improve productivity. OPM, as many of you know, had a significant productivity leadership effort in the late '70's. We found that agencies gave high ratings to OPM's clearinghouse services, technical assistance, and productivity training. Unfortunately, OPM's effort was terminated. OMB initiated several management improvement projects under the umbrella of Reform 88. The efforts, however, did not explicitly focus on productivity and did not address program operations. OMB did not provide clear signals to the agencies that productivity was a priority issue. The agencies therefore viewed these actions or nonactions as an Executive Branch deemphasis on productivity. As the primary management agency in government, OMB must take a leadership role and encourage and support productivity management in federal agencies.

In the private sector, we found completely different stories. We visited about 25 companies that had initiated formal and systematic productivity efforts. Many firms admitted that for years they had largely ignored productivity and, instead, relied on increasing prices and volume to meet profit objectives. Those firms that touched on productivity viewed their involvements as industrial engineering efforts. With markets changing, more world-wide competition, and the inflation in the '70's, these approaches were no longer viable. Companies were forced to adopt the strategy of improving profitability by reducing operating costs through productivity improvements.

In responding to this strategy, companies underscored the importance of not taking program approaches. We were told that the single greatest deterrent to sustained productivity improvement was the tendency to approach the improvement of productivity as a "program." A program carries many negative connotations to an organization; implying a temporary add-on to regular and continuing activities. Everyone knows that this program will fade like all the others. With sufficient attention and pressure, programs may achieve some short-term gains, but will invariably fail the test of sustainability. The alternative was to view productivity as a management process. A "process" contrasts with a "program" in many significant ways. A program, by definition, is limited in time frame, is of finite duration, and has a beginning and an end. A management process is continuous. Once established, it is an on-going and integral element of organizational functioning.

A program, almost by definition, is isolated from the organization's mainstream and is not part of its continuing day-to-day activities. A management process, by contrast, is integrated into the organization's procedures and practices, becoming an integral element of the appraisal system, the rewards system, the budgeting and planning systems, the goal setting practices, the management information system, the evaluation and control system, the

communications system, and the human resource management system. Through this integration, productivity improvement ultimately becomes part of the culture of the organization. Once you integrate productivity into the basic management systems of an organization, you alter the factors that influence behavior in that organization. Productivity becomes a way of life. This is what you are trying to achieve. If properly integrated, productivity improvement can be predicted, planned, organized, and controlled.

Productivity programs are typically tactical in nature and consist of one or more techniques designed to bring about short-term productivity improvement. While tactics and techniques are important elements of the process, they are inadequate in and of themselves. A management process has a more strategic orientation; the focus is on creating a climate and culture where productivity improvement is a way of life and a part of everyone's day-to-day responsibilities. Within such an environment, the tactics and techniques utilized to bring about improvements have a much more powerful context.

Finally, productivity "programs" are generally top-down in nature--that is, they involve only management, with the bulk of the work force having no involvement in the effort. The result is lack of ownership and resistance by the majority of work force. A true management process, on the other hand, involves everyone in the organization. If productivity improvement is to become an integral element of the organization, the employees must be fully aware of its implications, must be committed to it, and must have opportunities to contribute to the process. This approach obviously requires a great deal of management commitment, support and time. It is the only way, however, to ensure that productivity improvement is significant, lasting, and continuous.

After examining the formal productivity management efforts at the various companies and several state and local governments, reviewing the literature, and meeting with experts, we identified seven common elements essential in an effective productivity improvement effort. These elements are applicable to the federal government and allow considerable latitude for designing specific approaches.

Let me briefly summarize these elements:

1. A dedicated, high level organizational entity serving as a focal point for productivity in the organization. The focal point can be a single person operating alone or with a large staff. A permanent focal point institutionalizes and highlights the productivity effort, accumulates and disseminates information on productivity to managers and employees, provides top management with data on productivity performance, revitalizes the effort when needed, and coordinates and integrates the various organizational activities. In short, the focal point is the organization's champion for productivity.

2. Top level support and commitment. This does not mean that the agency head or chief executive merely states that productivity is important. Rather, this element requires top managers to periodically review the productivity performance of the organization and the organization's managers and hold employees accountable for improved productivity. Clear top level support can develop and maintain the legitimacy and effectiveness of the entire productivity effort.

3. Written productivity objectives and goals and an organization wide productivity plan. An organization must have clear goals and objectives to have an effective productivity effort. These goals can be broad, such as improving the entire organization's productivity by 10 percent in 5 years, or can be detailed, assigning certain objectives to specific organizational components. The overall goals and objectives and the methods to achieve them should be brought together in a productivity plan. Although the type of plan most appropriate for an organization varies considerably, the plan itself is essential since it clarifies for employees the organization's goals and objectives and what needs to be done to meet them.

4. Productivity measures that are meaningful and useful to the organization. Productivity measurement is an essential element of an effective productivity improvement effort. Productivity measures need not be precise, total factor measures. Often, a series of measures that are easy to understand and calculate and that are meaningful to managers and employees are more useful.

5. Use of the productivity plan and measurement systems to hold managers accountable. Productivity plans and measurement systems are of little value unless they are used. Accountability can be achieved by specifying expected productivity rates for various measured activities, comparing actual performance to expected, and using this information to assess managerial and organizational performance. Productivity improvement should be integrated into the performance evaluation process. This makes it clear to the organization that productivity improvement is a criterion for promotion and rewards. Only through a strong accountability system will everyone recognize that productivity is an integral day-to-day element of their jobs.

6. Awareness of productivity's importance to the organization. Because productivity is a commonly misunderstood concept, management must initiate awareness campaigns and help employees recognize their importance to the productivity effort. Without this effort, it will be difficult to enlist the work force in the pursuit of productivity improvement. Integrating the concepts of productivity improvements into training programs is another important way to assure awareness and understanding.

7. Involving human resources in pursuing productivity improvement opportunities. Who knows better about how to improve jobs than the person who does it every day? Surveys have shown that employees have ideas on how to improve productivity and cut costs. They just want to be asked. They want to participate in the problem-solving and decision-making processes. They want to be recognized for their efforts. It is incumbent upon the organization, therefore, to provide an environment in which employee contributions can be maximized. Effective structures for tapping into employee ideas exist. Numerous structures are available--employee surveys, suggestion systems, task forces, quality circles, autonomous work teams. These techniques have differing levels of sophistication and risk, and it is important to carefully assess organizational climate and circumstances to determine which techniques are most appropriate and most likely to succeed within a given environment. It should also be recognized that these techniques are not ends in themselves, but rather are steps along the way to developing a more participative management style within the organization. Many quality circle efforts in this country failed because the organizations did not provide climates conducive to a participative structure.

None of these elements is particularly innovative. But the integration of these elements distinguishes systematic productivity improvements from other approaches and makes them powerful processes for improving productivity and reducing costs.

Studies on why productivity improvement approaches fail to achieve comprehensive and sustained improvements reveal certain pitfalls that seem to occur with regularity. Most are simply reiterations of several of the key points I just discussed--weak commitment from the top, taking a "program" approach, failure to establish responsibility and accountability, and failure to get employees involved.

In closing, we are pleased with the overall structure and elements of the President's Productivity Improvement Program. We have worked closely with OMB throughout this past year to share our findings and experiences. I believe the time it has taken to get the President involved, to get a Presidential statement, and to meet with officials from each agency to answer questions was time well spent and should pay dividends. I also believe that OMB's plans to integrate productivity efforts into the budget process through its management reviews will help to provide a clear signal to federal managers that productivity and the productive use of resources are high priorities.

GAO's role in productivity will continue. We will not only be monitoring the President's Program for Congress, but also continue to identify targets of opportunity for dollar savings, address barriers and constraints to productivity, promote productivity-enhancing tools and techniques, and participate in general management reviews of departments and agencies.

The ultimate question that each organization must ask itself is, does it want a productivity program or a management process for productivity improvement? Does it want productivity improvement to be viewed as a short-term, add-on responsibility that will cease to have emphasis after passage of time, or does it want to change the culture and climate of the organization so that productivity becomes institutionalized and becomes an integral element of organizational functioning?

I hope it is this latter response that agencies take to the President's Productivity Improvement Program.

Let me leave you with a definition of productivity I came across that captures the essence of my message: "Productivity is like a diamond. It is multi-faceted. It's value is enhanced when those with the proper tools work on it. It can be measured in a number of ways. It is appreciated most by those who understand it's many subtleties. It is obtained at a price. It is widely sought after; and as a result, it is often faked." Thank you very much.

## 5. PANEL DISCUSSION

**AUDIENCE:** It seems to me that the keynote speaker (Stofan) said something that was very much in conflict with what all the other speakers are saying. He said, "you must never do negative things to people involving productivity," and I wrote down a couple of things that the other speakers said. Ms. Dineen said, "we have to build productivity into the agency budget process." And Mr. Usilaner said, "that one of the important considerations is we need goals, productivity goals, and plans on how to achieve them." It seems as though all these things involving the budget involve doing negative things to people involving productivity improvement. I would like to hear the panelists' opinions of that. Is that a conflict?

**DINEEN:** When I said, "build it into the budget process," I did not mean in the traditional OMB sense. What I meant is that very often to achieve productivity improvements you need to make an up-front investment. I had examples at Treasury of new systems that would, (a) improve service to the public, and (b) cut down on the manpower required to do the job, which for years and years had not been funded. Don Regan was sympathetic to those projects and gave them support. The savings will and have occurred. The point is, you have to think ahead, you have to not just look at this year's budget problem, we always have a budget problem. You have to look ahead and be willing to make the investment with the understanding that savings will be down the road.

Now again, in my part of Treasury I had only something like four percent of the total Treasury budget, and I did not do any sexy things like interdict drugs, or collect taxes, so it was very easy to neglect my area, and it had been neglected. We did several graphs and charts showing how Treasury's budget as a whole had gone up while mine had remained flat. In many cases, we funded our own improvements by automating something or cutting down on the number of people in disbursing centers and freeing up those resources so that next year we could apply them to something else which had a productivity component. So no, I do not come at this from the point of view that we are just going to slash and burn and look to only cut cost.

**USILANER:** Let me add to that. I strongly believe that setting goals and developing a plan for achieving those goals is good management, positive or negative. It is good managers; you do that in any other areas and that is a way of trying to assure yourself that you are accomplishing things. Now in terms of the other comments, no one can argue with you on your point to accentuate the positive that was made by the keynote speaker. But you have to make sure that you build into the management processes when you improve productivity that it makes a difference; it makes a difference to the organization. The budget does not always have to be a negative tool; as Carole pointed out, it could be a positive tool; in the appraisal process, improving productivity or focusing in on productivity can make a difference; time rewards into performance into improving productivity can make a difference. That is what I am talking about. Building those type of cues which will then alter the type of behavior we want and in a very positive way. It is not the stick, those days are gone. You have got to make sure that people realize that if I do improve productivity and I cut the staff through attrition, I won't get downgraded, I won't be cut arbitrarily on a budget, those type of things. You have to make sure that those people don't have that perception, but have the perception that they will be rewarded and the

achievement they make will be underscored.

**BRAUNSTEIN:** Now let me just comment on that from the NASA perspective also. The key issue that you are faced with when you start a productivity program is how to institutionalize it, how to make it internal, how to make it part of your culture. From that standpoint you need some kind of management tools to make that happen, like planning and measurement. Now we are starting to measure productivity at NASA and one of the fears that I have is that I am going to institutionalize a process that is going to be used as a weapon against us. All the people in the field are concerned about that. They say, "Hey, if you measure the Personnel area at the Lewis Research Center, are you going to compare that with the Johnson Space Flight Center, and then take negative action against the one that seems to have less employees doing the same function?" And our answer is, "No." We hope to develop a measuring system that will be used by managers to improve their own performance. And when we have savings, we don't take away money or people from organizations. What we try to do is get more bang for the buck out of it. So we have a way of sharing those savings with the departments and Centers that actually achieve them to see that they get some benefit out of their improvements. Our program is not aimed at negatively incentivizing or developing a large weapon to hit somebody over the head. However, there is a delicate balance there because you really are aiming to institutionalize this and make it part of the management system.

**AUDIENCE:** I come out of the Labor Relations section, and labor relations offices by and large in the federal government have been very negative, very litigative oriented, very confrontational. The Office of Personnel Management, at least prior to Director Horner and prior to Director Devine, as a matter of fact, have been the same way. The advice that they have put out has been how to litigate; this is the minimum that you have to do in regard to the union. In my Agency we are looking at the Labor Relations hopefully sometime, labor relations policy that naturally will be human initiative, productivity initiated. And I just have thought, for instance, advice and assistance bulletins from OPM which goes through the case law tells you what not to negotiate with the unions. OPM does not, has not in the past, through their Office of Labor Relations, put out guidance on "here is how you deal with the union in the initiatives." Here is the best way to do it. The Director of Lewis Research Center is talking now about a very, very small part of the government, those who want to deal in this manner with the union. And the question I want to ask Director Horner is, do you plan on modifying OPM's approach in this area so as to attempt to create in OPM and among the Government's labor relations staff a more constructive approach in dealing with the union and management and productivity improvement issues. I don't know if Carole . . .

**DINEEN:** Well, no, I am not going to answer for what OPM plans or does not plan to do. I do know, however, that within agencies, in fact within bureaus, you can work successfully with the union when you have a productivity improvement program that has the potential for disrupting the work force. We did it in the Bureau of Public Debt at Treasury, we were converting to a complete book entry system for government securities held by smaller investors, about one million accounts. And the effect of that would be that with overtime, several hundred jobs would be unnecessary. We worked out a plan which involved greater reliance on temporaries during the transition period, interview counseling, job placement, etc., so that no one would have to be rified. It took a lot of extra planning, it meant starting to think about it, say a couple of years sooner than otherwise you

would have had to, but it worked very well and if we were able to do that, I don't see any reason why managers can't undertake those kinds of initiatives.

**BRAUNSTEIN:** Yes, working positively with the union is extremely important. When we started quality circles, what we call NASA Employee Teams throughout NASA, (and, by the way, we have now five percent of all of our employees involved with either the quality circle or the NASA employee team concept), our first hurdle was the union. The way we tackled that was to put them on the installation Steering Committee and let them be part of the group that introduced that process on the installation itself. At one installation, it took nine months to get a cooperative feeling between both sides. But it is something you have to approach very constructively, and work with them as part of the team. Yes?

**AUDIENCE:** This is a question for Mr. Usilaner. I wanted to ask Director Horner concerning the area of paper performance and particularly the performance appraisal system. In the management review that GAO just completed in Labor, it was pointed out that there are quite considerable inconsistencies between different bureaus within the Department, in terms of the existing appraisal system. In other words, how many excellent appraisals are awarded and how many superior, and how many to the different grades. And there have also been a number of reports that in some agencies 95 percent of the people in an office will get an excellent rating. This sort of tends to make it a meaningless process. From GAO's point of view, I don't know whether you have looked at this, what kind of specific safeguards or specific measures are needed to make sure that a great performance system is fair and is indeed doing what it is supposed to do?

**USILANER:** I think that the Civil Service Reform Act is quite clear. If you take a look at that it lists the criteria on which not only the Merit Pay should be based, but the SES bonuses and awards as well. And one, I think there are four or five including service to the public, quality; but one of them is cost efficiency and productivity. I guess one of the things that we have found is that even though the Civil Service Reform Act is quite clear and explicit on these criteria, we have found a lack of evidence that those were being used especially in a quantitative sense within not only the Merit Pay but SES, and your point is well taken. What happens is if you give a little to a lot, it loses the whole impact in terms of the rewards. The problem is people outside of the Merit Pay and SES. There are mechanisms that they can be rewarded by in terms of performance and we are not taking full advantage of those mechanisms. One of the things that the Department of Defense, for example, has been experimenting with and looking at closely is a concept of gainsharing. Which is a way to share the productivity savings with the employees. So you are not limited to just that line item amount called for by your incentive awards. We are taking a close look at this now, and preliminary results show that this is quite effective as a motivator because it is very explicit, and very closely tied to performance. And I think these types of things will overcome the problems that you are talking about. But I agree that they do exist.

**AUDIENCE:** I have a question for Ms. Dineen. Sometime ago on Reform '88, there was the Federal Field Structure Group headed by Mr. Harman, and as part of that Ms. Triplett, he headed the Comment Administrative Service subgroup. And that subgroup came up with standards for personnelists and procurement people, and personelists, I think, was one personelists for 1,600

employees. And that was used in the '85 budget process to reflect cuts or whatever was being in the different agencies. Are those standards still being used or modified, what is the status of those standards?

**DINEEN:** I think those standards are still out there. I know the PCMI has worked on some similar standards, I think Commerce was the lead agency I am looking at, procurement staffing. That is a perfect example of the internal processes that Reform '88 has focused on. And to me, personally, the kind of savings you get from those kind of standards won't stack up against the kind of savings you will get when you start looking at program delivery and ways to improve productivity in program delivery. I think you will find that the productivity program will yield a great deal more for the Government. And I go back to what I talked about earlier, which was the idea of having a Reform '88 project menu. If we have a sense that an agency could come up with X efficiencies, we would look to the agencies to select the ways to get there.

**USILANER:** I would like to underscore the point that Carole made about the significant savings that will come out of program delivery. The easy part is the administrative side, and we tend to always gravitate management improvement productivity to that administrative side. The impact will be that they not only save money, but they get more out of their program. Budget cutting is a way of life in this town; it is going to be for the foreseeable future. We can't ignore that, but to get program managers on board we have got to demonstrate that productivity can be an effective tool for getting our job done with increasing workloads and so on. And that is, I think, going to be the key in biting the bullet. The effectiveness of this program is to attack program delivery.

**BRAUNSTEIN:** We have time for two more questions.

**AUDIENCE:** One of the last comments that Brian made disturbs me greatly. And that is we are going to focus on getting the OIG involved. I don't know what gives people the impression that OIG's are management specialists. And I would suggest that focus is being put in the wrong place and while we have OMB here too from management side, I think we would be far better if we put it on the Secretaries of the Administration.

**USILANER:** First of all let me clarify what I said. I said that one way to integrate productivity in the management process is through evaluation. To make sure that people are paying attention, that those people who are doing a good job get applauded. Managers have a lot to do, a lot on their menu. They are trying to get the job done, the work out. The IG's could be quite helpful in identifying targets of opportunity. I mention them in the same breath as GAO, the Congressional Oversight Committees, OMB, and so on; these are extra forces that can keep the attention on. The responsibility for productivity has to come from within the department or agency, and it has to be the managers and employees within that department or agency. It can't be staff functions like the IG or the Office of Management and Organization within the department. It has got to be a program.

**DINEEN:** I would like to say something to that too. I understand where you are coming from, I have been a line manager for 20 years and so I have been trained to sort of look askance at auditors. However, when I was at Treasury and we were concerned about institutionalizing cash management within the agency, so that it was not just Treasury pushing cash management, we asked the IG to

make cash management practices part of their agenda of things they would review so that there would be follow-up. I think the IG's can work in concert with the managers and, I think, hope, that that would be the thrust they would take.

## 6. QUALITY AND PRODUCTIVITY, A LABOR/MANAGEMENT VIEW

**BRAUNSTEIN:** Stephen Schlossberg was appointed Deputy Undersecretary of Labor for Labor Management Relations by Secretary of Labor Brock, on May 20, 1985. In this position, he is responsible for efforts to assist employers and employees to participate in cooperative efforts to improve productivity, economic competitiveness and the quality of working life. He also keeps Department and other Government officials abreast of significant developments in industrial relations and administers certain employment protection of benefits established by Federal law.

Mr. Schlossberg previously was a partner in a law firm of Zwelding, Schlossberg, Leibig, and Kahn. Before that, from 1963 to 1981, he was with the United Automobile Worker's Union, serving as Associate General Counsel, and then a General Counsel, and Director of Public Affairs.

He is no stranger to Labor and Management issues. He started his work career as a department store manager, and worked five years as an organizer for the International Ladies Garment Worker's Union, and has worked as a lawyer to the Federal Mediation and Conciliation Service.

He is the author of Organizing In The Law, as well as numerous journal articles and book reviews. He is a former Adjunct Professor of Law at Georgetown University Law Center. He served on the President's Commission on Industrial Competitiveness, and the President's Advisory Board on ambassadorial appointments. He is a former member of the Board of National Consumer's League and the National Legal Aid and Defender's Association. He was born in Roanoke, Virginia, and attended the University of Virginia, from which he has a BS and an LLB degree. He served in the Army during World War II.

**SCHLOSSBERG:** Thank you very much for that very long introduction.

It is good to be here and talk to colleagues in the Federal Government across the agencies about these issues. I am particularly grateful to NASA for being the prime mover in getting us all together at this juncture in our history to talk about productivity.

I know you will see my bias in just a moment. I hope that the Executive Order that comes out will pay some attention in seeking productivity to how one gets productivity, and will at least tip its hat towards programs like quality of work life for employees, words like participation, team work, and human relations -- those kinds of attitudes.

After all, if you are going to achieve productivity, quality and excellence and all of those wonderful goals that we really have in the Federal service and the State service and in the private sector and everywhere, if we are going to be successful, you must achieve those goals through people. You don't achieve them through mechanical, systematic contracts. You achieve them through human beings. That is how we do it.

And I take it that we have reached the stage in our world-wide consciousness when we are no longer like the Nazi soldier who had a ten-ton truck that stalled, and he saw a little puppy about eight months old, and he said, hitch that dog up,

and we'll have him pull the truck out. When advised that the puppy was very small, the Nazi said, "we have whips."

Well, we know that that is not one of the ways you motivate people today or even little puppies. We are interested in productivity and quality. And I want to tell you that the people who work for those of you who are managers and high Government officials as employees are interested in the same things you are. They are interested in productivity, in quality, in excellence, in service to the public.

I came to this position after many years in the private sector. And I would say, to join my colleague, Dennis Whitfield, who spoke to you earlier this morning, that I was immediately struck by the talent and the will and the just plain, get-it-done attitude, that I found in the little bureau that I came to.

I found a secretary, my own secretary, who was superior. I found people who were willing to go beyond the call of duty, and do all kinds of creative tasks. And I felt at home in one week. In short, I was struck by the quality and the dedication of the Federal employees that I met.

Not long ago, I saw another example of that. I saw a little circle of clerical employees who were trying to meet and find a way to improve the functioning of our bureau. And they came up with just such simple but sensible recommendations. They said, "we read the briefing book that you got when you came here - the one written by the managers. And we are not sure that we understood it enough so that we, as clerks -- as secretaries and clerks, can communicate to the public, what is the goal and the mission of each part of this bureau." And they said, "we want to meet with the managers and find out more so that we'll understand what we are doing. And we want an orientation manual for new people who come to work here." These kinds of suggestions indicate to me a willingness to deliver quality service to the public.

Compare those and contrast those, if you please, with a letter I read in the Washington Post a month or two ago, rather a memo, or a report of a memo, issued by some general. If it is the right general, it is hard for me to believe that he wrote it. Because I know a general over there -- and I don't think it is -- it couldn't be that same general.

He said something like -- "When you refer to military employees of this department, call them "soldier." Because the word, employee, seems to imply somebody who is slothful and who lays down on the job and cheats the tax-payer. But when you refer to soldiers, it raises expectations of valor and sacrifice and all of these wonderful attributes."

Well, I once was a soldier. And I can tell you that there are all kinds of soldiers, just like there are all kinds of other people. It is hardly the kind of memo that is calculated to stimulate the civilian employees who work for that general to really give the job everything they've got.

You run into mechanical ways of thinking about things. There is a story that is told about a man who got a big job in a corporation. Bigger than anything he had ever dreamed of having. And he sat down at his huge desk -- a room the size of this one, with a conference table in the other room. He sat down at that desk. And as people will do, when they are a little nervous and ill at ease, he opened the

center drawer and he looked in there, and there was a note which said: To the new occupant of this office: you are bound to have three crises in your administration of this position. And we have numbered envelopes one, two, and three -- open them in order, as the crisis arises. Well, he forgot about those envelopes. Then about two or three weeks later, he was having a meeting with his staff down at the other end of the conference room and a minor crisis came about. How do you solve it?

So he says, "Look," he thought of that envelope, "why don't you all go out of the room. I'd like one minute alone just to think all by myself and see if I can come up with some kind of a solution."

Well, they all left the room. He runs down and he tears open number one, which says: "Blame your predecessor." He brings them all back in and he says, "It is all the fault of that woman who was here before me." Lays it on her. And everybody feels pretty good. They think the boss is pretty smart.

Two months go by and now there is a more serious crisis. "You know how I work," they all file out just like that. He goes down, and he tears open envelope number two, and it says: "This can be solved by re-organization. It is a structural thing." And they see him as oh, so brilliant. This is considered so brilliant that the CEO sends him a case of liquor to show his appreciation.

Finally comes a crisis in which his business life is at stake, and everybody in the room is involved. And he tears open envelope number three after getting the others out of the room and that one says: "Make three envelopes."

Now, it is very difficult to predict where we are going. But again, when I say we are dealing with people and we are going to talk about some very fundamental human concepts, and how you motivate people, what frightens people, and what causes people to do good things like -- working to improve quality and productivity. People are interested in those things if you give them a chance.

But as for predictions, I am loathe to predict anything. Because prediction is always dangerous, particularly when it is about the future. But I would cite you the story of the workaholic Government employee, the manager, who left home, this is a man -- who left home when it was still dark, and who came home when it was dark again, and who one night, said to his wife, "How are things at home?" She said, "How dare you ask that. You are a workaholic: you leave here when it is dark, you come back when it is dark. And in the meantime, I am raising two monsters. Two monsters; one monster is eight years old, and one is twelve years old." And he replied, "what do you mean, monsters? Our sons?" She said, "They have the vilest, filthiest, most rotten mouths in the neighborhood. Mothers call me all of the time about how these boys talk." The husband said, "Look, I want to tell you something. I can cure that in one morning. Tomorrow, I don't have anything important at the office. I will have breakfast with the kids and get them off, you sleep and forget about it."

Next morning, he goes down to breakfast, he says to the twelve year old, "What would you like for breakfast?" And the twelve year old said, "I would like some damn corn flakes." And he hit this kid, and knocked him all of the way across the room. He then turns to the eight year old, and he said, "what about you, son? "Well," he says, "I don't know, but you can bet your ass it won't be corn

flakes."

And why do we want quality? Why do we want excellence? Why do we want productivity? Because nobody wants to feel marginal, that they are doing make-work. That they are leeches on society. Nobody wants to feel that they are marginal, mere numbers in a work pool somewhere. People want to matter. People want to make a difference.

And everyone of your employees, dear friends, want very much to do the best job they can. It is not likely, I suggest, that they are going to suggest improvements that will put them out on the street. So, you have to worry about what motivates employees and what makes employees frightened and prevents them from operating creatively and productively and efficiently and being concerned about quality.

I remember when I went to college, -- in Sociology class, I remember the English sociologist, Thomas, who said that all human beings are driven by four wishes. It was a sexist time -- I think he said, all men -- but it is changing. Now, I'll say, human beings -- are driven by four wishes.

And the wishes are, he said, security, response, recognition, and new experience. That stuck with me since 1938. And that is a long time to remember such a formulation. Of course, along came Abraham Maslow, who made a pyramid of what motivates people and he found that first there was a survival need -- homeostatic -- and then a safety and a security need, and then a love and belonging need, and then esteem needs, and then needs for self-actualization, knowing and understanding and, finally, aesthetic needs. They are really no different than the needs that Thomas talked about -- and you all know those things. You know, just as everybody in this room knows, the secret of what motivates people. People have needs to be secure -- no question about it. They have needs to do their own thing -- to be able to operate as human beings -- to make a contribution -- and to feel that they are making a contribution. They need recognition. Those are basic human needs.

Let me talk for a minute about the needs for respect, love and admiration, and recognition. When we talk about rewards in a society like ours and in the business of running a government, I can't tell you how important rewards are. People do learn, it seems to be, somewhat by pain. And they learn by rewards. But rewards, if they are properly handled, can so motivate people and can pay such dividends to the rewarder, that the results will exceed expectations.

I know a story about a fellow who was drifting in a rowboat one day on a river -- idly drifting - he was supposed to be fishing, but he was just sort of drifting, and along came a snake, whose head was out of the water. A water snake. And in the snake's mouth was a struggling frog. And he felt sorry for the frog. He reached out and just took the frog out of the snake's mouth, and the frog happily jumped away. And then, he felt sorry for the snake, whose mouth was quivering because he just lost his lunch. And he thought he would reward the snake. And he reached in his boat, and he poured about four inches of Jack Daniel's Black Label down the gullet of the snake. And he felt pretty good!

And he was drifting there in the boat, when suddenly the boat began to rock, and he looked on the other side and there was the snake with two frogs in his mouth.

Rewards don't pay off in just a one-to-one basis. We know human relations, the human psychology as well as any nation in the world, and its value in relation to management.

The Japanese have been able to take the technology, not only of manufacturing for productivity and quality, but the technology of understanding what motivates human beings and to use that to the advantage of the human beings, the process itself, as well as the product. They have done very well with that.

When you are dealing with these kinds of problems, you are asking human beings to be creative. And where does creativity start? We had a retreat in the Labor Department last week, and we talked about where creativity starts. I used the story of my Aunt Fanny to tell you where creativity starts.

Aunt Fanny made the best damn roast beef in the whole world. Nobody could make roast beef like Aunt Fanny. Now, her daughter, Dorothy (Aunt Fanny has passed on into the great roast beef kitchen in the sky) cooks on all of the big family occasions. We have a wedding, we have a funeral, a reunion, Dorothy is cooking roast beef -- in the Aunt Fanny tradition.

So, last year, Dorothy is cooking the roast beef and I was in the kitchen, "Dorothy," I said, why do you cut the end off the roast beef?" She said, "Did Aunt Fanny make the best roast beef in the world?" I said, "Absolutely." She replied, "That is why I cut the end off the roast beef. My mother always cut the end off the roast beef." I said, "Dorothy, my mother asked Aunt Fanny, why do you cut the end off of the roast beef," and she said, "because the beef doesn't fit into the pan."

That is when creativity begins -- when you understand the Aunt Fanny principle. That you don't have to tell managers who work for you that the only way to get along with the Union is to get the best of it. That the only way to get the best out of people is to drive them. That people are driven by fear. If you want to build a constructive climate, a cooperative climate, a climate in which human beings can achieve and in which human beings can be happy at the same time they are producing, that you do it with positive enforcers.

You do it with security. You do it with assurances. You do it with teamwork. You do it by avoiding scrupulously the tools of the manager that destroy human initiative.

What are those tools? You avoid anonymity. When you get a memo from somebody, find out who else worked on the damn memo and be sure everybody gets a place in the sun.

When you get a project going and some person comes to you and says, "This is it," say, "Who helped you on this?" And, if it's a bad job, share that too, because people do learn a little bit by pain. And people don't have to be treated like children. You are dealing with a wonderfully educated class of people here.

True, we have some problems with the education system. But they are not from the people you deal with. That's not who the problems are with. I mean, most of the people in death row in the North Carolina prisons are school dropouts. That's not who you've got here.

But, even dropouts can achieve. Some of the people I work with and myself went through the Numi plant. (That's the joint venture between Toyota, General Motors and the UAW in California). We saw teams working from the ground up. And that's one of the principles I would give you as a bedrock principle. Involve people from the ground up.

One of these teams was headed by a 63 year old black man who was absolutely illiterate -- could not read and write -- and who cared about the kind of quality automobile he made, and who cared about how fast the automobile was made, and how efficiently it was made. And we found that all of those people were involved in the product and in the success of the enterprise -- the union officials and the management officials. We found that they had found -- they had found a wonderful secret. Teamwork. Sharing.

You see? We are always looking for easy secrets. You know the story about the great sea captain who had the greatest reputation in the world. And, every time he went on watch and went to duty, he would first open the drawer of his desk and look down. Huh! What was the secret? Was it a picture of his dead mother? Was it his wife, his children? A passage from the Bible? Well, when he died, they opened the drawer and they looked, and it said, "Port is left."

But I will give you a touchtone. I will give you a secret. The use of symbols. And they are very important.

These people at NASA know about the use of symbols. They understand about how to deal with people. They understand. I had, by the way, a great experience at Cape Kennedy Space Center. I recommend it to all of you, especially if you get the kind of VIP tour I got. It was just gangbusters.

But, listen. Symbols. What do I mean by symbols? Well, you hire the disadvantaged. You hire the people who are a little older. You show the workers that they really mean something here -- they mean something to you. You destroy the line of demarcation between managers and political managers and workers. You say that we are all going to live and work as equalitarians. And that we're involved in this thing together. And that we're going to share information. And we're going to share prosperity as well as austerity. This is a joint endeavor in which we are working together.

If we can infuse some of the cooperation that some of those in the private sector are doing, into the public sector, we will combat the greatest enemy we have.

What is the greatest enemy we have? Perception. People who take cheap shots at Government, and who say that Government can't organize a two-car funeral, and who like to sit back and carp and make fun of the Government.

And let me tell you. Nobody in this room, ought to be guilty of that, because you are in this together. The managers and the workers have the same interests. If you work with a bunch of dunderheads who can't organize a two-car funeral, and who are just putting in time, then you ought to be shot. Because managers and people have the same interests. And they share the need and desire to work in an efficient, quality operation that serves the public.

What higher calling is there than to be in the Government and to serve the

general welfare of the United States? To work for the defense of the United States? To work for the improvement of the United States? To make the United States a better competitor in the world? To work for the humanity of the United States? For the dignity and well being of its citizens. You've got people who do it.

When they badmouth your people, when they badmouth the job that Government's doing, they badmouth you, your job, and they badmouth this country. You should see it as damn near unpatriotic.

So, I like what you're doing here today. I simply say, don't forget, it has to be done with people. And you've got the greatest resource in the whole world -- the American people. They make up your work force. If you will form a partnership with them, together, you can do some wonderful things.

## 7. QUALITY IMPROVEMENT THROUGH TOTAL QUALITY MANAGEMENT

**BRAUNSTEIN:** Our first speaker this afternoon is Commodore John Kirkpatrick. Commodore John Kirkpatrick is a native of Bessemer, Alabama. He began his military service in February of 1951 as an enlisted man in the United States Air Force. Upon completion of basic training, he was assigned as an Air Policeman at the Ramey Air Force Base in Puerto Rico, where he received an appointment to the U.S. Naval Academy. Upon graduating from the Naval Academy in June '56, he was assigned to Flight School at Pensacola, Florida, and was designated a Naval Aviator in October '57. His initial tour of sea duty was in Attack Squadron 46, flying the A-4 aircraft.

He earned a Masters of Science degree in Physics in May '65 at the Naval Postgraduate School, and additional sea duty following in Attack Squadron 66, with deployments to the Mediterranean and combat duty in Vietnam in Attack Squadron 212. Designated an Aeronautical Engineer Duty Officer in October '67, he has had many subsequent tours, including duty as Production Manager, an Attack Class Desk Officer for the U.S. Pacific Fleet, Avionics Systems Project Officer for Naval Air Systems Command, and a Special Assistant for the Air Warfare Programs to the Assistant Secretary of the Navy R&D.

Commodore Kirkpatrick served as Commanding Officer of the Naval Air Rework Facility at North Island from July 1980 to July 1982. From July 1982 to July 1984, he served as the Force Material Officer on the staff of the Commander, Naval Air Force, U.S. Pacific Fleet.

His decorations include the Legion of Merit, two distinguished Flying Crosses, six Air Medals, eight Air Medals for strike, a Meritorious Service Medal, three Navy Commendation Medals with the Combat "V" and the Purple Heart.

His experience is very impressive, and he has been telling this afternoon before we started about the work he has been doing to improve quality in the areas that he has responsibility for.

At this point, I would like to introduce Commodore Kirkpatrick.

**KIRKPATRICK:** Thank you, David.

Ladies and gentlemen, it's a real pleasure for me to be here today.

You note that Captain McCandless and I have been switched on the schedule. My speech teacher in the third grade told me I never should follow lunch or an astronaut.

I welcome the opportunity to participate in the creative exchange of ideas taking place here today and share with you something of what we are doing to improve quality and productivity within the Navy, specifically through the total quality management approach we are implementing within the six Naval Air Rework Facilities.

And, speaking of productivity, St. Louis was not very productive during this last series. And I have a lot of friends in St. Louis. And I had a couple of friends that were baseball players. And they were not professionals. But they loved

baseball. One was a pitcher; one was a catcher. And they talked baseball all the time. They played on a local team together. And they made a pact that, if one should die, he would come back to tell the other whether or not there was baseball in Heaven. And a really terrible thing happened a few months ago. The catcher was in a terrible accident, and was killed. I was talking to my friend, the pitcher, just a couple of days ago. He was very upset the way the World Series was going. But he told me that something very unusual had happened the night before. In a dream, the catcher appeared. And he said, "We made a pact. I came back to tell you that Heaven is everything it's been written up to be. It's wonderful. They do have baseball in Heaven. As a matter of fact, I caught today." He said, "There's some other news I'd like to share with you that's not altogether good. You're scheduled to pitch next Wednesday."

Since it is just after lunch, and I have a subject that I feel very strongly about, I tend to ramble a little bit with it. I tend to sound a little bit like a revival minister.

So, to avoid boring you, I'm going to stick very, very closely to my notes.

I am the head of six Naval Air Rework Facilities -- among other things. And I'm going to tell you a little bit about what we are doing to take a new look at our quality program and our productivity program.

And, throughout this presentation, anywhere that I use the word "quality," that's synonymous with productivity. And I think we have the evidence to support that claim.

The six industrial facilities employ approximately 25,000 people whose job is to support Naval aviation through providing expert airplane overhaul, maintenance and repair. Four of the facilities are located on the East Coast at Jacksonville and Pensacola, Florida; Cherry Point, North Carolina; and Norfolk, Virginia. Two are located on the West Coast -- North Island, or San Diego, California; and Alameda, California.

The corporate headquarters is at the Patuxent River Naval Air Station -- the Naval Aviation Logistics Center.

Like both private industry and other government agencies in this country, we encounter competition for resources. We need to improve our quality and our productivity, not only in order to provide better services to our customers in the fleet and to save tax dollars, but also in order to improve our competitive position.

Our total quality management approach, based primarily on the philosophy of Dr. W. Edwards Deming, builds upon quality and productivity initiatives which we have successfully implemented in the past, and provides us with both the concepts and the tools we need to meet today's challenges.

Some early initiatives which are building blocks for our current approach include the Artisan Certification Program, quality circles, employee suggestions programs, and production management teams.

As an example, I will briefly describe the Artisan Certification Program which has been in operation since 1978. This program is based upon the conviction

that no one is better qualified to certify the quality of a product than the skilled workers who produce it. We believe that, if we provide our production workers with the training, the tools, equipment and other support they need to do the job, they will take the responsibility for building quality into the product, certify they have done so, and greatly decrease the need for inspection at the end of the line.

Our artisans earn their position by demonstrating their own ability, and are themselves certified by a collaborative training process, which includes the production, engineering and quality departments.

Our Quality Assurance Program is based on this concept. While there are some safety of flight items, which do require final inspection, basically our QA people inspect, perform quality audits of specific products, or entire systems and of processes. They do not function as quality inspectors in the traditional sense.

The validity of the approach is attested to by the fact that the Air Force, after conducting an exhaustive study of QA methods in thirty companies, including our Naval Air Rework facilities, concluded that our Artisan Certification Program was the most effective approach, and in 1983, directed their rework facilities to develop a similar approach.

Quality circles are another ongoing initiative resulting in higher quality, increased productivity and reduced cost. Some of our facilities have as many as fifty quality circles currently operating.

The graphic techniques used by quality circles are the same as those used in statistical process control, which is the primary tool used in implementing the total quality philosophy.

The participative process used in quality circles is another building block which is invaluable to developing total quality management.

Our quality circles are basically a bottom-up approach to solving the quality program. Total quality management, while incorporating and building upon quality circles, is a far more comprehensive top-down approach which requires long-term management commitment for organization wide implementation. Long-term management commitment. (repeated for emphasis)

This total quality management is an extension of our previous efforts to improve quality and productivity. It is not just another program focused on a particular area. Rather, it is an effort begun by top management to change our organizational culture so that quality becomes everyone's first priority and everyone's job -- from the Commanding Officer to the clean-up crew on the shop floor.

I know that you are all familiar with Deming's Fourteen Principles for Quality Management and the use of statistical process control. And you are probably using many of these ideas in your organizations.

I want to describe some of the ways in which we are implementing the key elements of the total quality concept in the Naval Air Rework community.

First, as I stated earlier, we have recognized that quality, productivity, and cost reduction are not separate issues. They are inseparable elements which can

no longer be treated in isolation by productivity experts, quality assurance specialists and cost accountants. It must be addressed through a total quality management approach. And I mean no offense to productivity experts, quality assurance specialists and cost accountants. I just want to make the point that quality and productivity is the job of line management. It is not a staff job that you assign to someone and then depart.

Deming has said, "Nobody seems to understand except the Japanese that, as you improve quality, you improve productivity and reduce cost." We understand. We can produce great output, on schedule, at less cost, by doing the job right the first time. Somehow we had lost sight of that fact, and it was not institutionalized in our processes.

We are now getting back to the basics. We are beginning to demonstrate in our facilities that improved quality, indeed, means less rework, less scrap, and more product per unit investment.

Our total quality management approach, is above all, customer-focused. It required a shift in management emphasis from beating the competition to satisfying the customer. We believe we are already doing a pretty good job of satisfying our ultimate customer -- the fleet aviator.

Recently, an outside management consultant firm, commissioned by the Secretary of the Navy to evaluate the effectiveness of our facilities, completed a major study of all aspects of our operations. This team talked to our customers in the fleet -- the people who fly the airplanes. Our customers expressed satisfaction with the high quality of the products we provide and with the competence of the work force. We maintain very close communication with our fleet customers, so we were not surprised to receive that report. But we think we can do better.

And I might add that, once they got through saying all the nice things, they gave us the yards-long list of areas in which we could improve.

Well, we want our customers to be more than just satisfied. Bill Sherkenback, Director of Statistical Methods for Ford Motor Company -- and a Navy Reservist -- recently told a meeting of Naval Air Rework managers, "It is not enough to improve your product or service so that you no longer get complaints from your customers. Your goal is to have your customer brag about the quality of your product."

We are not there yet, but we take that challenge seriously.

In accepting the challenge, it's important that all of our employees understand that they are involved in processes which provide products or service to customers, both within and outside the organization. While our ultimate customer is the fleet aviator, every work group has its own customer supplier relationships as well.

We are identifying these relationships, both internal and external, and our customers' needs are becoming the terms by which we define quality. We have begun to improve our customer feedback mechanisms so that we can know what those needs are. As we define the critical processes in satisfying customer needs throughout the organization, we are beginning to work together to improve those

processes and produce a higher quality product.

Improved customer feedback mechanisms within the organization means quite simply that our people have begun to talk to each other about what they need and about the way that they impact each other's processes. The result of this customer-focused approach is teamwork. For example, our facility in San Diego was the first to initiate the total quality management about a year ago. By focusing on the customer-supplier relationship between its Plating and Grinding shops, and establishing interdepartmental quality management boards to identify and solve common problems, these shops have transformed their relationship from one of conflict to one of teamwork.

The result is a continuing increase in the quality of their product and in their productivity. By working together to improve the process in producing H-46 helicopter rotor pins, a quality management board (composed of platers, grinders, machinists and engineers), was able to change a 30 percent acceptance rate to a 95 percent acceptance rate.

I have several similar examples that I won't discuss now for the sake of brevity.

The result of this kind of successful teamwork has increased pride among the workers and greater job satisfaction.

Continuous process improvement is the cornerstone of the customer-focused total quality concept. For us, quality no longer means simply conforming to specifications. It means continuously working to provide a better product.

The key to the approach is to document control and improve the production process instead of inspecting the product. Our Artisan Certification Program was the first step in this direction. Teaching basic charting methods to quality circles was another step.

Now, however, we are beginning to apply statistical process control methods throughout the organization. And, believe me, these methods are no more difficult than balancing your checkbook. They involve basic charting techniques which are easily learned and used by both managers and workers to analyze existing data.

I want to emphasize the word "existing." Some of our people thought that data collection for statistical control charts would be an added burden to their already heavy administrative workload. They were surprised to discover that most of the data they need already exists. The key is being selective in determining what data actually provides the information we need to improve the process, and then using it effectively. We have literally tons of data, but we need information. The trick is to learn how to use the data so it tells us what we need to know, and to stop collecting data which does not help us to improve the process.

The use of statistical process control methods rests on the premise that everyone wants to do a good job and improve performance. These methods provide a way of identifying and eliminating impediments within the system which keep workers from being productive. Through using statistical process control, we can identify both common and special causes of problems. And management can

obtain the facts necessary to make decisions which will improve the system.

Common causes, of course, for all of you people familiar with Deming, indicate systemic problems which can be resolved only by management action. Special causes are far less frequent, and usually can be eliminated by the workers.

And we are learning that another benefit of using such techniques as process flow diagrams, operational definitions and control charts is increased communications among the workers, between departments and between workers and management.

The net result is reduction of product variability. The benefits of producing a uniformly high quality product are seen in reduced total cost and increased customer satisfaction. I want to emphasize, however, that we see statistical process control as an important tool in achieving total quality management -- not as an end in itself.

Most important -- and, in our environment, perhaps most difficult to achieve -- is the long-term management commitment required to create and sustain unity of purpose throughout the organization, and to change the organization's culture. Changes in political and military leadership are a fundamental fact of our governmental system. It would be easy to dismiss total quality management as just another "good idea" which will disappear with the next change of command.

However, within our community, we are actively working to institutionalize the total quality management approach.

We are doing this in a number of ways.

Our headquarters, the Naval Aviation Logistics Center, is providing overall guidance and direction. However, each facility is responsible for developing its own quality management philosophy statement, training capability, and supporting organizational structure, to best fit its needs, environment, and workforce.

I want to re-emphasize that point; we are trying to centralize the decentralization, or decentralize the centralization -- whichever way makes it more understandable to you. But we've got to control the process; we've got to point it; and then get out of their way, because they each have a different environment, a different problem, and they can manage their own problem better than we.

In all our facilities, top management training in the total quality philosophy is well under way. In two of our facilities, the training process is extended well into the middle manager level and below. During February 1986, Dr. Deming will conduct a Navy-only four-day seminar in Jacksonville for 600 participants from our community. We think this will be an important step toward creating the "critical mass" which is essential to changing the organization's culture.

We are very much aware, however, that exposure and training will not suffice to create and sustain long-term commitment to total quality management. It is also necessary that we, as managers, demonstrate our commitment through our actions. One of the ways that we are doing this is through developing organizational structures which will support the total quality philosophy.

Each facility has formed its own quality management council -- or steering committee -- composed of top managers, which is responsible for wrestling with all the tough issues of quality management implementation, and overseeing the implementation process in their facility.

This involves discussing issues such as how we deal with our employees to encourage open communication and teamwork. It means ensuring that our employees see us practicing what we preach. It means developing a meaningful statement of our corporate quality philosophy.

This is a long-term commitment, with no promise of immediate or short-term results.

It means taking a hard look at our measurement systems, especially our traditional forms of both employee - and facility-wide appraisals. And coming up with ways of measurement which do not encourage destructive internal competition and discourage teamwork. But, instead, focus upon the ways in which we can improve our system and our product by working together.

It also means looking at policy directives, such as those dealing with government contracting procedures, and developing ways of establishing the constructive relationships with our contractors so that quality becomes their top priority, as well as ours.

Quality management boards, I mentioned earlier in my example of teamwork at our facility in San Diego, are another important element in the organizational support system. They create not only a vehicle for interdepartmental communication, but also for communication up and down the chain of command. Each board includes representatives at the same level from different departments, as well as a representative from the next higher and the next lower level of authority. Any issue which cannot be resolved at the level where it is introduced is referred to the next higher or lower board.

Thus, decision-making at the appropriate level is encouraged through this quality management structure.

Each of the rework facilities -- and the Naval Aviation Logistics Center -- is at a different point in the implementation process. Overall, I would say that we are in the initial phases of implementation. But, our understanding of what's required, and our commitment to meeting the challenge, is growing throughout the organization. We are confident that, through increased long-term management commitment, customer-focus both within and outside the organization, training, and development of supportive organizational structure, we will achieve continuous improvement. We are already seeing initial results in higher quality and greater productivity.

In closing, I want to say that I appreciate the opportunity to discuss our common concerns with you today. I applaud NASA and others for encouraging this kind of exchange of ideas. And I particularly appreciate the recent series of articles on quality and productivity which have appeared in the Government Executive magazine. I think, through sharing our ideas in these ways, we can support each other in our common efforts toward achieving continuous improvement.

I had another joke that I was going to tell you. But, it is so bad that I'm going to spare you. Thank you very much.

**BRAUNSTEIN:** Do we have any questions? Yes, sir.

**AUDIENCE:** Do you teach statistics to workers?

**KIRKPATRICK:** As I mentioned, when we went into the quality circles program, that was a part of what we did. We went through the basics of fishbone diagrams, histograms, parado diagrams, flow charts, and so forth. And I think that, if you try to get much more complicated than that, you make a mistake. We do have people at higher levels in the organization that have a better understanding of statistics, and I intend to have a statistician on my staff eventually. But it's important that people display the data, understand how to display the data, and use the data that affects their job. But I think it would be frightening for them if you said "statistical process control."

And that's why I wanted to emphasize it's no more complicated than balancing your checkbook. You can do it on the back of an envelope and come up with good useful data, What's wrong? What broke? What data do I have?

And it's amazing when you see the platers and the grinders out at North Island. Those people are turned on. They have come up with a half a dozen or so different problem areas in which they have decreased the rejection rate. They have saved a lot of money. Several hundred thousand dollars per quarter are being saved on the reduced process time and on the reduced machine time.

In one case, one of the problems we had led this group to turn up was the fact that a new specification had been put out by the Air Force which we weren't aware of. It is one that had been developed by McDonnell Douglas on the F-15.

As a result, we have eliminated the baking process that is required for high-strength steel after you use an acid non-destructive inspection technique on it. You have to bake out the hydrogen to avoid the hydrogen embrittlement problem.

We are saving literally tens of hours in the baking ovens because these groups of people were talking and working together, and they had the engineer down in the shop working with them.

**BRAUNSTEIN:** Any other questions?

**KIRKPATRICK:** Yes, sir.

**AUDIENCE:** What do you mean by ways of measurement that do not encourage destructive internal competition?

**KIRKPATRICK:** That was pretty sneaky the way I ran that one past you. Yeah, I have some ideas.

I would like to throw the merit pay system out, for starters.

I'd like to get rid of the -- what do we call it? The BPAP.

I think that what we are doing with those two systems, instead of rewarding the people that are doing a good job, we are only penalizing people.

For instance, we are required to have a bell-shaped curve. Right? So, how many of you would like to start your business this year saying that 70 percent of your people are losers? And that's exactly what we do with a bell-shaped curve. Only 30 percent are winners. And why can't we structure a system that says they are all winners?

You can carry that right down to the BPAP, to the Wage Grade people on the shop floor. Nobody likes to be a loser. People need correction. People need education. And they need to be winners.

Our problem is not commitment of our work force, our problem is commitment to our work force.

We've got within the Department of Defense -- I can't speak for the rest of the government since I have no firsthand knowledge. But, within the Department of Defense, we have a very, very fine, dedicated workforce. A lot of them have been around a long time. As a matter of fact, a lot of our people are retired Navy. They respond well. They work hard. They want to do a good job. And we need to turn them loose to let them do the good job.

And, I really think that our appraisal system -- and I recognize it's difficult to design an appraisal system -- I just think we are going to have to do some real tough thinking on the subject and come up with a better way to do it. And I don't want to denigrate in any way the people that designed it, because it is tough. Nonetheless, I would like to throw it out and not have a formal appraisal system. I think that, as a supervisor, I am perfectly competent to appraise the people around me. That's what I do in the military. And I don't have strict rules governing how many people can be declared winners.

I think that we can do the same thing with our civilian managers. If they aren't competent enough to judge the worth of the people that are working for them, perhaps we made a mistake in promoting them into their jobs.

**BRAUNSTEIN:** Thank you very much.

## 8. IMPORTANCE OF QUALITY AND PRODUCTIVITY IN THE SPACE PROGRAM

**BRAUNSTEIN:** Our next speaker is Bruce McCandless, a Captain in the United States Navy and a NASA astronaut. He graduated second in his class from the United States Naval Academy. Captain McCandless has logged more than 4,000 hours flying time. Over 3,000 hours of that has been in seven different types of jet aircraft. Among his assignments he saw duty as an aviator aboard the USS Forrestal and the USS Enterprise aircraft carriers. Aboard the Enterprise, he participated in the Cuban blockade.

Bruce McCandless was one of 19 astronauts selected by NASA in April 1966. He was a member of the Astronaut Support Crew for the Apollo 14 mission, and was backup pilot for the first manned Skylab mission. He was a Mission Specialist on the tenth space shuttle mission which was launched in February 1984. The flight crew was responsible for recovering and deploying two Hughes communications satellites which were previously launched.

This mission marked the first checkout of the manned maneuvering unit and manipulator foot restraint with which McCandless and his colleague, Lieutenant Colonel Robert Stewart, United States Army, performed two spectacular extravehicular activities. The eight day orbital flight of Challenger ended in the first landing on the runway at the Kennedy Space Center.

In total, Captain McCandless has logged 191 hours in space, including four hours of manned maneuvering unit flight time in space.

He was born in Boston. He has a Bachelor of Science degree from the Naval Academy and a Master of Science degree in Electrical Engineering from Stanford University.

It gives me great pleasure to introduce the first NASA astronaut to move untethered in space.

**McCANDLESS:** Thank you. In turn, it gives me a great deal of pleasure to be here today and to have the opportunity to participate with you in this Quality Conference.

If I may take issue with one point in my introduction, as you will see in the movie, we did not recover the two Hughes communications satellites. We launched them. They did not make it into geosynchronous orbit; they were recovered later by the STS-51A mission, which was especially equipped for this recovery effort, in November of last year.

I am concerned about quality, both as an astronaut and as a citizen of these United States. In this latter capacity, it bothers me, both from a sense of nationalistic pride and from a personal standpoint, that the once depreciating phrase, "Made in Japan", has come to be held in equal -- or even higher -- esteem in many product areas than the familiar, "Made in the U.S.A."

As a very small but close personal example, let me point out to you that one of my hobbies of long standing is electronics. I received a Master's degree in Electrical Engineering from Stanford, and, after quite a number of years of

wanting one, I finally purchased an oscilloscope camera this fall from a major U. S. manufacturer for a non-trivial sum of money. When I first put this camera to use, this is the sort of Polaroid (TM) print that it produced. You can see that it is only half developed. The developer was only smeared across one-half of the image frame.

It turns out, on investigation, that a little tiny yellow plastic piece -- you probably can't even see it beyond the first row here -- was omitted. Okay. Down here on the ground, this was easily resolved with a couple of phone calls to Albuquerque and a few other places, and about a week's shipping time. But the point is that the back that was manufactured by Polaroid and the camera that was assembled by this major manufacturer apparently never even went through any sort of functional tests until it got to me, the end user.

In a similar vein, on STS-5, the fifth space shuttle flight, a nylon locking insert about the same size of the plastic piece omitted from my camera, each one of them worth less than a penny, was omitted from the pressure regulator adjusting ring of one of the pressure suits that was planned for use on the mission. During the vibration of ascent and launch, this locking ring vibrated out of position. It changed the pressure setting on the suit regulator and resulted in the cancellation of the space walk scheduled for that mission since it could not be corrected on orbit. During a space shuttle flight, we have neither the time, the tools, nor the test equipment to undertake spontaneous in-depth repairs. In contrast to Commodore Kirkpatrick's problem with statistical approaches, we are looking for perfection in very small lots -- units of ones, twos, threes, and half-dozens.

I brought with me today a short film clip documenting some aspects of the shuttle flight 41B, on which I was a crew member in February of 1984. This flight was a mixture of **yin and yang**, joy and sadness, success and failure. Not seen in the clip, for obvious reasons, is that we lost about 60 percent of the movie footage of the spacewalk due to camera malfunctions. Let's go ahead and start the film.\*

As an aviator, I have been thoroughly indoctrinated in the need for a pre-flight inspection of the aircraft. You inspect it; you sign the appropriate paper work; and it belongs to you. As you can see from this sequence, moving out of the crew quarters and to the pad and then climbing in the vehicle, the constraints of the shuttle countdown and the complexity of the vehicle preclude this. Crew egress and launch are acts of faith by the flight crew -- faith in the thoroughness and quality of the ground operations team.

When the solid rocket boosters ignite, as you will see in just a second -- right there -- giving a total vehicle thrust of over seven million pounds, you know that you are going to leave the launch pad and go somewhere! You sincerely hope that it is upwards and down range.

Once ignited, the solid rocket boosters (SRB) cannot be extinguished or terminated. The orbiter cannot effect an early separation, and the crew cannot get out. Ejection seats were available only to the two-man crews that were a part of the first four orbital flight tests, and they had questionable capabilities at that.

\*Here as shown the 16mm silent film clip STS-41B Crew Presentation Clip, CL1048R.

Lest I paint too gloomy a picture, let me acknowledge that the orbiter does have multiple layers of redundancy in critical systems, and numerous abort options after SRB separation.

The SRB's , as you see here, burn out after a little over two minutes. They parachute back down into the Atlantic -- or, with the Vandenberg launches that are starting in the spring, the Pacific -- and are towed back into port and reused. On orbit our first item of business was the deployment of the Westar-VI communications satellite, atop a proprietary McDonnell Douglas solid propellant payload assist module, or PAM. Here you see it going out.

Our first indications of trouble was the control center's requests that we confirm that we had in fact deployed the satellite and, later, that we prove it by dumping the videotape of deployment to the ground.

Temporarily side stepping the deployment of the second satellite for the Indonesian government, we launched an automatically inflating six-foot diameter radar target balloon, which will come out in just a second, over there on the right of the screen. This particular balloon was built by a company that had been making sounding rocket balloons for quite a number of years. However, it elected to explode instead of inflating, and left us with only this little shard of material as a target for the rendezvous procedures.

Having assessed the Westar/PAM combination failure as an isolated incident, the ground directed us to go ahead with the deployment of the Palapa-B2 communications satellite for the Indonesian government. As you will see in a moment on the black and white television screen, its PAM booster nozzle failed in exactly the same manner as the first, consistency apparently being a virtue even when you have a flawed product. It will be seen here as a luminous "smoke ring" when the nozzle throat blows out. Watch the top of the screen. We trained the TV camera on the RMS end effector over the side and, part way into the burn, the nozzle throat blew out. The nozzle -- or the motor -- extinguished itself, and resulted in a premature thrust termination. These two satellites were left in approximately 150 by 600 nautical mile orbit, which were later adjusted downwards, and they were recovered by the STS-51A mission. But I would point out that they were the sixth and seventh PASs deployed from the space shuttle, the first five having functioned perfectly.

With our spirits somewhat dampened, to say the least, we proceeded into the spacewalking -- or extravehicular flight activities (EVA) -- with the manned maneuvering unit, the testing of which was one of our secondary but nonetheless important objectives.

I would point out, as you see here on the film, that I made a small communications satellite, a sort of token offering to the gods, sending out the single message, "Go Navy, Beat Army" -- and it is the only one that functioned satisfactorily on our flight!.

I have been associated with the development of the manned maneuvering unit (MMU) for over ten years, and had been involved for about five years with its predecessor flight experiment in the Skylab Workshop, in both cases working closely with former Air Force Major C. Edward Whitsett in the Crew Systems Division at the Johnson Space Center. Based on extensive pre-flight tests and simulation, including manned thermal-vacuum chamber runs with all the flight

hardware, we felt confident and comfortable about the EVA, but apprehensive that our own little black cloud might somehow rain on us.

On the fifth day, we suited up for the first time. The hardware that you see here consists of underwear containing about 300 feet of small diameter plastic tubing through which a coolant liquid is circulated to help control body temperature and keep you comfortable inside the suit.

The pressure suits themselves maintain about 4.3 pounds per square inch pressure inside of pure oxygen. You let down from sea level pressure in an airlock so that the entire cabin hasn't been required to be depressurized, and then "lock-out" into the vacuum of space in the payload bay.

Vance Brand, as you can see here, our Commander, was very solicitous of our well-being, and in fact during the EVAs, we were in constant radio communications with Vance, and he was most concerned lest he would have to come back and answer to our wives as to why we didn't come back. In addition to helping fly the orbiter, our co-pilot, Navy Lieutenant Commander Robert "Hoot" Gibson, took most of the pictures during the EVAs, including a really spectacular series of Hasselbald still photos. Talk about quality! We nominated him for a Pulitzer Prize in photo-journalism.

Once we got going, however, it became obvious that our preparations had paid off. Our apprehension turned to professional pride as everything checked out "OK".

You can see here the first flight profile that I started out in the payload bay; the manned maneuvering unit is a totally redundant system, fueled by compressed nitrogen gas. It has 24 thrusters split into two systems of twelve each. We have two batteries, two control systems, and two sets of circuits for operating it.

Basically, we had built ourselves a configuration where we could sustain one failure and still come back to the orbiter. We could sustain two failures and have the orbiter come rescue us, although of course we didn't want to do that.

As late as four months before flight, we took the unit into manned thermal-vacuum chamber tests. This is a very large vacuum chamber where a person can get in it wearing a pressure suit and the MMU, with counterbalances to support the weight of the system. We fired the thrusters and checked everything out. Much to our surprise, we found a major problem with the electrical grounding of the system, which was corrected by replacing some transistors and adopting a procedure to work around it.

A series of untethered excursions out to a range of about a hundred yards and back by myself and by Bob Stewart, validated the capability for a traverse to the ailing Solar Maximum Observatory spacecraft on the next mission. During this EVA we also checked out other items of new equipment, such as the previously mentioned manipulator foot restraint, and a number of other tools, including a power tool. This is the view, looking back at the orbiter, taken by a Nikon camera mounted looking over my shoulder.

The system flew essentially as we had anticipated. We had simulated it on a very large computer controlled servodriven six degree of freedom simulator at the

Martin Marietta Aerospace Company in Denver, Colorado. The only real surprise arose from the fact that the control system has a minimum impulse time of about ten milliseconds for thruster firing, and, on the simulator, we had a 40 millisecond computation frame time -- or 25 Hertz. Consequently, we did not appreciate the fact that, when the control system was holding attitude and you were translating with an offset center of mass, there would be a fairly high frequency "chatter" -- about six and a half to six and three quarters Hertz.

The first time this occurred it was a bit startling to us, but, in thinking about it and in discussing it with the ground, we realized what the situation was, and the units performed flawlessly. Here you see a shot again of myself, this time on the end of the Canadian built remote manipulator arm which is being operated by Dr. Ron McNair, the third mission specialist, inside the cabin. I'm standing in the so-called "manipulator foot restraint", that was utilized later on the Solar Maximum Repair Mission, as well as the LEASAT salvage and the 51A retrieval missions.

In between EVAs, we took a day of time for rest and equipment servicing, and then we were out in vacuum again verifying an attachment device that we used to capture the Solar Maximum spacecraft. Here you see equipment checkout. It was also a bit of a surprise to find that we had overlooked the fact that, in partially depressurizing the cabin, the lithium hydroxide absorbent canister, which you see being installed there, was still at sea level pressure, and when we took the caps off the canister, we got a blast of lithium hydroxide dust out into the cabin. But that has since been corrected.

This is the trunnion pin attachment device that we planned on using for capturing Solar Max -- mounted on the front end of the manned maneuvering unit here. It looks a bit like a big draftsman's powered eraser with a collet for grabbing an eraser. It worked quite well during our test here, but the failure of the Canadian built remote manipulator arm, the wrist yaw joint failed, prevented us from using the RMS to lift out a satellite and rotate it at the same speed as the Solar Max for maximum realism in the docking tests.

Later, on the next mission, an undocumented fiberglass standoff, a thermal insulator about the size of a golf tee, would prevent the attachment device from actually capturing the real Solar Maximum spacecraft.

As has often been observed in talking about space, there really is no up, no down. After you get over the adaptation transient of about a day's duration at the beginning of the flight, zero gravity is really a delight. In fact, it's somewhat of a mixture of emotions that you have on coming back to the ground. You find that you have to fight the effects of gravity. You have weight again. And, although you're always glad to be home, it takes quite a while to get back up there again on another mission.

I could point out at this time that I am currently a crew member on the Space Telescope Deployment Mission, scheduled for launch on August eighth of next year. This will put a reflecting telescope with a 94-inch diameter mirror in orbit and will allow us to see approximately seven times farther out into the universe than we can at the present time. Taking the cube of this distance to ratio the volume of a sphere, we are looking at roughly three-tenths of one percent today, astronomically, that we will be able to see after the space telescope is in orbit.

A minor mishap, the portable foot restraint, floating off in the upper left hand corner of the screen, was converted to triumph by Vance Brand when he invoked the much practiced man overboard procedures, if I can use the expression. We flew the entire orbiter to a point where I could reach out from the starboard handrail and grab the errant foot restraint and bring it back on board. The foot restraint was an item of trivial value, but it was a good demonstration, because in the last simulation that we had had, I had last seen the orbiter at something like 4,600 feet away and opening rapidly -- and that was not calculated to inspire confidence just before a mission, but we dismissed it as a "software problem".

On day nine, the payload bay doors were closed. The de-orbit burn of about 400 feet per second was accomplished, and we plunged back into the atmosphere at roughly 25 times the speed of sound. This is Mach 25 and, again, about 25,000 feet per second. This heated the surrounding air to incandescence and, as you will see in a moment, we could look out of the window, and we got the impression that we were inside a small furnace.. The air temperatures on the highest temperature points on the orbiter reached approximately 2,800 degrees Fahrenheit during re-entry.

This phase of the mission -- entry -- is the other phase during which there really is no acceptable alternative other than the planned flight profile. Here you can see the incandescence. It lasts for several minutes, and then, as you have decelerated down to about Mach 10, the incandescence goes away. Coming into the general vicinity of the landing site at a speed of a little over Mach 1, and an altitude of something like 70,000 feet, the orbiter commences the terminal area energy management phase. (In landing an orbiter, the general idea is to contrive to run out of altitude and air speed at the same time that you arrive over the end of the runway.)

Now, as you all know by now, we have no engines during this phase of the mission -- none are functional. And we use the five computers in a redundant set -- four of them working in parallel, plus a fifth one as a backup. We have three inertial reference systems for inertial navigation. We take TACAN data; we take air data; we take microwave landing data -- everything we can get. And, as you will see in a moment, on final approach we have adapted the Navy mirror landing system to provide a system of light to show whether you are high or low on the glide path, that is to aid in establishing the correct angle of approach for the shuttle. The outer glide slope is about a 17 to 19-degree slope, which initially looks very steep, and is flown at an air speed of 290 knots. When you reach approximately 1,700 feet above ground level, the transition is made to an inner glide slope of one and one-half degrees. Here you can see the light system showing red and white lights indicating your position on the glide slope. The inner glide slope is an unstable decelerating situation. That is, you are not trading off kinetic energy fast enough, and you're decelerating. At an altitude of about 400 feet, the wheels are deployed. We have a single hydraulic system and dual pyrotechnic systems on the landing gear to make sure they come down. The orbiter touches down at a speed of about 185 or 195 knots.

The runway at the Kennedy Space Center is a single runway. It is, however, 15,000 feet long and 300 feet wide. We have also landed the orbiter at Edwards Air Force Base in California and Northrop Strip in New Mexico, just north of the White Sands National Monument. There are approximately a dozen additional landing sites around the world where the orbiter could be landed, should the need

for such a maneuver arise.

This was the tenth flight of the space shuttle. Tomorrow morning, weather permitting, we will launch the twenty-second.\*

With waiting cargoes and growing commercial interest, we are building toward a launch rate of 24 per year. Or, as upper management is fond of reminding us, this is one flight per payday!

We astronauts are really like the tip of the proverbial iceberg. The most visible part of a very large team. And we make a point of explicitly acknowledging and sharing the credit for our triumphs. Conversely, it is our lives and our careers that are on the line, depending on the quality of the work by the rest of this iceberg.

Nobody really believes the old saying about the orbiter being a \$1 billion pile of parts, each provided by the lowest bidder. But there certainly is a very profound, unanimous desire by every crew member during launch and entry that each component keep on functioning as intended.

When it comes to customer equipment, such as the Palapa/ Westar payload assist modules, the Hughes Syncom LEASAT, and so on, we in the crew are in a bit of a bind -- NASA only requires that cargoes be proven safe to the Orbiter and crew. It is the responsibility of the customer to make sure that they will function as he wants them to. However, if a payload does not function as expected, we look bad; the U.S. looks bad; insurance rates on the international scene go up; and our competitors such as the Ariane look better and become more aggressive in their marketing tactics. True, malfunctioning shuttle payloads can frequently be retrieved or repaired, as we have been demonstrating with vigor, while most Ariane failures require the services of deep sea divers, but we still look bad.

In an effort to inspire higher quality hardware, which we believe must be built-in -- not just tested-in -- we have for years had a number of programs intended to personalize otherwise cold and faceless hardware. Both informally, and as a part of something known as the Manned Flight Awareness Program, we tour factories, participate in working level reviews, go to company picnics and generally try to meet the workers and the people behind the scenes, not only on the line in production, but in procurement, in quality control, and in all the related disciplines.

Our mission patches, which I initially regarded as exercises in conceit, are distributed freely to remind people that there are real, named, human beings relying on them and on their work.

We have a silver pin in the form of a space-suited "Snoopy the Astronaut" that was derived from Charles Shultz's cartoon series, "Peanuts," with his permission and authorization. "Snoopy the Astronaut" came into being toward the end of the Apollo program in an effort to promote the zero defects program and reward quality control and high performance. It was broadened beyond the quality control arena to include outstanding performance in any area of program or

\*This was the end of the film clip.

payload support, and is personally awarded by an astronaut to these especially deserving members of NASA and contractor teams on recommendations of their management.

Additional programs take selected individuals -- workers, especially, and we are not looking at upper management here -- to the Kennedy Space Center to experience the launch of some piece of hardware on which they worked. These are modest programs, but they are executed with sincerity.

We need the maximum possible quality in all of our programs if the space shuttle is to be viable, and if the two shuttle missions carrying liquid fueled Centaur boosters, and nuclear powered spacecraft, scheduled for launch next May, are to take their rightful places in the history books as the Galileo Jupiter Orbit Probe and Ulysses Solar Polar Missions.

Thank you very much.

## 9. MANAGEMENT COMMITMENT TO QUALITY

**BRAUNSTEIN:** Being the last speaker in a conference like this is always a challenge, especially when you follow an astronaut. Our last speaker is John Franke, Jr. He became Assistant Secretary for Administration, the Department of Agriculture, on March 14, 1983. He has previously served as Deputy Assistant Secretary for Administration since August 16, 1982.

President Reagan also appointed him to the Board of Directors of the Rural Telephone Bank on January 26, 1984. Mr. Franke is listed in Who's Who in America, 1985 edition. He is presently a member of the President's Cabinet Council on Management and Administration Secretariat, and also a member of the President's Council on Management Improvement.

He has previously served as regional administrator of the Environmental Protection Agency Region 7, and he was elected Commissioner of Johnson County, Kansas, and served in that capacity for nine years, between 1971 and 1981. He was elected Mayor of Marriam, Kansas, 1971 to 1972, and he served as President of the city council of Marriam from 1969 until 1970. He was a member of the city council from 1965 to 1970.

In his role as Assistant Secretary of Administration for the United States Department of Agriculture, Mr. Franke's responsibilities encompass Departmental Director, EEO, Senior Official for Information Resources Management, Senior Debt Management Official, Senior Internal Controls Official, Senior Procurement Executive, and Agency Safety and Health Official.

I know a little about John Franke's program at the Department of Agriculture, and I am sort of a fan of his, because he is not taking a short-term approach. And it is really tough in a mammoth organization like Agriculture to take a long-term approach that sometimes is not popular with people that review your organization. He has shown originality in his leadership by trying to marshal the creativity inherent in the work force itself. So, with that, I would like to introduce John Franke.

**FRANKE:** Thank you, David. I left Secretary John Block just now, and I apologize for not being able to listen to all of the speakers that I should have. I benefit a great deal by having a Secretary as a boss that understands and believes in delegation and says, go forth, and do good - who understands that you've got three or four errors, mistakes, coming to you, and momentary stupidity can be forgiven. It is kind of pleasant working in that type of atmosphere. I left him over at the Automation Conference where he was giving a commentary. And luckily, our comments fit together. He was saying things that I've been saying for the past period of time. But more importantly, I'm saying things that he is saying, and it fits into what we are about here.

My purpose here is to, in my opinion, simply re-state the obvious -- the talent and the ability and the expertise that gather in rooms such as these. Many of these things that I am going to say are obvious. Our commitment to quality and productivity, and those sorts of things should be very obvious to the career manager.

All of us certainly read and subscribe to the In Search of Excellence

principles. We read the book. See the tapes. Do those sorts of things -- and it is excellent because it charges us up and gives us a drive. Very simple answers to very complex questions.

"Excellence" is the end product in a very simple equation. It is catalyst. And it works for us in the Federal Government to an extent. But -- it is also a detriment in a certain fashion. The public properly demands that we do better, and simply apply these principles to "do better." They say, "take these In Search of Excellence principles and apply them," not recognizing or perhaps not aware that Government is a little bit different -- that not all of these principles, or the path to apply those principles, can be applied.

To many, Government is very difficult to understand. Our checks and our balances are absolutely necessary and essential. We haven't survived over 200 years as the Government without having these essential checks and balances. But they do compound our problems as managers. And particularly as a cadre of managers, and more particularly, as those administrators and managers and the leadership charged with a large, complex Federal work force.

Our process is typically top-down. Our systems work against innovation. It is very easy to have ourselves called the fast-track society, wherein we reproduce our errors over and over again in a very sophisticated and a very automated fashion.

By virtue of our system, we invest in the status quo. All of you can probably quote from your various appropriation bills in which we read certain elements of micro-management. For example, and I'll quote from a very large agriculture department appropriation; I suspect that each of you in your offices can probably quote similar things from your appropriation language.

"None of the funds provided in this act may be used to reduce programs by establishing an end-of-the-year employment ceiling on full-time equivalent staff years below the level set herein for the following agencies: Farmer's Home Administration - 11,700; Agriculture Stabilization Conservation Service - 2,550; and Soil Conservation Service - 14,156."

We are all familiar with those kinds of floors or ceilings I am sure. And we, at times, refer to them as micro-management.

Another example was very interesting -- "None of the funds appropriated by this or any other act, may be used to re-locate the Hawaii State office from the Hilo Hawaii to the Honolulu, Hawaii location."

Those are things we cope with. They are part of the checks and balances, and they are not necessarily incorrect, but they are certainly not right.

So, we invest in the status quo. If you get a damn good plan or a way to approach an issue, we'll keep it going till it crumbles to dust. It is our system. We invest continually in yesterday's successful efforts, and change is not looked upon favorably. Risk takers are certainly not looked upon favorably in each and every area. There is a certain amount of protective camouflage we are tempted to take on.

As an example, one of the illustrations we use in agriculture is our own farm

bill. And we are certainly in the middle of that. In fact, the Secretary mentioned this afternoon, that it was a pleasure at times to get out and not talk about the farm bill. I am sure each of you get in those positions in your respective offices from time to time. You have one large interest at a particular point in time, and it is refreshing occasionally to get out and speak about other things.

I'll only refer to our farm legislation one time -- because it does apply to our management approaches and our management principles. Generally, our farm bill and our programs were devised back in the 30's or before, to address conditions of that time, and they worked fairly well then.

Fifty some odd years later, we are still applying those same solutions and we still have those same general policies. Our difficulty is that we have some 19th century practices in a 20th century setting.

Our problem and our question as Federal officials, and as the managers of this Federal Government, is our need to move into the 21st century. What is needed and necessary is a climate for change -- and a very realistic commitment to quality. We must begin with a "change agent" to emphasize any successful efforts to bring us into the 21st century.

We are all working on goals and targets for 1992 in our out-year projections. That is only eight years away from the 21st century. So, we must begin with a change agent, a champion, or a manager, that represents some of this quality commitment.

This morning and this afternoon, you have heard from speakers that are significant in the Federal Government. I have heard some of them speak before, and they say -- there is a different way of doing business. Well, doing business differently is not necessarily looked upon lightly.

A great deal of support should be given and must be given to those champions or those change agents that represent a different approach. A commitment to quality change.

In my opinion, the public, the Congress, is ready and receptive to quality change. They know and they understand that some changes are necessary. The old ways won't work. So there is a receptiveness to change. It should be our way of getting to those obstacles that give us difficulty as managers. I don't think we recognize sufficiently that the President and this Administration, have issued a challenge to address productivity, to improve productivity; the comments that you heard from central oversight agencies within the Federal Government, to be receptive -- not a guarantee -- but an opportunity to be receptive to some innovation, to some ideas, to some fresh thoughts.

Within USDA, our theme and our approach is to bring us into the 21st century. Stop and think for a moment -- that is less than 14 years away. We will be working on the 21st century budget in a very short period of time. If we are already thinking about projections for 1992, then our budgets and management plans should be geared toward the year 2000. So, it is no longer pie in the sky. It is no longer "the distant future."

I remember a great deal of the fear about "1984" -- the Orwell Conspiracy, and "these things are going to happen to us" -- and 1984 came and went. And as

far as a manager is concerned, the 84 syndrome was a very difficult thing, because we still had only 1950's tools. We still think in file-cabinets. We still think in pieces of paper. We forget that telephone systems, rural electrification, and interstate highway systems have been invented, and in fact, are in use.

There are certain facts that I believe we should have re-stated, the obvious. Quality changes do not happen on their own. There isn't a magical light that turns on. Quality managers do not just happen. They must be developed. And they must be nurtured, and they must be supported.

So, we must begin with realism. Those of us in this room, and others, begin with a sense of realism -- we are being given an opportunity, by central agencies, by the administration, and by the Congress, to define quality in today's terms. It is a rare opportunity to define productivity in a manager's terminology. To define the future is what is needed and necessary, and we haven't done that yet. As Federal officials, as a Federal Government, as those that are managers of the work force, we simply have not defined or stated what we think the future may be.

We normally think of a plan as being tomorrow's ideas. We haven't thought of tomorrow's ideas yet. A plan or a planning process is today's ideas that we think might work tomorrow.

Top management must set the example. My definition of a manager is an individual that has the authority to apply resources toward a defined mission or goal. A good manager, a successful manager could be defined as successfully applying limited resources toward a defined mission or goal. The proper application of resources is the key to success.

So my advice to you is redefine your available resources. All of your resources. I think most of us think in the traditional vein. Budget, certainly. That is a resource -- money, and it is limited. It should be. Why else are we in the public service business? Limitless dollars don't exist any longer. So, we have a limited resource in budget authority and dollars.

Next, technology -- we have the best in the world in this country. Can you acquire it and procure it in a timely fashion? Perhaps not, but at least it is a resource -- it is a resource that can be applied right now.

A resource we overlook sometimes is the power and the "clout" that you have as a Federal manager, that you have as a senior official. You have a great deal of this commodity and you probably use it. You network a bit. You exchange views. You listen. But that resource is limited also, because of agency specific micro questions that come about.

I think a resource that is overlooked is your "people power." The talent and the expertise and the knowledge that is available at your fingertips -- your subordinates. Your work force within your agencies. We frequently overlook our opportunity to become a cheerleader and to demonstrate our commitment, our personal commitment, to our subordinates, our personal commitment to an open environment, for changes and improvements.

How frequently do we go out personally to any field office or somewhere where we have some degree of responsibility or authority, and ask -- "could we do

something a bit differently?" Could you give me your ideas? Not all top managers or mid-level managers are receptive to change because it may imbalance our territorial equation.

As Federal managers we must utilize this resource. We must become a cheerleader, and we must demonstrate personally that we have an obligation, a commitment within our offices, to an open environment for changes and improvements.

We must develop our ability to "mix it up" with people. To get a fresh approach. Sessions such as these are good examples, but we should "mix it up" with our own people, or own internal resources. Experts are not necessarily 50 miles away with a different type of briefcase. Sometimes, they are at our fingertips and within hands reach, and unfortunately, we do not recognize them. Ninety percent of our resources and our people -- are outside the Washington area. And sometimes, we fail to recognize that.

Another tool available to us, is the use of ad hoc committees, task forces, a "bottoms-up" process. As a Federal Government, we fail to use that no-risk tool that is there and is easily available. Such talent comes from everywhere. The "political-career interface" is mentioned many times and I personally think that that ought to be fuzzed up a little bit.

When a non-career professional enters the Federal service, it is usually said, "gee whiz, a political-type." Most political appointees that move into the Federal service, have had a successful background in the private sector, or in some other area of government and enormous ability, expertise and talent. Unfortunately, when the political appointee enters Federal service it is perceived that all of that talent and expertise isn't there, and therefore a burden to bear. Those old schools of thought need to be fuzzed up a little bit.

One other fact that I forget to mention from time to time, is that most in our Federal establishment never come in contact with a political appointee. And woe to the political appointee that will resist coming into contact with the Federal work force. Either instance would be very unfortunate.

Another principal resource that we don't use sufficiently, and I can't think of a any agency that uses it to full capacity -- is our communication ability and our inter-agency networks. The cross-service potential. Being receptive to those ideas that can reduce our repetitive or redundant chores. Not our policy making, not our judgement calls, but the use of "clearinghouses." The use of cross-servicing potential for those redundant day-to-day things that cost us a great deal in resources. It is a resource, I believe, that you have personally at your fingertips that is under used.

Information. We happen to have the best informed and the most knowledgeable cadre of managers in the world. But we still mail our telegrams. Isn't that the damndest thing you ever heard of? We telephone somewhere, and use one of these speed-mail letters and dictate what we used to call a telegram, and somebody mails it. I don't know, -- that bothers me.

The use of information as a resource is a difficult question for us -- because most of us are not up to speed as far as being aware of what the real implications of automation are, and therefore, the use of information as a resource. Our

technology is allowing us to maintain vast amounts of data, and provide access to this data from locations anywhere in our network, meaning anywhere in the world. Sharing is terrific, but it raises further issues, such as what is the significance, the reliability of the data we obtain from someone else. If Agriculture obtains some data from Commerce, what is the significance of it? Should we collect it in the first place? And vice versa.

Who is responsible for its being current? And its accuracy? What security measures should be put in place, and where should we apply standards to further sharing thoughts and ideas? Well, the questions must be resolved through our cross-servicing ability. And through the clout we individually have as managers, where we speak as equals. A word of caution. -- Don't get hung up on the mechanical side of automation. Think movement of information -- however you do it. The concept of the pony express isn't really all that bad. At the very least, we didn't sit on it. Our letters moved across this country in some fashion and the information was not sat on. We used our technology of that day.

Unfortunately, in today's automated world, we have instantaneous information accessibility and then sit on it. So, our work force isn't all that knowledgeable as to the 'How' of automation, and we aren't up to speed as managers, as far as understanding that the bottom line is the movement of information, not necessarily how we move it.

We need to bring our collective information horsepower together. Data bases must be streamlined. We can collect a lot more information now, today, than we ever could, and don't have to buy file cabinets to store it. The cost of hardware is going down. Things can be stored on disks, storage that was heretofore impossible. So, maybe we don't need all of those restrictions we used to place on the movement and storage of information, because it doesn't take up a great deal of floor space. We run the risk of gathering too much information. From the standpoint of imposing unnecessary work on the public, or on ourselves. Our systems must be compatible. It is ridiculous to have incompatible automated systems. Our telephone systems work because we can communicate with one another, regardless of our systems. Because we speak the same language, because we insist on compatibility.

Our administrative systems do not speak the same language, and we are incompatible in this thing called automation, the way we deal with the broader issue of telecommunications.

I urge all of us, individually, and collectively, to devise a plan to re-define our available resources. Not just money, manpower and material. Think of other things called information, your people power, and your ability to cross-serve.

And then, a plan for those resources, and a firm time table that is results oriented. Make it very ambitious. We all take pride in the Federal service, and we can deliver when we are challenged. You are less than effective, as a public official, unless you assign a challenge to someone.

However, a plan can be a trap. One of the most startling things we are doing this year in Agriculture is reassessing our management plan. However, it created consternation when we said it was good, and it really worked, but we are going to change it. And the phone calls came in, -- "why stop going with a good thing?" Well that is what happened to us back in 1930 in our farm legislation. It

was a good thing, and we kept it for 55 years. A plan is a vibrant thing that must address today's missions and goals with today's resources -- we don't even know what is coming tomorrow. A plan can be a trap if we say, "it has always worked before, don't change it." Keep the ball rolling. Maintain an interest level. Keep the same theme, but change the name if necessary to prevent boredom.

We must use examples of quality, or quality success, more often. We have a number of examples. Productivity clearinghouses, the things that agencies do, NASA putting on these conferences for example, is extremely beneficial.

Use those examples of quality and success, even though it is not our own. That is common sense, we do it in PTA and the Little League in our everyday life, but we fail to do so in our career service.

Give out showers of "attaboys" -- they don't cost a thing. It is surprising how a subordinate, or a superior, or a peer would really appreciate hearing an "attaboy" occasionally -- and that is basic human relations that most of us learned after our first kindergarten fist fight. 'Attaboys' are very beneficial and they don't cost a thing.

Plagiarize success, but give credit. That could be very helpful because you are seeding the ground for the future. It is beneficial to a Federal manager to take advantage of a plan, or an approach, that somebody else has pioneered, shift it a little bit to your own case, and plagiarize on it. Market your ideas. We hear soap commercials constantly, and it drives us out of our gourd. We turn on the television, or the radio, or see a sign, "buy this soap, buy this soap, buy this soap," you get disgusted with it ..... but you buy the soap. So, marketing is essential in the Federal government, and we do a lousy job of it.

If we have a good management idea or plan or approach, we need repetition, repetition, repetition, until it gets old to us. Nothing worse than sitting in my office in Washington, coming up with one hell of an idea -- work it through a central agency,-- work it through the Cabinet, or your own secretarial offices, get it adopted, -- go to the field a year and a half later, mention the term, and nobody knows what in the hell you are talking about. They don't have the vaguest idea -- we don't market enough. And marketing is something we could do quite well because we are slightly prone to repetition.

I really think you should brainstorm a "vision of the future." We are attempting that in our agriculture offices. We have over 15,000 of them in this country that we are automating -- by the year 1987. That implies work-force changes, a re-training necessity and a "vision of the future" -- for example, "how will your extension service office look and operate on May 1, 1980?" We are asking each of those potential automated offices to give us a picture of what their office will be on May 1, 1990? It is a very unusual and illuminating exercise.

Finally, follow through, follow through, follow through. Maintain that realistic commitment to quality -- an obligation to create an environment for improvement.

The fact of life is -- our work force is changing, not because we necessarily want it, but because of new tools of the trade that we have developed. Our work force is changing, and they are anxious. We don't really like change. We want it, but we are afraid of it.

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