



# NBS SPECIAL PUBLICATION 383

THE CREATIVE PARTNERSHIP:

Government  
and the ...

Professional  
Services

U.S.  
DEPARTMENT  
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National  
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## NATIONAL BUREAU OF STANDARDS

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**THE INSTITUTE FOR BASIC STANDARDS** provides the central basis within the United States of a complete and consistent system of physical measurement; coordinates that system with measurement systems of other nations; and furnishes essential services leading to accurate and uniform physical measurements throughout the Nation's scientific community, industry, and commerce. The Institute consists of a Center for Radiation Research, an Office of Measurement Services and the following divisions:

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<sup>3</sup> Located at Boulder, Colorado 80302.

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1973

# The Creative Partnership: Government and the Professional Services

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Proceedings of the Fourth Users-Producers Conference  
Sponsored by the Technical Analysis Division,  
Institute for Applied Technology, National Bureau of Standards,

In Cooperation With

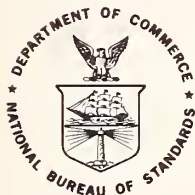
The Center for the Study of Private Enterprise  
The American University

Held at the National Bureau of Standards,  
Gaithersburg, Md., January 23, 1973

Edited by

James D. Johnson

Director, the Center for the Study of Private Enterprise  
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Washington, D.C. 20016



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## FOREWORD

These proceedings are the result of a short conference in which the participants discussed, in an open and frank manner, the problems of providing professional services to the Federal Government. The unique character of these proceedings is their straightforward delineation of problem areas and proposed solutions. No punches were pulled! In addition, they serve as a valuable informational input to professionals or professional service firms attempting to provide their services to Government.

The contributions are many and varied. William Sommers portrays the procurement process in cogent and organized terms; Dr. Cushen's contribution in stating the twenty-three problem areas and accurately summarizing the recommendations of the conferees is a valuable step forward toward solution of mutual problems. Gene Bond portrays, in a step-by-step fashion, both the pre-contract and contract remedies available to private industry. A new method for procuring professional services is set forth by John Moriarty. The knowledge in this presentation would have been a sufficient contribution for the entire conference. Each speaker and panel was productive. It only remains to follow upon this conference with the action required to mitigate the problem so clearly formulated. These proceedings stand as a valuable first step in this process.

The American University Center for the Study of Private Enterprise has been proud to participate in this endeavor. The editor wishes to acknowledge the cooperation of the staff at the Technical Assistance Division of the National Bureau of Standards, with special thanks to Dr. Walter Cushen, Mr. John Moriarty and Mrs. Ruth Ciufolo. Mr. John Magnotti, Executive Secretary of the National Council of Professional Services Firms in Free Enterprise, offered valuable assistance, and served as the catalyst for action. Bowers Reporting Company, of Falls Church, Virginia, prepared the verbatim transcript and the final copy for printing. Finally, the staff of the Center, Mrs. Rebecca Burns, Mrs. Kathy McKnight, Mr. Herb Schock, and Mr. Pete Franzen, deserve the thanks of all concerned for their cooperation and dedication to the objective we all sought.

Dr. J. D. Johnson,  
The American University,  
March, 1973.

## PREFACE

This Conference is the fourth in a series designed to highlight the systems approach to large scale Government problems. The first Conference in this series was held in 1966 which emphasized the role of OR Analysts and what they could do in Government. In 1969 a second Conference was held which looked at both the private sector and Government agencies and attempted to define what Government expected of private agencies and visa-versa. In 1970, case studies in Federal domestic policy were presented at the third Producers-Users Conference in an attempt to determine exactly how the roles of Government and private agencies fitted together. Finally, in 1973, the fourth Users-Producers Conference was held to consider the procurement problems in providing professional services to the Federal Government. The main thrust of this Conference was to acquaint interested individuals from both the public and private sectors with the problems and opportunities of Government utilization of professionals and professional service firms.

It is hoped that this Conference has brought insight into the many procurement problems encountered when Government agencies use professional service firms and the numerous advantages obtained by utilizing these services.

John E. Moriarty  
Technical Analysis Division  
National Bureau of Standards  
May, 1973



INTRODUCTION TO THE CONFERENCE

Dr. W. Edward Cushen

Chief  
Technical Analysis Division  
National Bureau of Standards



ON BEHALF OF THE NATIONAL BUREAU OF STANDARDS, welcome to our campus. As most of you know, the National Bureau of Standards is one of the most important scientific assets of the nation. We hope you will make yourselves at home while you are here.

I would also like to welcome you on behalf of the Department of Commerce. The Department of Commerce has as one of its primary purposes the fostering, stimulating and promoting of the business activities of our nation. It is beneath that rubric and under the scientific rubric of the National Bureau of Standards, that we offer this workshop session.

We also welcome you on behalf of the Technical Analysis Division, one of the line divisions of the National Bureau of Standards. The Technical Analysis Division was created eight years ago to address the question of using the systems approach more productively by the civil agencies of Government. We have been running conferences similar to this since the inception of the TAD. Each conference has taken a different form. This one addresses itself to a specialized question that is of pressing concern to Government and business.

We also welcome you on behalf of the National Council of Professional Services Firms in Free Enterprise, a co-sponsor, co-developer and co-designer of this Conference. This organization has provided much of the needed material used to focus our attention on productive questions and to avoid simply another "professional society" set of presentations.

We further welcome you on behalf of the Center for the Study of Private Enterprise of The American University.

Finally, we welcome you on behalf of the American people. Our Government exists for the purposes of the American people. In our system of government there is no legitimate power except that which is surrendered by the American people to its Government to act in the best interests of the people.

This Conference is intended to be a workshop and a sharing of information. The question that permeates this Conference is: how is it best possible to provide professional service, advice, consulting and contract work from the private sector to the Federal Government?

This Conference will therefore be a working and information-sharing experience, based upon the eight years experience of the Technical Analysis Division, in attempting to help the Government start to use the systems approach.

Troublesome questions keep recurring, and these tend to be of two dimensions. The first dimension consists of those who do not know the system now in operation for procuring Government services. On the other hand, the second question is how can we modify some attitudes to make it possible for the vast productive potential of the American free enterprise system to contribute an increasing share to the management of the Government?

In this Conference, we will probably be talking negatively to some extent. There may be criticisms of ourselves and criticisms of Government. From this Conference I hope we can emerge with a set of recommendations that may be introduced into Governmental systems so that you can go home to your own private industries with suggestions for improved service and for improved marketability of your assets. What I am looking for today are suggestions as to how Government agencies can better utilize your assistance.

Today we will be emphasizing procurement for the civil Government agencies. We will be taking a broader approach than systems analysis or operations research; hence the theme of the Conference: "Professional Services." We have expanded the subject to include the contributions of the management information systems and the computer world, architectural and engineering services, and those of the consulting engineer and the management consultant. We will be interested in exploring the points of contact between industry and Government, trying to ferret out those aspects that need attention.

The Conference is broken into three sections; the first section is devoted to developing the nature of the problem.

In the second and third parts of the Conference, we will be addressing two specific processes that seem to be particularly troublesome to the worlds of industry and Government.

The first of these processes is the procurement process. The second process is that of managing the contract once it exists. We will also take heed of the lessons that have come from the productive work of those who are contracting to Government.

By the end of the day I hope to be able to assemble a set of draft recommendations that I would like to place before

you. If these appear to be productive, I will then reproduce them and mail them to you for your appraisal. I am sure we will have a productive day.

PROBLEMS IN GOVERNMENT PROCUREMENT OF PROFESSIONAL SERVICES

The Honorable James C. Corman

United States Congressman (California)  
Chairman, Sub-Committee on Government Procurement  
Select Committee on Small Business





I WANT TO JOIN ALL THE PARTICIPANTS in thanking the National Bureau of Standards, The American University, and the National Council of Professional Services Firms in Free Enterprise for staging this Conference. I am sure it is useful to you who are in the business community and of value to the Government, because as you know, we spend an awful lot of money and we need to spend it more efficiently. There is always room for improvement. I think this kind of crossbreeding of views and information is most useful.

I want to thank all the people who are here who helped put this together, Dr. Krueger, John Magnotti, Jim Hostettler, Dr. Walter Cushen, John Moriarty and Dr. Jimmy Johnson.

I would be remiss if I did not thank two gentlemen who are extremely helpful to me. In the course of getting to know each other better maybe you will drop around to my office, particularly those of you who are in small business. We can sometimes be helpful, and if we can at all, it is because Bob Ruben, my Administrative Assistant and Henry Robinson, who is Chief Counsel for our Subcommittee are available to help.

Not long ago Jack Anderson evaluated all of the Congressmen. He had one category of people that he said had good staffs that make poor Congressmen look good and good Congressmen look better. I want you to know that Bob and Henry make me look good.

#### Small Business has Been Deprived of Opportunity to Perform

I think that small businesses have a capability of doing work and that they have been deprived of the opportunity to perform in the professional research and technical services for the Federal Government.

The industry provides professional services of all kinds, including management consultants, architects and engineers, systems analysis, data processing, research and development. There are also organizations performing a variety of studies.

It is an eight to ten billion dollar industry. It is composed of 11,000 firms, over 90 percent of which are small business. However, they get something between five and six percent of the money that the Government spends. If anybody thinks that the small business community is doing well in this field listen to these figures.

DOD last year spent \$5,168,000,000 in this field. Large firms got \$4,913,000,000. Small firms got \$255,000,000. Over at NASA, they spent \$2,003,000,000. The large firms got \$1,889,000,000, the small firms \$114 million.

Educational non-profit institutions received \$631,000,000 from DOD and \$55,000,000 from NASA.

I thought I might discuss with you some observations that were made by our Subcommittee on Government Procurement last year, and also some of the observations and recommendations made by the new Procurement Commission.

Our Procurement Subcommittee, in its October 1972 report, said:

"The reporting procedures followed by the Administrator of GSA, in his Government-wide responsibilities to assemble and publish the small business performance records of civilian Executive agencies, do not include separate listings as to their R&D procurements."

#### Specific Information Needed

This is always the trouble we have. Government witnesses come in to testify to us, and without exception, whatever the law says that they ought to do, they can tell you that they have done it and done it well. But then when you try to sort it all out and find out the specifics, the information that you need is not available to allow an independent judgment based on actual facts. That is one of the areas that I am hoping we will be able to find out a little more about. What is the situation as to the specifics in this highly sophisticated and difficult area?

#### Federal Grants Have Skyrocketed

The Procurement Commission in its summary report reviewed Federal grant-type assistance programs, because of the importance of such activities and the uncertainty of their relationship to procurement. The stated purpose of this review was to gain an understanding of the significance of the interchangeable use of grants and contracts, to the extent to which procurement rules and regulations are or should be applied to such grant-type assistance programs.

Federal grants to states and local governments have skyrocketed. They were \$2.2 billion in 1950, and they grew to \$43.5 billion for Fiscal Year 1973.

While the Federal Government grants to non-governmental recipients are said to have risen significantly in the same period, the Procurement Commission's summary report does not provide relevant statistical information.

Our Subcommittee staff has inquired, trying to develop the rather surprising information on statistics of non-governmental grants only to find that they were not available. The National Income Accounts, the Special Analysis of the U.S. Budget and the Office of Management and Budget Catalog are the principal sources of information, and they are scant.

#### A Look At A-76

Our Subcommittee tried to take a look at OMB Circular A-76 last year.

It purports to establish a Federal policy and practice of preferential use of the private commercial sector in securing necessary services for Government. As you know it makes a very fine and firm statement about the free enterprise sector. If you read the first part it is great. When you get down to the exceptions, they are troublesome.

The practical effect has proven to be less than totally satisfactory. Federal agencies have increasingly used A-76 to favor in-house provisions of professional, technical and research services, rather than acquiring them through private sources.

The General Accounting Office, in its recent report on the subject, describes a number of discrepancies in the way OMB implements A-76. Also, the Department of Defense alone spends more than \$6 billion annually for in-house activities to provide commercial and industrial services and products.

Further reviews and reports of in-house performance by the Federal agencies are far behind schedule.

Our Committee recommended that we reframe Circular A-76 in a way which can leave no doubt that it is the policy of the Federal Government to rely on the private sector firms in the procurement of property and services for the Government.

The Commission's report pointed out that historically

Government policy has favored contracting for goods and services, rather than providing them in-house. Executive Branch procedures for the policy's application have been subject to controversy.

For almost 40 years Congressional Committees have studied various aspects of Government activities that are or may be in competition with private enterprise. The Second Hoover Commission Report contained 22 recommendations designed to eliminate or substantially decrease Government activities competing with private enterprise.

In 1971, OMB requested a special report from the agencies on the status of their commercial and industrial activities. Only 99 out of 15,000 activities reviewed were discontinued or curtailed. That is 99 out of 15,000 items that were in-house. That leaves 14,101 still being done by the Government.

### Reliance Must Be Placed on the Private Sector

The conclusions and recommendation of the Commission was that a policy of reliance on the private sector for goods and services is fundamental and should be stated in the law. It was their conclusion to say, through legislation, that it is national policy to rely on private enterprise for needed goods and services, to the maximum extent feasible, within the framework of procurement at reasonable prices.

### Current Cost Comparison Creates "In-House" Impetus

In the matter of cost comparisons our Committee while looking at A-76, noted that it allows a Government agency to make cost comparisons of contract costs including overhead and profit, of private sector firms as compared with the cost of Government personnel on an incremental basis without the overhead factor.

Clearly this kind of cost comparison provides an excuse in many cases for work to be done by the Government in-house. The unwillingness of many Federal Departments and agencies to fully disclose the details of their comparisons for evaluation by outside interested parties raises serious questions about the integrity of the policy and the economic soundness of many of the decisions.

Full disclosure and proper accounting is necessary.

The Commission Report concerning costs of in-house performance did not go quite as far as we did. They said:



"There should be estimated on a fully allocated basis in some situations and on an incremental basis in others, comparisons of the cost for in-house or procured services."

A-76 does not require cost comparison whenever the products or services involved cost less than \$50,000 annually. There is reason to believe that adequate competition exists.

The Subcommittee went on in its findings to point out that our hearings established the trends toward utilization and support of non-profits and not-for-profits for work among the Executive Departments and agencies.

### The Grant Process Should Be Analyzed

In large measure, these non-profits and not-for-profits engage in professional research and technical work. They are the "think-tanks." They range from small operations involving two or three professionals to large groups in the hundreds. The Federal Government has been rapidly expanding requirements for these kinds of services but has failed to sharply formulate regulations and policies which limit non-profits and not-for-profits to their proper role.

The most dramatic technique to move Federal funds to the non-profit or not-for-profit entity is the Federal grant. Limited by its term to public or non-profit entities, it is used automatically in many instances to acquire services available in the private sector. Even where statutory flexibility exists to choose to contract with a for-profit firm, or make a grant to a non-profit, the choice usually is made to use the grant. The middle-level manager is not required to justify the grant to the same extent that he is required to justify contracting to the private sector.

Whether the use of non-profits is sound national policy has been seriously questioned by GAO in a recent report entitled: *"Fees Allowed Non-Sponsored Not-For-Profit Organizations By Various Government Agencies."*

The Comptroller General points out that such organizations are often allowed the same rate or fee as commercial organizations for similar work although they pay no Federal income taxes on fees earned for Government work. The Comptroller General has asked OMB to develop a Government-wide policy on negotiated fees for non-profit organizations.

It is recommended, pending development of such a policy, that each agency should re-evaluate its current policy and take steps necessary to insure that fee payments are

adjusted to recognize the tax-free status of non-profit organizations.

### FCRC: A Serious Example

Our hearings focused attention on one group of organizations collectively referred to as FCRC's, Federal Contract Research Centers, such as RAND and Mitre Corporation, representing a particularly serious example of the not-for-profit problem.

The FCRC's get all their Federal business without competition. Originally formed shortly after World War II to assist specific Federal agencies in the performance of activities which at that time were not available from private sources, such as analytical problem-solving and systems analysis emphasis, the FCRC's have attempted to expand their role rather than to contract it as private sector capabilities have developed to perform the same tasks.

Congress recognized this problem in reviewing the 1971 DOD appropriations and recommended a significant reduction in the level of funding for FCRC's. This is clearly desirable, since most of the work performed by FCRC's could and should be done in the private sector.

The Subcommittee is particularly concerned that the Secretary of Defense has urged non-Defense Departments and agencies to use the services of DOD sponsored FCRC's. Many Departments and agencies have implemented the Secretary's suggestion.

Each time a task is assigned to an FCRC on a non-competitive basis, a major opportunity is potentially lost by the small business private firm. The role of all non-profits and not-for-profits in receiving Federal funds, either by contract or grant, requires reexamination.

In this same field, the Commission report pointed out that major changes are being made in the roles of public and private sector R&D performance, and the relationships between them. The Commission concluded that the universities should continue to be the primary performers of basic research, but that industry should be the primary source of applied research and product development.

Also, in-house laboratories should be strengthened and should maintain a technical competence to properly sponsor and manage the R&D programs as well as to perform basic and applied research to carry out the required tests and evaluation functions.



The Federally-funded research and development centers, including the Federal Contract Research Centers, as they are designated by the Department of Defense, have provided unique assistance in technical management functions for the Government. The option to use such resources should be continued, but under more specific guidelines for initiating and terminating such organizations.

The National Science Foundation, the National Bureau of Standards and experimental incentive programs with consortia of organizations, should be followed closely and their results translated actively into practical applications.

We made some recommendations concerning new uniform guidelines for awards to non-profits. We hope that the hearing departments will give some attention to them.

I want to tell you why I feel very strongly about the importance of small business for profit. As was mentioned, the Small Business Committee is really only a second committee for me. I consider it very important, though in the scheme of things in the House it is not very important. I serve on the Ways and Means Committee and, as you know, this country is in great financial trouble. A part of the trouble is because of the organization of the House.

There are 25 of us on Ways and Means. We have to raise all the money the other 410 spend. As you know, we ran about \$30 billion behind them.

Every time a small firm is successful in getting a Government contract and makes a profit, 48 percent of the profit comes to Government. That ought to be borne in mind by the procuring agencies when they sharpen their pencils and try to find out where they are going to get the cheapest buy.

I have been toying around with a tax reform bill that I would like to call to your attention. It is an easy number to remember, HR 1040. Some of you may fill out that form. It is not directly related just to your business, but it will have a substantial effect on your business. Every one of you who is in the business of providing material or professional advice, software or whatever else, to the Government, is in that category of taxpayers that pays 48 percent of your profit to us in taxes. I want you to know I appreciate it and I am delighted. I do not plan to try to cut it to 47 percent.

But there are lots of people in the business community who do not pay any taxes, and there are a great number of others who do not pay much. The reason all that came about

was because, over the years, the Federal Government has fallen prey to the persuasion that there is some great social or economic purpose which can be accomplished through a tax incentive.

For instance, back in 1926 we thought we might run out of gas. Henry Ford was building so many Model T's we just did not know where we would get the needed gasoline. So we evolved a tax system for the oil industry. We gave them oil depletion allowances, intangible drilling costs, and all kinds of incentives that made it possible to go out and prospect for oil.

The fact of the matter is that many of you here who have 5, 6 or 7 employees, and have a tough time getting the Government to do business with you, pay as much total dollars in taxes as some of the five or six largest oil companies in this country. That is not sound and it is not fair. We ought to revise our tax structure. We should not try to influence how people invest their money depending on what tax breaks they must pay. We should leave it to a free economy so that the dollars for investment will flow where the promise of profits is high, not where the promise of taxes is low.

I suppose I have become a convert to small business because of the things I have listened to over the years in the Small Business Committee. I suspect, if there is one great threat to the free enterprise system, it has to do with the growth and size of business entities, both vertically and horizontally, and it seems to snowball.

I fear that someday AT&T may own most of the productive capacity in this nation. When we sort it all out we will find out that AT&T has just been purchased by Big Boy Restaurants. This is what happens in conglomerates.

If we ever lose the opportunity for a man with a very little bit of capital, a lot of courage and the brain to enter into the business community, to compete fairly and to grow, we will have lost the real vitality of the free enterprise system. I hope that we never do that.

#### Questions From The Floor

QUESTION: "Mister Congressman, you gave some indication that some changes may be in the offing with respect to the way contract funds are allocated from the Government. Is that a disposition within the Committee, or do you see some real chance of that kind of orientation?"

CONGRESSMAN CORMAN: First of all, many of you perhaps know that our Committee is not a legislative committee. We are an "oversight" committee.

The law says that small business must get a fair share of the Government procurement dollar. That certainly would include the kinds of dollars we are talking about here. Of course the big whirl gets to be: what is a fair share? I would not want to tell you that all of the Members of Congress are as sensitive to the problems faced by small business as our own Committee because we spend a lot of our time listening to the problems.

On the other hand, we have been tolerably successful in getting a change of attitude in the Executive Branch. I think that one of the significant new factors in Government procurement is going to be the Procurement Commission.

It is new, and it is designed specifically to try to figure out how we can best spend procurement dollars, how can we get more than we are getting now and how can we avoid some of these gigantic overruns.

As a matter of fact, when I prepared my remarks I tried to run down what our recommendations have been and what theirs were. I will tell you they have not gone nearly as far as I would like for them to have gone in some of their recommendations. On the other hand, I detect that they are listening to us. One of the reasons is that Frank Horton is also on the Small Business Committee and serves on our Procurement Subcommittee.

So he has been conditioned, and Chet Hollifield is a pretty good fellow and I spend a good deal of time talking with him. Chet fortunately is a small business man from Montebello; he is a haberdasher. He understands the problem of a haberdasher surviving when he is across the street from the May Company.

But it is not easy, and I think there is this general attitude in Government, and perhaps it is tougher in your line of services than in others, that the guy who knows his professional career is on the line when he makes a decision feels that:

"Well, if I go with somebody that is big and established and they screw up, nobody is going to notice me, but if I step out and select somebody who is small, relatively new, does not have a great track record, and things go wrong, I have a lot of explaining to do."

We try constantly to overcome that attitude. I think some of the things that we have done, particularly in the procurement field such as provisions for set-asides and annually having the procuring departments come in and testify on what percentage of their dollars has gone to small business, is helpful. It is the reason I hope we can get them to break this out in their statistical data because this is in many ways the toughest area of all.

We do not have any not-for-profit airplane makers. We have "for-loss" airplane makers, but we do not have any not-for-profit airplane makers. Not only are you in a sense competing with big for-profit corporations, but you also compete with these folks who really do not have to come in and bid. They just kind of come in and talk about grants and things, and you feel kind of safe because you know they are not going to make any money. As I pointed out earlier, that does not enchant me very much.

QUESTION: "One thing that bothers me a little bit, I do not believe the Government does a fair or accurate job of costing when they estimate in-house costs."

CONGRESSMAN CORMAN: If you really think about it, if you just look at the people who are sitting down doing the work and add up their costs, you have not gone very far.

They have to be in a building someplace. They have to have people over them who are managing. The one factor that we really have not gotten them to think about yet is that 48 percent which is our take.

QUESTION: "You mentioned that your Committee needs statistics on the kinds of procurement being contracted by the Federal Government. At the General Accounting Office we can track procurement statistics from DOD, through what they call their 'DD-350' system that generates this data.

"But when we go to the civilian agencies to get comparable statistics, we run into a problem. They do not have this kind of a statistical base. What kind of statistics will your Committee need to keep its oversight of procurements across the board?"

CONGRESSMAN CORMAN: I would like very much for you to discuss that in some detail with Henry Robinson. He is the man I look to to try to help us piece it all together.

What we like to do is look at this pie of dollars and say:



"How much did you dump into procuring professional services, and of that, what slice went to the not-for-profits? What went to large business and what went to small business?"

So being able to feed in the statistics that give us that kind of picture is most helpful. I am sure Henry can give you a more intelligent and detailed answer than I can.

QUESTION: "Mr. Congressman, how do you feel the Congress will react to the report of the Commission on Government Procurement?"

CONGRESSMAN CORMAN: I think when they make recommendations for legislation we will probably adopt them. I think that considering the people who are on it and considering the attitude of the Congress at the moment, there is a strong probability that their recommendations will be adopted.

We are fussing with lots of people about lots of things right now. We are distressed, and we catch hell when we go home, when people think that the Government is wasting their money. We do not produce money. We just collect it and spend it, hopefully in the public interest and hopefully efficiently.

There are some indications from time-to-time in the press that maybe we are not totally successful. I think that Congress will be eager to support that Commission's recommendations.

Many of those recommendations will involve the Executive Branch and potential changes. I could not tell you for sure what the attitude there will be. I do not think we have the same kind of potential confrontation between the Executive and Legislative Branch in this area that we do have in some other areas.

Thank you all very much.





PANEL ONE: DEVELOPMENT OF THE PROBLEM



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THE FIRST ITEM THAT NEEDS CLARIFICATION IS THE PROBLEM to which I am addressing these remarks. That problem is the one encountered when professionals from government and the private sector meet in order to arrange for procurement of computer services, computer products or both, or computer-related services such as operations research, systems analysis and systems design efforts. Within this general problem area, we can put particular emphasis on large topics such as management information systems, applications programs and systems design/analysis efforts.

There is a high level of activity on this problem front because the government has approximately 6000 computers in its possession which it either rents or buys. The latest General Accounting Office report of August 1972 estimated that the annual operating cost of the Federal inventory of computers was about \$4 to \$6 billion annually. They estimate that over \$2 billion a year is spent on software maintenance services and that the rental of ADP equipment alone amounted to \$451 million in fiscal year 1971. In addition, we estimated, in testimony which I gave to Congress in May 1972, that in this period of time, the Federal government spent somewhere between \$100 and \$150 million annually in identifiable research and development efforts in the computer field.

As a result of this widespread use of computers and computer services, as a result of the dependency of government agencies on computers for functions integral to their mission and their internal management responsibility and as a result of the sizeable amount of research and development expenditure, there is considerable interest in improving the means by which the Federal government can procure the services and products which it needs in the computer field.

By Congressional legislation of 1966, which is generally referred to as the Brooks Bill, the Federal government has established central management authority in the computer field. That authority is shared by three agencies, the Office of Management and Budget, the General Services Administration and the Department of Commerce through the National Bureau of Standards. This law provides GSA with exclusive authority for procuring all general-purpose ADP equipment for use by Federal departments and agencies. It reserved to individual agencies, however, the right to determine ADP requirements, to develop specifications for computers and to determine the use to be made of the computer systems. The Department of Commerce was required by the law to provide GSA and other agencies, upon request, with technical advisory services pertaining to ADP and related systems. In addition, the Department of Commerce was directed to develop mandatory Federal standards for computer equipment, computer software and computer data.

Additionally, the Brooks Bill assigned the Office of Management and Budget (OMB) the responsibility of exercising fiscal and policy control over GSA and NBS in the implementation of their respective responsibilities set forth in the law.

As a result of this and OMB implementing directives to the Brooks Bill, there is a set of formal documented rules for procurement in the computer area by the Federal government. These formal documented rules cover hardware, software and communications. There are no formal rules for procurement of research and development services by the Federal government nor are there any rules governing the obtaining of professional services related to but not directly producing either software, hardware or computer equipment. As a result, the kinds of services which are designated systems design, systems analysis, operations research, management consulting and research and development of any kind are governed only by the individual grant and contract authorities of each Federal agency or organization.

The only central authority in this regard is that which was directed upon the National Bureau of Standards by OMB in a letter of December 1966 to the Secretary of Commerce. In that letter, the National Bureau of Standards was directed to conduct an annual review of the accomplishments of and programs for research in computer sciences and techniques in conjunction with OMB, the Office of Science and Technology and other government agencies engaged in or sponsoring research in computer sciences to assess accomplishments and to provide guidance for programs. That particular authority, if exercised, would enable guidance to be supplied by the central management agencies in the carrying out of Federal agency R&D programs in computer sciences and technology. That authority has never been exercised. It is our intent to ask the Bureau of Standards to initiate this kind of a review in 1974.

The GSA procurement regulations governing procurement of hardware, software and communications in the computer field are known as Federal Property Management Regulations (FPMR's). Those pertaining to computers fall under Part 101-32 of the Federal Property Management Regulations. Presently, there is only one OMB circular devoted entirely to procurement in the computer field; that is, OMB Circular No. A-54 amended as of August 26, 1971: its subject is "Policy on Selection and Acquisition of Automatic Data Processing Equipment." The 1971 amendment encouraged the use of computer performance evaluation techniques by government agencies.

There are other OMB circulars containing within them provisions relating to the use of computers by government contractors and the use of computers by state and local governments where some portions of the funds for the systems or services in question are provided by Federal agencies.

The problems encountered in computer area procurement activities by Federal agencies are separable into the problems of acquisition and use of software, acquisition and use of equipment, acquisition and use of computer services and, finally, acquisition and use of professional services related to computer systems. The GSA maintains a Federal Supply Schedule for both hardware and software. In general, procurement of hardware can occur by simply placing a purchase and/or delivery order against an applicable Federal Supply Schedule item. If equipment is



being procured which is not on the Federal Supply Schedule then the terms under which that can occur are delineated rather thoroughly by GSA procurement and contracting procedures. One of the principle areas of change in equipment procurement involves peripheral equipment. GSA has initiated a government-wide program to replace existing leased peripheral devices with lower cost plug-to-plug compatible equipment offered by independent suppliers. This program was aimed at permitting competitive offers of peripherals by independent suppliers and by requiring multi-vendor equipment systems when costs could be reduced by obtaining peripheral equipment suppliers. Annual savings have been reported early since this program was initiated. A recent NBS report which has received considerable publicity is aimed at determining the need for appropriate interface standards which could be used in procurement by the Federal government. That report recommended against a single interface standard but did state the desirability of interface standards for large volume peripheral equipment widely used within the government and for which a continuing market was predicted. This kind of market is exemplified by magnetic disks, magnetic tapes and magnetic cassette memories, for example.

Just this last fall, GSA demanded a disclosure of interface specifications by computer manufacturers in order that their equipment be placed on the Federal Supply Schedule. Agreements have been signed now with the major mainframe manufacturers which allow the government unilaterally to add foreign attachments to the systems leased from each of these mainframe manufacturers. The manufacturers also agreed to provide related technical information which has loosely been denoted as interface specifications or interface standards. This particular activity on the part of the government was intended to make data processing systems more competitive so that any user who wanted to upgrade or expand his computer system could have a much greater choice of suppliers. The benefactors of this would be the manufacturers of independent peripherals or independent computer components.

One of the major problem areas in the computer field relates to the acquisition of software. GSA has been interested in determining whether it was feasible to use a single-purchaser concept for software meaning that the government would procure a software package for use by all Federal agencies. This interest on the part of the General Services Administration was in large part generated as a result of a study of June 30, 1971 by the General Accounting Office. This GAO report was entitled "Acquisition and Use of Software Products for Automatic Data Processing Systems in the Federal Government." It recommended that GSA employ the single-purchaser concept and start to obtain non-restrictive or license-free contractual arrangements for software with rentals based on use: it asked GSA to consider buying outright software products that would be widely used throughout the government, and to maintain an inventory of computer software. The Bureau of Standards was asked to establish and maintain indices of computer programs and to do evaluations of computer programs, as well as to expedite their promulgation of Federal standards for computer languages and program documentation.

This particular set of recommendations was not really liked by the independent software companies because of the fluid state of protection for software packages. This fluidity has been increased by the recent Supreme Court decision on computer patents. That decision found computer programs to be not patentable, based on a particular finding with respect to a particular program. The use of copyright and trade marks as means of obtaining property rights to software are the remaining property protection rights that are still available to software producers. It is very obvious that there must be developed a more coherent policy both for the sake of the customer as well as for the producer for protecting the software rights of producers and at the same time protecting the customers for the software products.

It is interesting, even in line with the Supreme Court decision, to review the role that patents played in software and to review the interests of software firms in the private sector for obtaining proprietary or property rights for their software. The first patents for computer programs were issued in 1965. As of about a year ago, some 126 patents on computer programs had been issued: the majority of these had been issued since 1969. As of about a year ago, only one independent software producer held two or more patents on software. That was Applied Data Research, Inc. It is also interesting to note that five of the nine organizations holding two or more patents could be classified as computer software users rather than as producers of software. These were in particular Bell Telephone Laboratories, Texas Instruments, Continental Oil, Kaiser, Inc., and the Navy Department. The summary that was made a year ago showed that 69 of the patents issued were held by eight firms and one government agency. At that time, only IBM, Honeywell and Burroughs as producers of computer software held software patents. It appears then that not only is the Federal government not quite sure of its property rights of software but neither are the producers of software in the private sector. There is no question about the fact that professional relations during the procurement process will be improved as an understanding of the property rights of software are more clearly delineated.

From the GSA study on procurement and use of proprietary software in use on September 30, 1971 by Federal agencies, the following results were obtained. The number of software packages in use procured by the government as proprietary software numbered 496. The number of different types of packages was 279. It was determined that the number of packages with more than one copy in use were only 62 and the number of software packages with more than 10 copies in use were only three in number. It was very obvious that the use of software packages as of that survey was very small. The survey seemed to bear out the observable fact that the vendors and the professional firms selling proprietary software packages knew the individual government agency as the customer rather than the Federal government as a single customer, and their market policies appear to be based on this concept. In this regard, the major problem facing the government seems to be the identifications of firm requirements for a particular software package upon which one can base an economic evaluation or price. As a general rule, the data processing requirements for any installation are considered unique and dynamic, and



agencies are justifiably reluctant to commit themselves to the use of a specific software package in view of what appears to be their constantly changing requirements. GSA felt that there were many formidable obstacles which would have to be overcome before procurement of proprietary software packages for government-wide use would be feasible.

Some additional comments concerning the procurement of software from professional firms or private sector companies would be that government rights are not well defined in many software development contracts. There is a need for policy guidance, say, from the Office of Management and Budget. We note that DOD Legal Counsel has determined that computer software is property. The implication of this property determination is still not known. The effect, if any, of the DOD property determination on the free use of DOD software by other government agencies should be clarified by DOD policy rather than be left to individual determination. Any field that has the amount of permissiveness in it as does the procurement of proprietary software is bound to generate misconceptions and disagreements between provider and seller, and between the government and the professional firms providing services and products. It would be to all of our advantages to clarify the role of proprietary software and the rights of both the buyer and the seller.

The time and cost of the selection process within the Federal government for computer systems which may include just hardware, just software or both hardware and software is excessive for both the vendor and the customer. One of the main objectives of government procurement has been and still is the streamlining of the procurement process. Some surveys, including the DOD Blue Ribbon Study of several years ago, show that for more than 60% of Federal computer customers, the computer system selection process takes from 18 months to six years. In this period of time, an entire computer equipment generation may have come and gone. The burdensomeness and cumbersomeness of this process to both the vendor and the government is obvious. The five major techniques employed in computer selection processes by the government as well as other large computer customers are 1) evaluation of benchmark problems, 2) computer simulation, 3) the use of published hardware and software evaluation reports, 4) mathematical modelling and 5) the programming and execution of test problems.

Just last summer, the GSA established a Federal ADP Simulation Center and delegated authority to the Air Force to operate the Center. Under the interagency agreement involved, GSA assigned responsibility to this Federal ADP Simulation Center for providing technical services and assistance throughout the Federal government for simulation, analysis and performance evaluation of ADP systems. The Simulation Center was made the primary source of supply for Federal agencies for ADP simulation and computer performance evaluation requirements: the Center was to provide these ADP services at less cost to the government. In addition, all government contracts for simulation and performance evaluation systems including those for software packages would be issued by the ADP Simulation Center. The intent was to have the Federal ADP Simulation Center provide centralized services for Federal agencies during procurement processing

for ADP systems. Whether or not the simulation services thus provided on a centralized basis will expedite the selection process remains to be seen and awaits a longer time of existence than the six months in which the Federal ADP Simulation Center has been operating.

It is apparent to anyone who has been observing the computer products and service marketplace that this is not yet a marketplace which is rational. It does not provide proper documentation or consumer information to the customer, there is a relatively poor relationship between price and cost of products and services, and there is a general mis-use of traditional marketplace standards in the computer marketplace.

Quite frankly, one of the major problems in the computer marketplace is the soft market practices in software transactions. One of these practices is the familiar dispersion of responsibility between the private sector companies and the Federal agency customers. This practice has been deemed essential for successful software production since the beginning uses of computers. However, it does not seem to be essential, and it does indeed effectively preclude any real assignment of responsibility for quality of software products to the producer. My feeling is that contracts based on cooperative efforts between buyer and seller just do not lend themselves to protection of either customer or seller.

A second reason for today's problems in the computer marketplace is the lack of acceptable business procedures for estimating the extent of the software package to be produced either in terms of the number of instructions, the man-hours to produce, the time to run the complexity of design and the like. Neither the buyer nor the seller of software has devised such widely useful estimation procedures which are common to most service areas. A real problem facing the Federal agencies as well as other computer customers is the lack of existence of product performance or design specifications for software. Other than benchmark test and simulations both of which still lack any widespread acceptance, there is no uniformly useful market test for software. Individual Federal agency customers left to their own devices have real difficulty evaluating the delivered software soon enough to request modifications under the terms of any covering grant or contract. As a result, we find a situation where neither the buyer nor the seller is really satisfied with the result of the procurement action. There is a looseness of terminology in defining whether or not one is buying just a software package, just a piece of hardware or whether one assumes that in buying a software package or piece of hardware, one is really buying a service that will continue longer than through the transaction of the initial procurement. The permissiveness in this regard that is now tolerated by both the Federal agency customers and the private sector seller is amazing.

In particular, when one looks at an application area such as management information systems, we see these generalities becoming specifics. For example, most surveys of computer system users which have attempted to measure satisfaction with the computer product or service have revealed



that management information systems are those from which least satisfaction has resulted. There are many other development areas such as inventory control, process control and scientific and engineering use where there is widespread satisfaction with computer systems. This is also true in special application areas, such as library retrieval or computerized patient record routines for hospital use.

In the management area where management information systems that are computer based have become widespread and quite popular, the problem seems to be equally divided between the buyer and the seller. Most buyers hope that a good computer system will make a good manager. The best that should be told by sellers is that a good computer system can supply good information, the good use of which will make good management possible. However, too many times the seller attempts to make his point using the arguments and the desires of the buyer rather than the realities that are manifested by his own product or service.

At the Bureau of Standards, we have just completed an index of data management software packages. In this instance, general-purpose data management software has been defined to be software which is application independent and which provides at least one of the basic data handling functions of file definition, file creation, file maintenance, query, retrieval and report generation. The index listed currently available packages, both proprietary and government-owned, and identified them by name, developer and source and contained some descriptive material. Even in this particular indexing effort, we discovered two problems of major significance which are also encountered by buyer and seller. One of these problems was the variation in the technical level of documentation made available by the supplier, and the other one was the disparity encountered in the terminology used. Both of these problems relate really to the lack of documentation standards and the lack of persistent customer demand for good reliable consumer information.

Using this definition, some 154 data management software packages were able to be identified. If one considers a selection from 154 products with the complexity of a non-trivial computer program where the documentation is insufficient, where there is no measure of performance supplied and where there are no standards utilized either for documentation or for the quality of the software generated, then one indeed has a situation which can guarantee dissatisfaction of both buyer and seller.

I think, therefore, that the computer world of which management information systems is a very important subset, there are some characteristics which are not commonly found in the Federal government for other products or services. One is that central management has been provided through the Brooks Bill and is exercised by OMB, GSA and the Department of Commerce through the National Bureau of Standards. Secondly, there is a self-contained coherent set of procurement procedures which attempt to keep pace with very rapidly advancing technology. Thirdly, computer marketplaces are ones where customers have been extremely permissive, have demanded very little of the suppliers, and as a result, have essentially generated an industry not grown on our business practices of cost/price

setting, on providing satisfactory maintenance and on having to determine the precise service guarantee liabilities that they must assume or must offer in working with customers. At the same time, there are very few areas outside the computer world where the customers have insisted on being such an integral part of the service or product production cycle that the separation between customer and buyer becomes almost impossible in many instances. This causes a very burdensome load on the seller who wants to have a clearcut responsibility in this area. There does not appear to be solutions to all of these problems in the near future although the problems are being eroded away by continual efforts of these three central management agencies and of the major users of the computer related services in the Federal government.

## MANAGEMENT CONSULTING

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ONE OF MY IMMEDIATE PROBLEMS IS TO DEFINE MANAGEMENT CONSULTING. According to some figures we collected last year, the amount of management consulting procured by the Federal Government in 1971 amounted to approximately \$1.5 billion.

This consisted of about \$900 million in civil systems work, such as in social services, labor, manpower development and others, and about \$600 million in technical and scientific consulting services. Furthermore, on top of that Federal market, the state and local governments purchased about \$400 million in management consulting services.

### Management Consulting Defined

Management consulting is professional services but excluding architectural and engineering services.

Management consulting, as defined by a firm such as Booz, Allen and Hamilton, or the Association of Consulting Management Engineers, would be as follows, and I will read you a brief excerpt:

"Management consulting is the professional service performed by specially trained and experienced persons in helping managers identify and solve managerial and operational problems of the various institutions of our society, recommending practical solutions to these problems and helping to implement them when necessary."

I submit that while this definition fits management consulting done for commercial industry, it does not fit within the context of the work that is normally done for Federal, state and local governments.

### A Different Definition for Government Management Consulting

In terms of Federal, state and local governments, management consulting is research and systems oriented. One of our senior officers has estimated that about 90 percent of what we management consultants do for the Federal Government is



research and systems oriented and not the "classical" management consulting accomplished for industry. Industry consulting is typically reorganization studies, personnel studies and financial studies.

### Services Performed by Management Consultants to Government

This morning we are talking about management consulting in the Federal, state and local government context. These services are: *program evaluation studies* in which a consultant is called upon to evaluate costs, schedules, feasibility, analysis of alternative choices and programs, program planning, R&D planning, financial planning and systems engineering.

*Management-information systems*: falls into the definition that I would use for management consulting in Federal, state, and local governments. Economical and technology trade-off studies, analytical studies, pure analytical studies, cost-benefit studies, operations research, engineering studies, technical assistance, counseling, training and Government program-implementation support are part of the management consulting business in the Federal, state and local government.

Management consulting covers a wide spectrum of services.

What I am going to do this morning is to offer suggestions on how the Government could hire consultants. The second topic pertains to suggestions on how the Government should manage consulting services to get the best results, and third, what, in fact, the Government should expect from a management consultant in his dedication and performance.

As you all know the Government has a rather voluminous set of procurement regulations for hiring consultants. These regulations have become more voluminous over time, and have been developed to guard against improper practices on the part of either the Government or consultants serving the Government, and also to fix liability and determine who did the work.

The procurement officials who administer the procurement regulations are major participants in this entire procurement process.

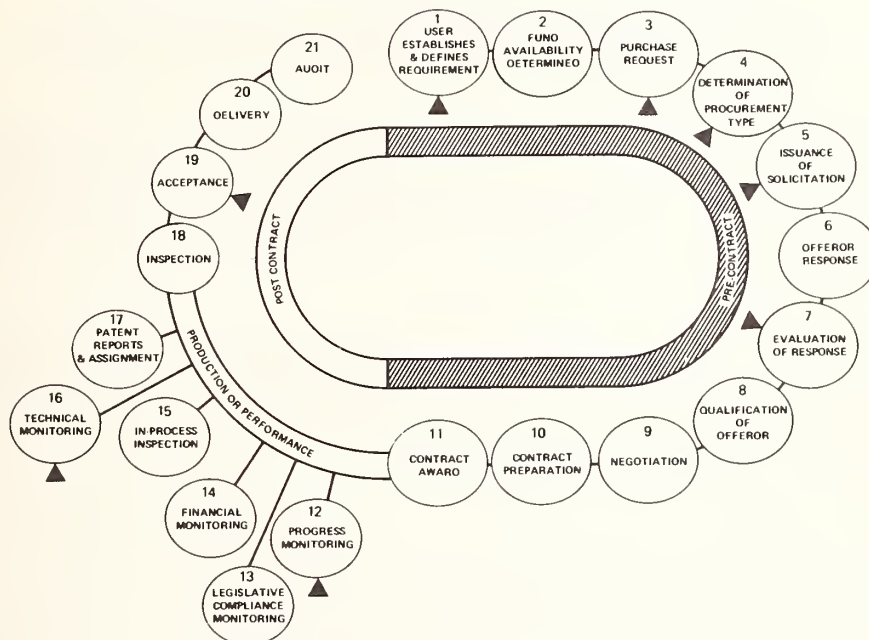
I would like to pause at this point and point out that there is no parallel in management consulting work done for industry comparable to a procurement official.

### The Procurement Process

Without passing judgment on that difference, the net

result of there not being that procurement official is rather significant. For one thing it means that the Government must act through a far more formal process, which puts an amount of burden on the Government to execute some preliminary steps. In industry the consultant participates in many of those preliminary steps.

### THE GOVERNMENT PROCUREMENT PROCESS



This chart portrays the Government procurement process. It is a rather formal process; in fact, you could say a rather "formidable" process. It starts at Step No. 1 and continues through Step No. 21. The shaded portion on the right of the chart is the pre-contract portion, Steps 1 through 11. The portion on the left is post-contract, what happens after the contract is awarded.

The steps marked with a triangle are the crucial steps in the process, the steps where problems most frequently arise between the Government and the consultant who is either bidding or performing work for the Government. We will talk about those crucial steps.

Picking out the steps marked with the triangle during the hiring process, these are the five most crucial steps during the process of hiring a consultant. It places a burden on the Government technical people at the outset.

Because the Government can usually only hire consultants

under a formal statement of work, the Government must typically do the following:

1.) It must develop an overall plan for the entire program. The specific job to be procured is simply one part.

2.) A statement of work for the consulting services must be clearly stated by the Government.

3.) The end product and results desired by the Government must also be specified.

These are not easy tasks; in industrial management consulting, the consultant is often brought in sooner and assists in this process. This is one of the differences between "classical" management consulting and that which we do in the Government.

Incidentally, it is interesting to note that some Government agencies actually have hidden prohibitions against hiring consultants under the term "management consulting." It is interesting that in our agenda we should define this service using the term "management consulting."

In the DOD, for example, any line item in the budget calling for a management study gets such close scrutiny that some of my friends in the Department of Defense have pointed out that these studies have all but disappeared. That does not mean they are not done; sometimes they are done under other names. Sometimes they are done under that name, but these instances are less prevalent than they used to be.

This means that the type of consulting that is so commonplace in industry, which consists of providing top management with counseling during the formative stages of the problem, is much less common in the Federal Government. In my judgment, the trend is toward less and less "classical" management consulting in the Government.

This is unfortunate; it means that as parties in this partnership we work increasingly against rigorous statements of work.

There are only a few cases in which the consultant, is called in to do a Government job where it is a "stand alone" job; in other words, that job has no relationship to other jobs. The opposite is quite true; in most cases, the job the consultant is called in to do is closely related to other assignments the Government is already doing, either internally or externally or through combination.

Often, in my experience, when the work done by a consultant is found later to be of unacceptable or limited value, the cause of the problem is found to be a poorly structured overall program in which the Government was unclear as to what it really wanted from the entire program. Unfortunately, the formality of the Government process demands that the Government do its homework in this area extremely well before the procurement is initiated.

### Less Rigidly Structured Contracts Recommended

Implied in this statement is an opinion and a recommendation. The Government would be served much better if it made greater use of less rigidly structured consulting contracts which would permit the consultant to provide the full range of his advice and services and which are often needed during the formative process of developing the entire program plan.

### Avoid the "June Rush"

Program needs, that is, what is actually required by the Government in the project being procured, should be identified early, and by all means, the "June rush" should be avoided.

In our business, where we work primarily with the Federal, state and local governments, the "June rush" seems to be increasingly evident, where the bulk of procurements out of some agencies occur between April and June. I think that leads to unfortunate experiences on both sides. In our case, I have seen a number of poorly conceived contracts result from hastily drawn statements of work and hastily procured contracts.

Unfortunately, in the long run, only the results of the work persist. People tend to forget how the work was procured and under what circumstances. Even worse, resources can be wasted and the wrong job can be done.

### Allow Sufficient Time For Statement Of Work

Thus another recommendation is for the Government to allow sufficient time to prepare a work statement. This means sequencing the work so that upcoming needs can be identified early. I will make another case for this point later.

One of the more serious problems that we see in our work is the problem of getting a good statement of work. Under the formality of the procurement regulations, the Government increasingly needs to know what it is procuring so that it can procure in a competitive way. It demands that clear, concise,



clearly-delineated statements of work be issued. That is not an easy task.

The solution is simply: write better statements of work. Write them so that a person of average intelligence can clearly understand what is needed.

### Features of a Good Statement of Work

The chart below lists some of the features in a good statement of work.

## FEATURES OF GOOD STATEMENTS OF WORK

- (1) STATEMENTS OF WORK WRITTEN SO A PERSON OF AVERAGE INTELLIGENCE CAN CLEARLY UNDERSTAND
- (2) SETS CLEAR OBJECTIVES FOR THE JOB
- (3) SETS SCOPE OF WORK THROUGH CONSTRAINTS OR LEVEL OF EFFORT
- (4) DESCRIBES CLEARLY THE PRODUCT/RESULTS DESIRED
- (5) CLEARLY STATES THE EVALUATION FACTORS TO BE USED IN CONTRACTOR SELECTION
- (6) DESCRIBES MEASURES OF PERFORMANCE BY WHICH CONTRACTOR WILL BE JUDGED
- (7) STATES SKILLS/ SPECIALTIES REQUIRED
- (8) SETS SCHEDULES/REQUIREMENTS GOVERNMENT IS WILLING AND ABLE TO KEEP

If nothing else, this chart illustrates that there are a lot of aspects to a statement of work. I have already covered the first point.

The second point, setting clear objectives for the job, really means trying to write down what is desired from the assignment, not just a specification of how it should be done, but what the end product is to be. The latter is more important.

The scope of work should be very clearly set, either through defining carefully the constraints on the job to be done or stating the level of effort. In some cases it is felt to be more "competitive" to not specify scope. In my judgment



this leads to some of the worst work I have seen done in the name of management consulting. There should not be a guessing game between consultant and Government. Something should be in the RFP that clearly delineates the scope of work desired. The products desired should be specified.

It is easy to say that in every case of management consulting the end product is a final report. There should be documentation on any job. More important, however, something lasting is desired out of the job or the job is not sufficiently important. This aspect needs to be specified.

The evaluation factors that are to be used in choosing the contractor should be specified, as well as the measures of performance expected of the contractor. This is much harder to do and is typically not done as well in Government procurements.

The two points on the chart, 5 and 6, are related, but in my assessment much less emphasis and attention is given to Point No. 6.

The Government should feel free to state the skills and specialties required. In my judgment the Government is buying a team of manpower. The Government has every right to specify what they want represented in terms of skills and specialties on that team.

#### Differences Between Grants and Contracts

The Government procures work under two entirely different approaches. The Government procures some professional services under grants, other services under contract. Increasingly there is a marked difference between the way grants and contracts are handled.

I participated last week in a discussion at NIH in which this point was being studied. I do not profess for a moment to speak for NIH, but as I perceived their study program, they are looking at the sharp contrast between the grant program, which is a somewhat loosely managed program and their contracts program which they feel free to specify very clearly what end products they want.

They want to go toward directed research in NIH, which means more toward specifying what they want out of grant programs. This is going to be an increasing problem in Government.

The contract program has become more rigid in specifying what is needed; the grant program has stayed relatively loose under the impression that grants should be

for scientific and basic research and therefore should be very loosely structured.

The contrast is becoming great, and at least one agency, NIH, appears to have come to the conclusion that they have to do something.

Finally, the Government needs to set schedules and requirements that the Government itself is willing and able to keep.

Let us go back over just a few of these points and emphasize them. In speaking for myself as a contractor we do want measurable results from our work, for one very simple reason: we want to be measured.

### Measures Are Needed

In the case of our firm, we are solely in the consulting business, either for Government or for industry. Our success in the long run depends entirely on what people perceive our value to be. It is frustrating to be a contractor who really wants to perform well to be performing under a contract for which there is either no end in sight, no urgency attached to it, or no definable product specified. When this kind of consulting contract ends, neither the client nor the consultant will be able to tell what was really accomplished.

That is unfortunate, because we need to work on jobs where there are definable end results and where our benefit can be measured. It may be good or bad; the product may be measured and found wanting, however, this is still superior to working on a job for which there is no end in sight.

The measures by which bidders can be chosen have been mentioned earlier as a problem. I also mentioned that the performance measures of a contractor should be specified.

The reasons for this are very simple and fairly obvious. The measures of performance that are applied to a consultant very often dictate the priorities of the job. To the extent that the Government, as the purchaser of the service, can clearly delineate its priorities, this measurement is for the benefit of both parties.

### Recommendation: Early Participation by the Contractor

Another recommendation is to encourage early participation by the contractor. You always have the problem in the procurement process of situations in which getting to know the contractor can lead to favoritism.

In my judgment, one of the areas of Government procurement that most needs emphasis and corrective action is pre-screening of the consultant prior to the competition. The Government has every right to get what it asks for. Tough pre-qualification efforts are appropriate. The Government should become acquainted with a potential contractor and his past work in industry.

Contrary to what some Government procurement people may believe, most competent contractors are not looking for more chances to submit proposals. I know we are not. I think a lot of evil is committed in the name of competition. I will give you two examples.

Our firm participated in a competition last year in which the Commerce Department did a good job of advertising the procurement, however, it was not a very clear statement of work. As a result, 42 firms submitted proposals on a \$45,000 contract.

The procurement man seemed delighted. At an estimated cost of \$1,000-\$2,000 per proposal, most of which is reimbursable under a system in which the Government reimburses the cost of proposals, this was a rather expensive competition. The Government may have paid as much as \$90,000 for the competition to be run in allowable overhead.

Contrast this to a competition in which our firm participated. The Department of Transportation knew two years in advance that they were going to be procuring systems management services in the urban mass transit field. They picked out the nine areas in which they wanted to hire consultants and contractors. They then ran a pre-selection competition in which 400 firms submitted qualifications. They were very detailed qualifications because the qualifications were pre-demanded by the Government.

The Government was very hard-nosed. A lot of firms complained. It took a lot of work to submit that qualification. In our case it took as much work as submitting a proposal.

In each of the nine areas, the Government qualified no more than ten firms. The RFP's were later issued and in every case they received almost as many bids as they had qualified firms. I do not think any firms that were pre-selected out or who lost the competition felt that they had been dealt with frivolously. They had been dealt with rather carefully, and I think they appreciated it. I think the Government got greater value as a result of that competition than the one involving the Commerce Department.

## Value and Price Should Be Equated

The other real problem in Government procurement is the problem of value versus price. This is one of the most distressing trends in Government and it has been growing. This trend is to hire consultants more and more on the basis of price of the services offered rather than for value.

In many cases the Government without saying so is actually running a two-step procurement process. This is a process in which a number of firms are found to be technically qualified and the award is made to the low bidder. This is not, except in rare cases, in the best interests of the Government. A Commission on Government Procurement, that just closed out its work, has released their report and this happens to be one of their recommendations.

Their recommendation is to reintroduce some flexibility into this aspect of hiring. If we think about how the Government procurement process has gone in the last several years, we know that it is increasingly difficult to justify awarding to a firm other than the low bidder.

The reasons for this are simple. First, it is hard to write this reason into the file. The GAO and a Chief of Procurement are always going to read the file. The toughest thing for a procurement man to write is a memo that says, "I awarded it to the technically first company; they were not lowest in price but they gave the greatest value." Value is hard to define. It is easier to define price. So price is increasingly the determining factor.

I think there is a second reason for this phenomena. In too many cases the Government technical man has let his position in the procurement process erode and has all but relinquished to the procurement man his right to make the final selection of the consultant.

This has come about because in some cases the technical people did not really know what they wanted, or were unclear in stating their needs.

If the trend toward price auctions continues, the result can be nothing less than inferior work in an increasing number of cases. I contrast this to the whole grant process, where the technical man makes the only determination of who gets the grant. In the case of many agencies, more money flows out of grants than flows out in contract form.

In my NIH example the grant program amounted to \$900 million contrasted to \$100 million in their contract program. That is an interesting dichotomy.



## Government Must Monitor Work in Progress

The Government's job does not end when the contract is awarded. We all know that, but I think it is important to emphasize it. Consistently the best work is produced when a well-informed Government monitor maintains a full awareness and personal involvement in the work. It should be fairly obvious why, but let me list a few of the reasons why.

If the work is really consulting, and is funded under R&D, and is technical and professional services, then it cannot be fully specified months in advance of its execution. The study direction will likely be refocused as results are achieved. The information that is developed during the course of the work may be usable as it arises. If a Government monitor is working closely with that contractor, it will be used. That has benefit in that it reinforces the contractor's approach, it builds his team enthusiasm, and it is a "people" business and the people do react to seeing the results used.

The Government working closely with the consultant also helps assure that the wrong study is not done. Lessons learned early might redirect the study. Since the work is being done for a useful reason the earlier the results are used the better.

I would like to give you one quote which I have found particularly distressing. It came out of the recent Congressional hearings. It was a quote from a high-level Department of Defense official, who said:

"The alternative to using federal contract research centers is to utilize other private contractors. This is likely to result in lower quality work and will require greater Government staff resources to negotiate, award and supervise the technical efforts."

I submit that to get the best from any professional consultant, whether he be part of an FCRC or a company, is to work with that consultant and manage him. Whether he is a part of a Federal Contract Research Center or a company, Government and taxpayers' resources are being used and it is less than honest on the part of Government not to manage those resources.

The other point is that the Government has to deliver the data and information promised, and I maintain the team approach.



Now allow me to go to the last point in my presentation.

### What Should the Government Expect from a Contractor?

In the foregoing two sections of my presentation I have emphasized what the Government has to do. What should the Government expect and demand from a management consultant, or its professional services firm?

#### Professional Services

Professional services means thorough fact-gathering, pertinent, in some cases exhaustive analyses, and a very clear articulation of the results.

Finally, in giving professional services, the Government should expect that it is getting those services without bias; that it is hiring a consultant who does not have a vested interest.

#### Capable Personnel

The Government should expect capable personnel. I think the Government is wisely putting greater emphasis on this. They should expect the contractor to deliver the quality of personnel he has promised. This may not mean the precise people, but it certainly should mean personnel of the same caliber.

I would also like to point out that we cannot overlook that the Government is sometimes dazzled by the credentials of a single person. Unless it is a one-man job, the Government is buying a team, and it is the team that does the work. It is that teamwork that in fact produces the best work.

#### Clear Presentation of Results

The Government should expect a clear presentation of the results, whether they are presented orally, in writing, in a computer program or in documentation of that program. I am bothered when I go back and look at work that was done several years earlier and find that the result or the product is not sufficiently clear.

#### Sensitivity to the Client Involvement

The Government should expect a sensitive treatment of the client's needs. The consultant has to understand the problems being encountered by the Government. The procurement process can take as long as a year. The circumstances within the

Government can change. The consultant who does not recognize this and does not tailor his results to those changed conditions is not doing his job very well.

### Strict Control of Results

Finally, the Government should expect strict control of the results and no unauthorized disclosure. In our firm we follow the policy that even if the work is made public by the Government, the Government still has the only right to release the report. We are not at all free to distribute it.

More importantly, the consultant should never discuss his work without Government approval.

In conclusion, there is considerable room for improvement in the selection of consulting services and their use by the Government. I firmly believe that consulting services can be of great value to the Government in its administrative and substantive programs. With diligent professional work on both sides of the partnership, the job can be done very well. In many, many cases it is being done very well.

## ARCHITECTURE AND ENGINEERING

Commander Jerome R. Dunn

Staff Officer

Office of the Director of Construction Operations

Office of the Secretary of Defense (Installations & Logistics)

Washington, D.C.

I CANNOT HELP BUT PREFACE MY REMARKS BY CONTRASTING the situation which exists on the architect-engineering side of professional services, with some problems presented here.

There are innumerable reasons for this. One of the reasons is that architect-engineering services have been procured by the Government for a very long period of time. This traditional means has developed and recently been codified, so that we do not face all of the same problems.

Let me discuss some of the problem areas in the DOD which have been areas of controversy with the private sector.

### In-House Versus Staff Work

The first of these is the concept of in-house staff versus work done with private contractors. This is an area which has been one of increasing interest in the Congress in the last two to three years. It has even been the subject of some studies by the General Accounting Office. It has always been a matter of great concern to us in the Office of the Secretary of Defense and to the individual agencies in the Department of Defense.

Basically, within the last two years, we have developed within the Department of Defense a clear statement concerning in-house staffing to answer questions of what work is done in-house and what work is done by contract. Our in-house staff levels are based upon our aggregate, overall facilities acquisition and management requirements. We must have sufficient resources to manage these essential functions, and I emphasize "manage."

This is true principally because we are charged with managing and maintaining a very large inventory of facilities. We have a large continuing program for acquisition of new facilities. Therefore we must look at this job as a system rather than as individual discrete work functions.

We place primary dependence upon the private sector to do our A&E services. The principal amounts of these are

designs for new construction, but there are innumerable other types of services which we also procure; studies, concepts and other architect-engineering areas of expertise.

### Professionalism Must Be Maintained In-House

Over 80 percent of the dollar value of new construction design is done by the private sector. That percentage which is done in-house is done deliberately with the goal of maintaining the professionalism of our own in-house staff. We feel this is important because we must have active involvement in the actual practice of the profession in order to recruit and retain competent and competitive personnel within the Department of Defense. It also assures that the Government professionals who do the slating and selecting, actual negotiation of the contracts, management and administration, and evaluation of contract performance are truly professionals who are on top of the profession, and not merely managers with some prior technical background.

We also require this professionalism to carry over into other areas. We require it in the planning and programming of our new construction requirements, management of the construction, the actual construction execution, and in the management and maintenance of the large inventory of facilities which we have.

There is one other area in the traditional A&E expertise for which we do not place primary dependence upon the private sector. This is in the so-called Title II, or "Clerk of the Work" inspection.

This function is routinely accomplished by the in-house forces of our two primary construction agencies, the Army Corps of Engineers and the Naval Facilities Engineering Command. We do this for a number of reasons: First, because we find it the most cost-effective; second, because we double up these personnel in performing a construction contract administration function. We cannot effectively separate one function from the other.

I realize that in talking to representatives of the private sector it is very controversial to say that it is more cost-effective to do something in-house than by use of contract. I assure you this is an area which has had intense study, and has been a subject of great concern to some of the Congressional Committees and to the General Accounting Office. We have gone through this in some detail.

Since we do procure some 80 percent of our new design, or a major portion of our A&E services from the private sector through contract, we are very concerned with the procedures and the Federal regulations that apply. Many of you know that the



procedures for procurement of A&E services were recently codified by Public Law 92-582, more commonly referred to as the Brooks Bill, which sets forth the policies of the Federal Government for procurement of architect-engineering services.

The Brooks Bill confirms, at least from the Department of Defense point of view, our long-standing practice of selecting architect-engineers on the basis of purely technical competence for the specific job and not on the basis of price proposals. I would certainly agree with Mr. Summers' comment on the problems that would evolve if we did become dependent upon price proposals.

#### Public Announcement of Contracted Services Forthcoming

There is one other aspect of the Brooks Bill which the Department of Defense is implementing, even though the Brooks Bill per se does not apply to us directly. However, in keeping with the statement of Federal policy enunciated in the Bill, we are adopting a procedure for public announcement of architect-engineering services.

We have been constrained from doing this in the past, particularly for new construction designs, because of the very close relationships between the design services and the future Federal budget. The Office of Management and Budget has constrained us from making these announcements because it would disclose elements of the President's budget. We are very pleased that we will be able to make public announcements. We are proceeding with regulations which will allow public announcements.

One other area which is sometimes troublesome to the architect-engineering community, and I guess is one of these "buzz" words that alerts people and makes them sit up in certain circles in the architect-engineering community, is the word "turnkey."

#### "Turnkey" Procedures to Continue

We do not procure all of our so-called architect-engineering requirements directly through A&E contracts. We have and will continue to procure some A&E services, which are directly related to construction, through the so-called turnkey procedures. This can be either a one-step or two-step procurement procedure. We do so only in selected circumstances. We have recently completed a very extensive study of these instances to establish criteria which would clearly identify those cases where this would be the preferred route. In essence what we are saying is that when we are buying a product rather than a design, when a design is either incorporated in that product or it is a standard design, it makes sense to logically



procure the construction with the design being incident thereto.

We do not foresee any great problems in the architect-engineering area. We have been very fortunate to recently have had some of these areas of controversy removed by the Brooks Bill. I recognize that there is still controversy remaining in this area. The Commission on Government Procurement report has a majority recommendation dealing with architect-engineering procurement which would lead us more toward the procedures now being followed in other professional services' areas. But for the moment, with the passage of the Brooks Bill, this does not confront us directly.

#### Communication: A Recognized Problem

We do feel that there are problems, as always, in communicating with the private sector. We have made great efforts to resolve those problems. One of the biggest pertains to what we do in-house and what we do by contract. We have made great strides in the last two years in meeting with the various professional societies of architects and engineers, such as the Consulting Engineers Council, National Society of Architects and Engineers, AIA and others so that we do understand each other's problems. This is the key to solving whatever problems remain before us in the architect-engineering field.

## OPERATING LEVEL PROBLEMS IN PROCUREMENT

Dr. Walter Edward Cushen

Chief  
Technical Analysis Division  
National Bureau of Standards  
Washington, D.C.

I AM GOING TO CONCENTRATE ON MY FAVORITE PROFESSION, operations research. Operations research is described in the very broad sense of the word, to include systems analysis, management consulting and related activities.

I am going to concentrate on problem areas. I will not pay much attention to the many things that are done. I am going to concentrate on things that our Division has discovered as we have worked among the second echelons of Government agencies. This will be, in a sense, a "worm's eye" view of what is going on inside the system that we are discussing.

Our Division tends to live at the front end of problems. That is, we tend to be there when somebody thinks of a northeast corridor transportation project; we tend to be there whenever somebody in HUD says: "Let us have a management information system project."

We tend to be there when the Department of Justice says: "What will we do on an impacted cities program, if we have one?"

### \$500 Million of Untapped Business

We tend to associate with the Government bureaucrats in the salary and grade range of GS-13 to GS-17. We do not tend to associate with the political appointees at the Assistant Secretary level and above. In a way this viewpoint comes from the operating level. An awful lot of the work is done at this level that people want in response to exercised political choices.

Within these areas I would estimate that there is \$500 million worth of business in the systems profession that is not now being tapped by most of you.

### Twenty-Two Trouble Spots

I am going to list some 22 troublesome spots that we have found and the results of a survey. Rest assured that there is an altered tone within the Government these days. The Nixon

Administration is beginning to filter its wishes down to middle level bureaucrats who have to do the job. Consequently you will continue to see something of an altered tone. In the future you will not notice a feeling that a problem exists and therefore Government must solve it by building a big empire.

### Must Determine That A Systems Job Needs To Be Done

First of all the basic problem we see when we attempt to assist somebody is to be sure a systems job really needs to be done. In many cases, he is not so sure it is going to do him any good even if he gets an answer to the question. Therefore a sales job needs to be done at the front end. It needs to be done, not with PERT charts, not with beautiful diagrams, not with "beautiful dances," and not with the beautiful brochures that tend to come out, but rather, it has to address the question: what good will it do if I provide a good system job?

A credibility gap exists in a large number of the civil Government agencies, a credibility gap concerning the fact that the systems approach is going to really do them some good, that it really has to be part of the process. There is still residual doubt.

### Problem No. 1: Early Problem Specification Difficult

When our good friend from Booz, Allen asks: "Fellows, why don't you tell me clearly what problem it is that you want to have solved?"

The answer to that question is: "We cannot describe the problem. It is far too tender. It is in a developmental stage, and I honestly cannot tell you what I want.

"What I can tell you is that I have an idea what it is I want done. I know that I need your assistance, but I cannot shove that through my procurement channels. They insist that I have something clearly stated. About the best I can do is to say that I want a variety of services. Today I am going to need this, tomorrow I am going to need that, I do not know what I am going to need, but I am going to need your technical skills. I know that I can use them, but I cannot really define my problem clearly enough for you to be able to respond."

A good example is the new concept of public technology. "Let us get technology down where the cities can use it." If you are designing a garbage collection route, like Stonybrook for the City of New York, the basic questions are: how many cities are going to use it; what is the hang-up in the process; why is it that somebody else has not invented the thing; how do we aggregate the market; and how do we make it profitable?

I really cannot tell you which "hunk" of the problem I want you to work on. I know the problem I am trying to address. I simply cannot, and will not, say exactly what it is that I need, because I do not know at that stage of the game. I would like to have the management consultant in at the early part of the process, and I do not know how to do that.

## Problem No. 2: Advocacy Process Demands Many Answers

Whenever you are doing these types of studies you are purely and simply part of an advocacy process. A man who starts a northeast corridor transportation project, or a man who tries to get the Postal Service mechanized, or a man who tries to install an evaluation system in the Department of Health, Education, and Welfare, is flying uphill. He is trying to begin a project which he believes is in the best interests of Government. He is an entrepreneur, and he is trying to institute change.

There are adversaries to this process. There are inertias that he has to overcome. Therefore, the guy who is helping that particular Government manager is part of his adversary process.

The Government manager knows. He has heard many sales speeches about the systems approach, and he does not want to hear any more. The concept is acknowledged. He requires somebody to move rapidly, along with him. If this afternoon is the day on which the Director holds the program review, the answer has to be there then, not the next day. He does not know when that program review is going to be, but he needs you then. He does not need you otherwise.

He has small amounts of money. Because he is an entrepreneur and an advocate trying to get something new done, he is living off a pilot project money himself. He cannot properly reimburse you for the services that he has asked you to provide.

You have to work with the system. One of our experiences has been that when we thought we were starting somebody to solve his problem we found ourselves going off on a different track. We became part of the problem rather than part of the solution.

A systems study has to go through successive stages of approval. That is to say, if you do a systems study for a man in an agency, you are doing it for a man who has to convince his boss, who, in turn, has to convince his boss, who,



in turn, has to convince his boss. You are doing it for a man who is trying to cream off a piece of the action that some other Government agency seriously coveted and is going to stand in his way.

In a sense, a systems study has to answer a multitude of questions, not just the one that was written down as being the task that had to be done. The study has to pass the "acid test" all the way.

### Problem No. 3: Changes in Personnel Create Another Problem

People who start projects in Government tend to be new themselves. That is, typically a guy who comes in and starts a northeast corridor transportation project has never been in Government before. A new office is created, and the Administrative Officer for that organization is new. Like as not, the technical man is going to describe exactly what it is he wants to have done. He wants to have people studying modal split models, and he knows there are 100 of them. He would like to have all 100 of them checked out to see whether any of them are good, and if not, how they can be modified to make them work. If they cannot be modified he will want to try and develop new ones.

However, the technical manager of the problem very frequently begins with absolutely no orientation to the fact that whenever he lets out a contract, he has to tell the business man that he is going to let out a contract. Consequently, we have gone through sequences in which we have worked directly for a technical man who has informed our Budget Officer that we are being authorized to do a job but has forgotten to tell his own Budget Officer that he had authorized the work to be done.

We are dealing with a lot of changeover in personnel. We are dealing with people who have established a good system for operating in terms of what used to be. When we come through and say:

"How about trying a basic ordering agreement?" the procurement channels say: "What on earth is a basic ordering agreement? We never heard of it."

Each agency behaves in a totally different fashion. The word-of-mouth passes sometimes effectively, sometimes not very effectively. It is very difficult to set up a new procurement process in order to get things done, and it is very easy to say no.

There are always new problems that occur. An entrepreneur in Government has to have his contract out and the

answer in real quickly. His plan has to fit within his time-frame.

Increasingly, the Government man is less interested in paying for basic research. He knows that somebody ought to study why the grass grows green. However, he does not care about this research nor is he going to pay for it or pay any attention to it. The thing that he needs is something that will help his particular position in moving things along.

#### Problem No. 4: A residual Mistrust of Free Enterprise System

Among a large number of operators in Government, there is a residual mistrust of the free enterprise system. They believe that businessmen are out solely for a profit and could not care less about whether Government is advancing its interests.

You know that is all false. I know that is false. The fact of the matter is that this perception still maintains and perpetuates itself in a number of places.

As an illustration let us look at the Government manager who starts an entrepreneurial project. The word about this project goes out real fast and within a week he is besieged by telephone calls from people who want to come in and peddle him something. At this stage of the game, he does not know exactly what he wants you to do, but out of politeness he has to stay and listen. This puts him behind schedule. By the time he has briefed 25 industrial representatives about what he wants done he has learned a lot in the process, but he has wasted a lot of time. He may be just plain "turned off" perceptually at that stage of the game.

#### Problem No. 5: Government Agencies Believe Inside Contracts Better

Most Government agencies believe, and I will confirm that it is true, that it is easier to contract inside of Government than it is to give a commercial contract. The imbalance in the costing rules that used to exist are slowly beginning to disappear. Government people, when they price out their own service, are increasingly including more of the components of the indirect overheads than they have in the past. They do not yet include the amortization of buildings, grounds and similar items so some unfairness still exists.

It is also easier to do an in-house procurement for the following reasons.

If you let out an RFP, there is a "rule of thumb" which says that it is going to cost the Government \$50,000 to

evaluate those proposals. The \$50,000 out-of-pocket cost to evaluate the proposal is not nearly so severe as the opportunity cost incurred should the people in Government who have to evaluate those proposals write the justification for how come they came to that particular conclusion, and enter the thing into the system.

#### Problem No. 6: Disagreement Over Contract Control

The Government manager believes that he is entitled to a greater degree of control over the contractor and the contractor's responsiveness than the contractor thinks ought to be exercised.

#### Problem No. 7: Information on Organization and Procurement Lacking

Most people do not know where to go for what. That is to say, you have your representatives out all over the Government, trying to find out where the money is, trying to find which "vacuum cleaner connection" will suck the money out of the pockets of the Government agent in order to do your work.

However, there is no systematic presentation. There is no blanket presentation of what Government agencies really are preparing to procure. At some of our earlier conferences we tried to advertise that notion. Tell a Government agency: "We are going to invite anybody who wants to come. You tell them what it is you want to buy, and the right guys will button-hole you after you tell them."

However, the fact is that partly out of the security of the President's budget, and partly out of just not quite knowing what they can pull off, Government agencies tend not to be able to make a sensible presentation as to what they are prepared to procure in the following year or years.

In addition, Government agencies really do not have a feel for what other Government agencies are doing in the systems business. The algorithms for routing fire trucks, garbage trucks, postmen and so on have been invented at least 100 times, almost always starting from scratch.

#### Problem No. 8: Decentralization Leads to Unclear Objectives and Confusion

The Government is decentralized. There are 100 agencies of Government and an Assistant Secretary, in part, is only partly responsive to his Cabinet level Secretary. A Bureau Chief is only partly responsive to his Assistant Secretary. A Division Chief is only partly responsive to his Bureau Chief.

Each person tends to be his own decentralized "king." When a contract goes through, all of these various people must do business with each other. One of the laments that we hear typically comes from a large aerospace firm that says:

"Hey fellows: until you have a good organizational pattern, and until everybody follows the boss's rules, and until everybody has clearly specified objectives and timetables, we cannot really help you an awful lot."

The fact is, nobody is boss. Nobody follows the rules. Nobody has clear objectives, nobody wants clear objectives. The name of the game is: how on earth can you get a systems approach being used by a Government in which this situation exists?

Government is in fact decentralized. You can make your deal with the technical man in NIH as to what it is you are going to do, and you can make your deal with the administrative guy in NIH as to what it is you are going to do, but a GS-7 in the Division of Research Grants is the character who classifies your project and sends it to its destination. By a single defect in judgment, he can kill the project because he sends it to the wrong addressee, and it enters the system twice.

#### Problem No. 9: Changing Goals

There is the problem of changing goals. When the RANN program was initiated in the National Science Foundation, it started with one set of goals, however, lessons it learned caused it to move in a somewhat different direction.

For instance: right now one of the primary themes in the RANN apparatus is the concept of research utilization, in which people are saying:

"I want to know now who on earth is going to use this result. I would like to have a strategy for how you are going to get the thing utilized, or pass it to somebody who will get it utilized."

So all of these goal changes tend to impinge on the process. If you are not there, you do not know that the goal is changing. In fact, most people do not know the goal has changed until it has already changed and somebody says:

"I told you before, you have to have a research utilization paragraph in this proposal; now you send it back and put the thing in."



Problem No. 10: OMB Tends To Be One Of The Targets Within Government

Government agencies do not like OMB. A fair proportion of the project work that they do is to try to convince OMB that what they said was true in the first place. A great deal of budget justification effort is caused by this problem.

Problem No. 11: Questions of Equity vs. Efficiency

People are beginning to get interested in questions of equity more than they are in questions of efficiency. Questions, which ask who on earth gets the benefits out of this thing, how will this help the inner-city blacks, are coming more to the fore than they used to.

Problem No. 12: GAO Must Be Satisfied

GAO audits represent one of the safety mechanisms inside of Government and a Government man very quickly learns that if he does not satisfy GAO he is in very deep trouble indeed. You will very quickly see his mood changing the first time he has gone through a GAO audit and has been drawn up short for doing something that sounds a little bit on the suspicious side.

Problem No. 13: Oversell Has Created Problems

We are a victim of oversell, particularly with respect to systems, and particularly with respect to computers.

Problem No. 14: There Is No Common Language

When I advertise for a systems approach to be made I often get inundated with people who want to deliver the optimum computer formula for getting my systems study done. So no definitions and no common language create a real problem.

Problem No. 15: Basic Research in Disrepute

There is an increasing disrespect for the notion that Government must pay for and subsidize basic research. This is beginning to disappear from the lexicon. It still has strong advocates in some grant-giving agencies, but among the people that we tend to service, who are trying to get applied type problems done, there is literally no point in suggesting to them that they ought to be doing some pure or basic research.

Problem No. 16: Real Objective Is People to do the Work

For many practical purposes, an entrepreneur in Government would like to buy staff to make up for the slots that he has lost. That is to say, he has been told he cannot have people; the work still needs to be done, and he would like to hire somebody to come in and relieve him of the burden. He has to invent ways to cheat the system in order to say:

"I want a particular product so that I can get somebody in here to work for me."

Problem No. 17: No Capability to Use Analytic Answers

Most agencies pass out so many contracts that when the results come back there is nobody there who can interpret and translate them into the administrative apparatus. There is in fact an excessively thin capability inside of Government to be able to use, on the average, your large analytic answers. If there is somebody who understands the analytics, he does not understand the nature of the political process of which he is a part. If he is a part of the political process, he does not want the analytic answers.

We once did a job for the Undersecretary of Commerce in the last days of the Johnson Administration. His specification to me was:

"I want to have a good systems study done, but don't you dare bring in an analytic formula. I do not want to see one word of mathematics in that report. I am a lawyer, I do not feel comfortable with mathematics, and since I am going to have to use it in my own adversary process, I do not want to be encumbered with what could turn out to be a critical defect."

Problem No. 18: No Lessons Learned from Experience

Contracts are let and people do not seem to learn. Should we let out ten contracts to say how do we deliver better health service to the nation? The reports come in, they get used in some manner, but nobody looks at them to say: what is the lesson learned from this exercise?

Problem No. 19: The A-76 Privilege A Hiding Place

OMB Circular A-76 provides a very nice hiding place for people who do not want to go commercial. Paragraph 4, Subparagraph (C) says:

"This A-76 Circular does not apply to managerial advisory services such as those normally provided by general counsel, management organizations staff or a systems analysis unit."

This means that somebody who would prefer not to go commercial has, in at least the latest revision of A-76, the perfect justification for not doing so. There are a lot of people who would prefer to do the job inside of Government rather than go outside for the work.

#### Problem No. 20: Mission Consistency Too Narrowly Defined

The next point deals with mission consistency. Unless something is totally consistent with the mission of the group that is being discussed, they are not going to get any money for that group. This Conference is judged not to be sufficiently consistent with the purpose of my Technical Analysis Division to warrant the use of Federal funds.

Providing switchboard service to make it possible for people to talk together to help solve problems is regarded as sufficiently over the edge of that which is uniquely tied to my mission. Because of this it does not get done.

#### Problem No. 21: No Assessment of Opportunities In Consulting

Within the Department of Commerce there is no person who spends full time doing the assessment of the business opportunities in the management consulting field. It is tied in with some other unit. There are industry specialists for many different kinds of industries but not one in the specialties that we are talking about today.

#### Problem No. 22: Inadequate Start-Up Preparation

Finally we see that there is inadequate preparation for major start-ups. The nationwide five-city test program that said; "What do we have to do in order to hire the hard-core unemployed?" was literally designed over a weekend. It was put into operation, advertised over television when in fact, the detailed planning for the concept was not done early in the game.

We are working with a complementarity of purpose and an Administration must get early results, early visibility and get things moving. This creates the inevitable complication of trying to do something with a staff that does not exist and has to be pulled in from the boondocks in order to get the program underway.

## Why Did You Choose TAD: The Results of a Survey

I will close with a report on a survey that my own Division did of its own services. We have had the good fortune of enjoying an increasing income from sponsors in Government agencies to do systems work.

We were recently asked: "Hey fellows: aren't you really competitive with the outside world?"

Our answer was: "We do not think so. We think what we are doing is getting in where that very thin film is and opening up the market potential for people who do not now enjoy that particular market potential."

We commissioned a survey to be made of our sponsors and said: "How come you picked us? We are an in-house group."

The answers came back as follows:

38 percent of the time sponsors said: "I did it inside of Government because it was related to a policy-making question and I do not want to go outside for that."

In 20 percent of the cases, the choice was motivated by the feeling within the agency that they were still in the problem-definition phase and did not know what to ask for if they did want to go outside.

In 15 percent of the projects, we were hired because we had "a unique skill."

In 12.5 percent of the cases, the time excuse was used. That is to say: "I cannot get the money out before the end of the fiscal year, and I have to get the thing started."

In 11 percent of the cases, the educational excuse was used. "This group already knows my problem, and I cannot afford to spend time educating somebody else in the nature of the problem."

The other 3 percent were miscellaneous causes.

What I have tried to do is to list, from an insider's point of view, some of the perceptions and some of the activities that I see going on which are different from the organization charts that you see.



## PANEL DISCUSSION, QUESTIONS, AND COMMENTS

### PANEL ONE: DEVELOPMENT OF THE PROBLEM

QUESTION - ENTIRE PANEL: "Is discussion of technical effort between contractor and Government technical personnel before procurement is released a good or a bad practice?"

DR. CUSHEN: Let me talk from the point of view of one who tries to design a program.

I would like to have all the inputs that I can get. I appreciate the fact that this gives privileged access and competitive advantage. Nonetheless, I would dearly treasure an ability to get program design information at the beginning.

There is really no reason why we should not have, in the civil sector of Government, the analog of a technical representative who can come in and assist a Government agency to design its programs.

DR. DAVIS: In the abstract it is a good practice, and a practice that is almost impossible to invoke. It is not invoked in industry. You are just as likely, through not being able to get a biased input from the people that you contact yourself as you are if you produce your own bias in your contract.

It is also a measurable amount of time in the procurement process, and does add a measurable amount of time to the selection process. I think it is a practice that is very difficult to do in an effective way, although abstractly, nobody could be against it.

COMMANDER DUNN: It does not really apply to our area, because we do not generally select architect-engineers by RFP process. The selection is made without submission of proposals by the prospective firms. It is based upon records on file.

In unusual circumstances where we are attempting a highly technical application, we do seek ideas. This could either be formally, in the form of a consultant contract, or independently.

DR. SOMMERS: I am in favor of the process, but I agree with Ruth Davis that it can become difficult if it is applied in every case. I would like to give a couple of examples.

I watched a person in the Air Force struggle for some time with a very serious problem. The problem was: how to do a more quantitative job of analyzing and justifying the expenditures put into modernizing Air Force air bases. At the time he was struggling with this problem it was slated to be a \$700 million program.

He had the problems that Ed Cushen referred to of not being able to define his problem well enough to put out an RFP. This particular person dedicated about six months of effort to talking with various contractors, first on a formal basis, and then informally.

The net result was a much sharper definition of what he wanted. I think it was almost the epitome of a sensible way of procuring systems analysis or consulting services. There was a fair amount of discussion that resulted in a more carefully drawn procurement.

Most of us as contractors have participated in the process whereby the Government has held a seminar and called in companies. I recognize it is time-consuming. However, when it is done well, when it is done with an intent to inform and to have a two-way exchange it is very beneficial.

It would be beneficial to do it in most instances where the problem cannot be well-defined and packaged neatly into a statement of work.

DR. CUSHEN: We have a problem on that one, Bill. At one of our earlier conferences, the accusation that kept popping up from the floor was: "Look, if I do that for you, I am going to do a lot of work solving your problem. Then you are going to turn around with all of this information that I have developed at my own expense, and you are going to publish it as an RFP and then you are going to give the award to the low bidder.

"So the net result is, I am coughing up an awful lot of proprietary information for you and I am half solving your problem for you, and you may publish an RFP and not really intend to give out a contract.

"You already have the information; you have already milked my brain for most of the information that is going to be valuable. It is a real puzzle; I would like to have access to the information and I would be willing to pay for it, but in many ways I am not allowed to."

QUESTION - ENTIRE PANEL: "There seems to be a present trend for the Government to compete with private profit-making

consulting firms by working through FCRC's and other Government agencies. Examples are NASA working for UMTA, ONR working for DOT, DOD working for HUD.

"This is a major problem for consulting firms, since we cannot compete financially. Will the trend continue, and should private consultants forget Government business?"

DR. CUSHEN: I frankly think this trend is on the downgrade. It still exists and there are still some directives to use the FCRC's to the maximum extent possible. There are some people in Government who believe that the Federal Contract Research Centers are smarter than other people because they have had the RAND-ITA type aura which says, "We can solve any kind of problem." I think there is a feeling that there are services that you can get from a non-profit that you ought to be buying.

I think that the people we deal with tend to be able to discriminate between the kind of services that they ought to be asking a RAND Corporation or an ITA to do and the services that they ought to be asking a commercial firm to do.

These people tend to have the perception that you go to RAND or ITA to get a top-level think product but if you need a real fast applied job, you probably ought to go someplace else. Again, it is an incorrect perception, but this, I think, is one of the prevailing bits of folklore.

DR. DAVIS: I am not so sure there is a trend in this area; I think there is a complexity of factors that are changing the situation.

Certainly, the FCRC's, RAND's and ITA's have been divorced from being a captive of a single agency, due to edicts. As a result, they are practicing among more than one agency and they are having to offer their wares to every agency in the Government. They are appearing to be in more places than they were, but at a decreasing level of effort in every place.

Abstractly, or theoretically, there should be no problem, because no Government agencies should accept work from another Government agency in competition with industry. If these rules were adhered to strictly, as they are by some groups, you would not have the kind of problems that are being addressed by this particular question.

DR. SOMMERS: I do not think there is a trend in this area right now. My own comment would be that this is probably one of the more perplexing problems. Solutions have

to be found for this problem in the very near term. If there is a trend, it is toward more use of FCRC's across Government, more use of Federal agencies working for other agencies, not less, as Ed said.

Obviously, this is just personal opinion, not based on any statistical survey.

One of the problems that you have to recognize is that in the Federal agencies there is a capability, as there is in the FCRC's, which has been bought and paid for with taxpayer funds over a long period of time.

This investment having been made, there is a temptation to say: "Well, what Mitre knows or has learned in systems management should be applied to EPA problems. What NBS has learned about housing should be applied to Project Breakthrough."

There is logic in both statements. At the same time use of FCRC's and others does constitute competition to firms like ourselves and I am sure to firms represented in the audience. It is a dilemma.

There has been a lot written about this dilemma and one of the problems is that in the midst of all this rhetoric there really have not been an awful lot of firm recommendations made on what to do.

I have just finished scanning a book on the non-profit research firms and resources in this country, and I think one of the conclusions is that the Federal Government has tended to build some of these capabilities, both in the agencies and the FCRC's, without a strategy.

Once you have an agency with the capabilities of the National Bureau of Standards, as a specific case in point, it does make sense to apply that to Project Breakthrough. However, you have to have a strategy which determines if you are going to follow this through and build a capability within NBS that grows, to do something that industry might be able to do, or are you going to purposely hold NBS to a level which does not fully meet the needs?

I do not think that strategy has been worked out in Government, and I think that is probably our biggest need.

QUESTION - DR. DAVIS AND DR. CUSHEN: "Why doesn't the Government view management consulting services, as Dr. Sommers defined them, in the same sense as architectural-engineering services, i.e., procure on the basis of technical competence, not price?"



DR. DAVIS: The question has inherent in it something we have to watch with respect to Marxist philosophy. If I accepted the assumption of the question I would give the wrong answer.

The assumption is that we are procuring management services solely on the basis of cost. I do not think there is one philosophy of procurement. I am convinced that in many instances, as in architectural-engineering contracts, that we are procuring management and/or management consulting services on the basis of capabilities and not just on price.

DR. CUSHEN: I think there is a wide variety of practice inside of Government.

Circular A-76 with its explicit statements, which appear in contrast with each other, "when you can buy it outside, buy it outside," and then, "forget this when it applies to systems analysis, if you want to;" indicates a need for the promulgation of a doctrine from the top. There is a need for a feeling of confidence at the operating level that would make that promulgation of the doctrine a fact rather than just simply an empty statement that is unenforced.

QUESTION - DR. DAVIS: "What percentage of Government procurement is in computer software, and what are the total actual dollars of such procurements?"

DR. DAVIS: There are not well-defined numbers. The latest GAO survey showed that about \$2 billion a year was spent on software and software maintenance services. About \$4 to \$6 billion dollars a year was spent on the annual operating costs of computers. If you take 6,000 computers in the Government, you can get roughly the cost of either buying on a one-time buy or an amortized rent.

QUESTION - DR. DAVIS: Is the National Bureau of Standards really a customer for professional services? If so, what services, and who will procure them?"

DR. DAVIS: Let me relate my answer to the organization that I direct which is in the computer sciences and technology area. We are a customer for professional services in terms of our mission in computer sciences and technology. One could direct such questions to any of the managements of the Institute for Computer Sciences and Technology.

QUESTION - DR. SOMMERS: "How did you get your estimate of \$1.5 billion for professional service contracts? The Procurement Commission could not obtain such statistics."

DR. SOMMERS: We did a competitor-market analysis last year in our company. It involved some fairly straightforward steps, most of which can be debated.

We simply took the budgets of each agency, found what portion was R&D and then, through discussions, applied a judgment of what fraction was professional services. Because R&D covers a number of things besides consulting and professional services, including purchase of hardware and some facilities, it had to be a judgment.

In the case of state and local governments, it was a much more difficult process. We worked through a number of the state and local government associations, and the amount noted there is a number which represents inputs from the 50 states.

I will not defend it as the right answer, but we went about getting it in what I think is a rational way, and it did take some manpower.

DR. CUSHEN: Let me toss in a voluntary answer here. I was calibrating my market estimate with Dr. Sommers'.

We took that "fiction book," the Budget of the United States Government, and went down it line item by line item. Some of the items we were thoroughly familiar with and knew exactly what was likely to happen. Because of this we could make an estimate as to how much we thought was going to be procured, but the manager himself did not know, for example, how much he was figuring on buying if he could, like a Human Factors Lab for the Postal Service.

We knew what number they were figuring on and we could also guess where that would inevitably lead them. We did this for each of the items in the Federal Budget, and we came up with a number that looks very close to Dr. Sommer's number.

QUESTION - DR. SOMMERS: "How can the small 1-to-5-man design office without a Government contract track record possibly obtain contracts without excessive cost or effort against bigger firms under present conditions?"

DR. SOMMERS: In the case of the unit that I work with in Booz, Allen, we started out in 1955, as one of those small companies with two people. That was undoubtedly a different environment, as environments change with time.

I know in our case one of the strategies that we followed was to concentrate on a very few specialties and try and

build a sole-source contract relationship in simply those two areas. We were successful. I must admit that we had an advantage. We were successful in that we did have the advantage of being part of Booz, Allen.

The problem is one of the toughest questions for the small company, and I do not know the complete answer.

Sometimes we in Booz, Allen think that we are competing against tough competition when we compete against that 5-man firm, because they can be so specialized and so much less expensive because of their smaller overhead. In these instances they have an advantage.

It is a question of strong skills. I still think the skill and the capability is what gets business. If you are truly competent in an area, do not spread yourself too thin, stay to those areas and I think the small firm can succeed very well.

QUESTION - COMMANDER DUNN: "How can the Government get AE's to take on complicated jobs, or one where the esthetics are important, given the wide disparity in fees between commercial and Government awards?"

COMMANDER DUNN: I take it the question asks, how can we get innovative design from our A&E contractors when we have more of a constraint, perhaps, on the cost of our construction?

We do not frequently seek innovative approaches in our A&E designs. This is not to say that we do not want innovation within the design effort. However, in terms of the corporate design, we are not seeking innovation because we are normally building upon a family or history of facilities and we want to just adapt from what we have in the past.

In some specialized new efforts, and in some "monumental" structures such as the Service Academies, we do and we pay the price in the construction. The congress has gone along with us on paying the price of construction, and I do not think this is a real problem.

It is really a question of need. When we have the need we are able to justify both the cost of the construction and the cost of the design effort.

QUESTION - COMMANDER DUNN: "You mention no problem on AE services procurement regarding the boundary between design on the one hand and R&D work or special studies work on the other hand. Is there such a problem? If so, how would you solve it?"

COMMANDER DUNN: I am sure many people here would agree that there is a large gray area when you go from "A&E" contracting into other types of professional services. The Brooks Bill attempts to define architect-engineer services. It concludes with a statement that says:

"... are architectural and engineering services as well as those incidental services which members of these professions and those in their employ may logically or justifiably perform."

I guess that is about as clear a statement of the uncertain area that exists. There is not a clear area between consultant services per se and architect-engineering services.

Within the Department of Defense, the test that is applied is: are the services applicable directly to services or the system for acquiring facilities? If so they are construed to be architect-engineering services. If they do not relate directly to facilities or to that system for acquiring facilities, then they are not.

QUESTION - DR. CUSHEN: "You mentioned the distrust of the profit orientation of consultants by Government officials. What can be done about it? Would you recommend some process for overcoming this?"

DR. CUSHEN: You have to remember there are some people who mistrust you and others who do not. One of the things that we did was to go into an agency that felt that it had been stung by a commercial producer and swore never again to go commercial on a systems type study.

We picked up on this problem and said to the agency, "Hey, don't throw out the baby with the bath water. It is possible for anybody to get stung, besides which, you did not say exactly what it was that you wanted to have done."

They paid us (NBS) about \$2,000 to figure out whether we were telling the truth about the commercial producer. This was followed by \$20,000 that said: "All right; you got off to a good start. Now take the next step."

Two and a half years later, that particular agency was firmly convinced that the service that we provided was obtainable on the outside a little bit better than we were able to do. They are now in the habit of commercial contracting.

The lesson here is that it is possible to prove to people who have had bad experiences that you can buy good services on the outside.



Government is also infiltrated with a number of people who tend to have a socialist orientation. I do not know how you change those people, except to reassure them that things are happening. I guess one of the more telling articles I ever read was by Arthur S. Miller at George Washington Law School, who said that anybody who believes that Government provides services to the public should rethink the problem.

This is a Government-business establishment; it is a techno-corporate society and the faster we recognize that fact, the better off we are going to be.

My only response to the question is; I think you can show them, and I think persistence and performance will do the trick. It is painful and costly, but it will work.



PANEL TWO: THE PROCUREMENT PROCESS





## GOVERNMENT PROCUREMENT POLICY

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ALTHOUGH I AM NOT AN EXPERT ON THE SUBJECT, I have had the opportunity of using professional services for about 30 years, so I may have some minor insight into part of the problem.

The report of the Commission on Government Procurement was issued yesterday. It discusses many of the things brought up this morning.

One section (Chapter Nine) in the report is concerned with procurement of professional services.

Someone mentioned earlier that they had made an estimate of how much it cost the Government to procure professional services. This report suggests that it is about \$1.8 billion, excluding architectural-engineering. I do not know the basis of the calculation. I am not even sure that it is possible to make such a calculation.

The report goes on to admit something which you all knew, that professional services cannot be procured like hardware, and that competitors, in a sense, have to compete on qualitative terms, even though it would be nice to reach the goal of knowing precisely what the measures were as one evaluated the several proposals in advance. The world probably is not this way, however, because fortunately we are dealing with professional services, with people who do not think the same way and therefore do not offer the same kinds of solutions.

We unfortunately deal in a world where, up to the time where you become professional the schooling you go through suggests that there is an answer in the answer book, that every question you address during the course has unique solutions.

At least from our vantage point, most of the questions we address have never had an answer in the answer book. It is very difficult to decide in advance what the evaluation criteria will be.

There is a special recommendation that the Commission makes to use a competitive proposal and negotiation procedure, which takes into account technical competence, concept of the end product, and the estimating of costs, including fee.

I do not remember offhand how many professional services contracts I have been privileged to work on over the years. It has been more than several, and in every case that I can remember it was done by my calling somebody on the phone and saying, "Joe, we have a problem; can you work on it?" Then we worked out the details after the job had started.

You cannot always do that, but I can assure you that on a good many important programs, that is precisely the way we do it.

### Vagueness and Ambiguity in RFP's

The report identifies a number of problems. Among these problems are the vagueness and ambiguity which characterize many requests for proposals and that must be frustrating. It is more frustrating to us than it is to you. Quite often the problem to be solved is only a problem because there is not a current solution.

### An Experiment With "Letters of Interest"

We have tried some experiments during the last several years in which we presented letters of interest to industry. This is a non-RFP. Maybe some of you responded to them. In one case about two years ago we addressed three major defense problems through letters of interest. We wanted to break clearly with the traditions of the past. That is a difficult thing to do, because we operate in a "cult-type" world. We have people who are specialists in ordnance, in airplanes, and electronics. They tend to think alike and in linear directions. What we wanted to do was to break with those traditions of the past, because indeed, in the Navy as in the other services, we are going to have to break with the traditions of the past.

Interestingly enough, though we got lots of complaints, we got over 100 fairly responsive kinds of innovative returns. We were unable, in many instances, to solve the bureaucratic problem of processing promptly all the things we would like to do, but I think that is understandable.

One action which was recommended by this fine report was that agency officials must clearly define the task to be performed in requests for proposals. That may be difficult for the agency officials.

If many firms can furnish the contemplated professional service the agency should be authorized to obtain brief preliminary data in order to select an appropriate number of firms. The report says three to eight. As you recall earlier, a speaker referred to the fact that some 200 people responded to

an RFP. We have had that experience also. It must be very difficult for you to sort those things out in advance. The recommendation of lowering this down to 3 to 8 people may also have its problems.

In unusual circumstances, the report goes on to say, only one firm may have the demonstrated capability. This turns out to be quite often true if there is real research involved. The Government does not involve itself very often in "real" research. In "real" research the principle is clearly not defined in advance. We often do applied research, but in those cases where some special, fundamental work is required, you often seek the guy who is doing his thing the way he is able to do it. There is often no competition at all.

The report speaks to some other problems. They are well known to you, but it notes concern over the use of professional service contracts when they are not really justified or required. They are used as a substitute for developing essential in-house competence when we are taking a 10 to 25 percent cut, or the job has to be done and the people are not available. Or they may be used as a result of getting around a personnel ceiling problem.

We have some concerns in the Navy. Some things which we are doing may take the form of policy because actions make policy rather than declarations.

#### Professional Services on a Competitive Basis

We are trying to make the selection of professional service contracts on a competitive basis. We hope to be doing this more often and with more vigor. We are in the process of reviewing the extended contracts, the ones which have been comfortable for years, to determine whether they are just comfortable or really required.

#### A Harder Look at the End Product

We are taking a harder look at the end product. Quite often the end product gets to be a final report. That is an anticlimax in most cases. It is something that happens after the job has long since been completed. The end product may well be something you do very early in the job rather than very late in the job.

More often than not, the recommendations and conclusions we get are in a form that we cannot implement. They are often in a "you ought to go do something" form. However, they do not suggest what you ought to do or what you should stop doing in order to make it possible.

In our line of business, we never do anything without stopping something else to make room for it. We not only have a declining budget, the budget is also fixed at the top.

### Professional vs. Personal Services

We have an effort under way to instruct project managers as to the fine line difference between professional services and personal services. It is very difficult, when you associate a highly-qualified guy with a project manager not to expect him to help in both areas. By stopping this practice you deprive us of the opportunity of developing our own skills, and we need them badly, because in the end there is a regenerative effect.

If we do not know something about the problem we are not going to be able to define it. There has to be a balanced understanding which goes beyond the particular task that may be required.

### Expertise Creates "Cults"

We have a problem with some "cults" that have formed. They easily form. We are trying to do something about them. However, cults form by virtue of creating experts in certain areas such as a management dogma, value engineering, reliability, and other areas. We are looking these over to see whether or not they perform a useful purpose on or off the job.

### A Gradual Decay of Professional Capability

We have a problem of the gradual decay of professional capability. It is a problem that we all face. Bringing in experienced people and nurturing them to be future leaders is very difficult. It is particularly difficult in the professional services arena. This is because you cannot get experience without working, and you cannot work unless you have experience. This is a real problem.

In our Navy labs we had our greatest build-up of personnel in the forties during the threat to national security. We had an input of professional people, whose tenure eventually amounted to 10 to 15 years. We are also at a point where a good many of these people are at or near retirement. They will take with them a good deal of experience. Simultaneously we are not hiring people because we are reducing the total overall balance. This situation builds a pressure which is likely to be felt by your industry as a group. It will reflect on our internal capabilities to define the problem well enough so that you can bring your expertise to bear.



Thus, the future is one of trying to work out the "creative partnership" which was the theme of this meeting. The pressure of the national economy is certainly going to require us all to sharpen our wits. Our methods are going to have to change from a linear extrapolation of the past. What was acceptable before is not necessarily going to be acceptable in the future. We are going to need more interaction with the "using" population in a more subtle way if we are to make up this growing experience gap.

# THE RELATIONSHIP OF PRIVATE ENTERPRISE TO GOVERNMENT PROCUREMENT

Dr. Robert W. Krueger

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National Council of Professional Services Firms in Free Enterprise  
Washington, D.C.

I AM GOING TO TALK TODAY ON THE PROBLEM of the private sector professional services industry with respect to the "make or buy" decisions of the Government. This comes before some of the other procurement problems you have been talking about today and involves whether you should do these services in-house, by not-for-profits, or buy from the private sector.

## The Professional Services Industry Defined

First I must say a few words about the professional services industry. As I define it the private sector professional services industry has the following general characteristics.

First of all, it includes firms such as architects-engineers, management consultants, information sciences, and systems analysts.

All these firms are for-profit. These firms are not engaged in any manufacturing or construction so that they, like the Government and not-for-profits, do not have the bias related to the production of some hardware or construction. These firms are 90 percent small businesses and deserve special consideration.

Being for profit, there is another characteristic that they share. They are owned and managed, practically entirely, by the same people. This means that they exhibit some of the classic characteristics of capitalism that are not exhibited in some major industrial firms. First, when an organization is owned and managed by the same people it has a particularly strong motivation for efficiency.

Second, they are competitive. This leads to desire for efficiency.

These firms currently total about \$10 billion in annual volume. Today, approximately \$4 billion of that volume is related to Government work. This includes architect-engineering along with the professional services.

## Decreasing Volume is a Great Problem

That number was larger a few years ago. Then it was

on the order of \$5 to \$5.5 billion. This decreasing volume is part of the problem that I want to talk about today.

Because of this decrease as well as the economic conditions during the last few years, the industry has been rather flat in its growth. It has been growing around 10 or 15 percent per year on the average over the last 15 years. This growth is expected again over the next 15 to 20 years.

There are five to ten times as many professionals in Government and in hardware industries as are in this industry. Also, there are the not-for-profit firms, which represent about \$2 billion dollars worth of Government work; Federal, state and local.

### Parts of Government Compete with Private Enterprise

The last number I am going to talk about is the poorest number of all. There exists, we believe, somewhere on the order of \$4 to \$5 billion worth of work inside the Federal Government which is of a type which ought to be done outside the Federal Government. About one-fourth of that, namely \$1 billion, represents work that is done by one agency for other agencies, for state and local governments, or for foreign governments. What I am saying is that there are some parts of our Federal Government that are in competition with private enterprise.

The speakers I have heard this morning have demonstrated that their attitude of cooperation with private enterprise is very good. I am referring to a lot of activities in the Government where there is not the cooperation that has been expressed here this morning.

The National Council, of which I am President, was formed a year or two ago to represent this entire industry. Currently it has about 400 firms as members. More importantly it has the major trade associations that represent the principal segments of the professional services such as the Consulting Engineers Council, the Planners Association and the Laboratories Association. We hope to have the Management Consultant Organization as part of our National Council.

The National Council's principal purpose in life is to fight what we believe has been an accelerating trend toward the use of in-house services and not-for-profits. In addition, and while we are at it, we are trying to get across the image of the professional services industry, not only to the Federal Government but to the state and local governments, and even to the hardware industry, which tends to use not-for-profits instead of private sector firms.

## An Historical Review of the Problem

The Hoover Commission, in the early 1950's, recommended some important changes which were instituted in the early days of the Eisenhower Administration. Let me say parenthetically that these "make or buy" policies of Government affect the entire private sector. They affect hardware, too, but much less because the Government does very little hardware production inside the Government. The service industry, including services beyond professional services, is very strongly affected by the Government's policy with respect to in-house work and not-for-profits than are the hardware elements.

In any event, getting back to policy, a very favorable policy which existed between 1954 and 1965, by a series of Bureau of the Budget Executive Orders, made it very difficult for the Government to use in-house services. It said, for example, that the external service would have to cost substantially more than any internal service for internal service to be used. Even then proper justifications had to be made, with suitably high officials.

During this period, the Government's policy fostered the development of the Government work portion of the professional services industry. A number of companies came into existence during this period which might not otherwise have come into existence. I believe that is one of the Government's basic requirements, namely, to do things to foster the development of private sector elements.

This policy worked well until the period 1965-67, when these favorable policies were changed to adulterated policies in the form of the document that has been referred to before, A-76.

### "Incremental Costing": A Reason for Lost Business

The A-76 document, while stating a preference for the use of private sector services and also hardware, has a group of escape clauses. I will not go through all of them but there is one in particular which is outstanding and which has caused us loss of business during the last six or seven years. This is the so-called "incremental costing principal," wherein a Government agency can justify in-house if it can say that the cost of the professionals and their fringe benefits, in-house, is less than the cost of the entire services outside. That is, the entire services outside meeting the cost of the professionals, their fringe benefits, all the overhead, and the profit.

Internally then, the Government is leaving out of this cost comparison all their overhead. Certainly when objective analyses of Government overhead have been made it is at least in the region of 150 percent.



As one Government official remarked, if this policy were followed in all cases the comparison would almost surely lead to every job going in-house.

Indeed, although A-76 does not absolutely require incremental costing, it allows it. Many Government agencies, unfortunately, the DOD, for example, have used this policy in recent years to do work in-house much more than before 1965.

The Commission on Procurement spoke to this matter in a majority and minority report. This section is on "make or buy" decisions.

The majority report did not make recommendations for very much improvement along this line. The minority report is very much along the line I am talking about. It states that whenever there are viable competitive sources available on the outside, regardless of price, they should be used instead of in-house work. The National Council is hoping to persuade the Executive Branch along the line of the expressed philosophy of the President and his various officials, that they should adopt a policy similar to the minority report.

#### The Not-For-Profit Problem

So much for the in-house problem. One aspect of the not-for-profit problem was referred to earlier as the FCRC's. This is really not the largest problem regarding the not-for-profits. FCRC's were very properly encouraged into existence in a sponsorship manner in the early days after World War II. This was done by the Government because there was no available capability in the private sector. It was the proper province of Government to do such a thing.

Later on, due to the favorable policies that I referred to earlier, beginning in 1954, organizations did come to work with the Government and also came into competition with the then existing FCRC's. FCRC's then spread from the work for their particular sponsoring agency to working for other agencies. They have continued in existence in that fashion and have worked for state and local governments as well.

While they are not a large part of the competitive problem with the private sector, they represent \$200 million of work. They are still given very preferential consideration in the form of sole-source contracts. We believe this is unfair, and we feel that they should be in competition directly with the private sector organizations that are capable of doing the same thing, rather than being given sole-source contracts.

## Not-For-Profits Should Compete For Applied Research Work

However, I am more concerned with the other elements of the not-for-profits. Let me quickly say that universities, in the main, are engaged in basic research, and this is not a sphere of interest in the work activities of the professional services industry. There is a small part of work in universities which is in applied research and it is increasing. I am mainly referring to the not-for-profits who were not originally sponsored by the Government. These were also sponsored by universities. They were simply private organizations looking for the favored treatment that not-for-profits get from the Government. The main source of this favored treatment comes in the form of grants.

Grants were instituted in the early days by Congress, by public law, and were aimed at basic research support. Over the years grants have become heavily applied to applied research, the work that professional services industry can do.

What happens, of course, is that an agency gives work to a particular not-for-profit, one of the independent NFP's or part of the applied research work of some university. Support is a grant with no more justification than the sole-source justification required in the case of giving work to the FCRC's.

These grantees are not the normal contractors. Grants can be given simply because the agency people like a particular organization, and indeed, certain agencies have close affinities with particular groups. They give work to those over and over again.

We, as the association that represents the professional services industry, are asking that all such work which the professional services industry is capable of doing be opened for the contract route and for competitive contracts. Let the not-for-profits compete. We believe, due to our efficiencies, that we will ultimately get more of the work. Nevertheless, we simply want open competition in the areas in which we are capable.

### The Congress and Executive Have to Act

The grant problem can partially be solved by the Executive Branch, where the Congress has given the Executive Branch the right to choose either grants or contracts. HEW's activities are probably the largest example of the use of grant activity. In HEW part of the work may be done in one form or the other. We are asking them, by Executive Branch choice, to choose the contract route. The other side of the picture is that by Act of Congress, the grant is required to be given. Here we are seeking the aid of Congress in changing those laws so that this type of work will be opened up for competition.

## LEGAL ASPECTS OF GOVERNMENT PROCUREMENT

Mr. Gene Perry Bond

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THE BEST WAY TO DISTINGUISH WHAT I AM GOING TO SAY relative to the legal aspects of Government procurement is to discuss remedies. I will discuss the remedies that both the contractor and the Government have, pursuant to Government contract disputes which arise prior to the time that the contracts are entered.

Remedies are actually the best way to distinguish Government contracts because the contract principles of law are not substantially different from the general overall development of contract law.

The legal remedies in Government contracts are not tailored to the nature of the industry or the nature of the company's business. The remedies that a professional service firm might have are no different than the remedies that any hardware manufacturer might have.

It is a fair generalization to say that the law that has grown up in the Government contract area has grown up by virtue of disputes which have arisen between construction contractors and hardware manufacturers on supply contracts. Of course most of that law emanated from the large procurements of the Department of Defense.

### Legal Remedies Different Before and During Contract

The important thing to remember is that the nature of the remedies which either the Government or the contractor have are different depending upon whether the problem involved arises prior to the contracts or during the performance of the contract. Therefore, the best and most logical way to break down this discussion is to discuss pre-contract and contract remedies.

I will try to canvass these remedies for you.

### Pre-Contract Remedies

When you are discussing pre-contract remedies, you must keep in mind that both parties to the contract can take action. The Government can go to the General Accounting Office and seek an advance decision on a contested procurement or a procurement about which it has a question. The contractor can file a bid

protest with the Comptroller General and seek the same remedies: to try to set aside the procurement, to try to have the procurement held up while this issue is decided, or to set aside a contract award.

I must admit, speaking as a private attorney, that when I think of the General Accounting Office in the bid protest area, I think first of that old jingle: "Who's afraid of the big bad wolf?" I substitute GAO for "big bad wolf." The statistics show, unfortunately for us who represent protesting contractors, that we are normally going to lose.

### 90 Percent of Bid Protests Denied

Surveys made on a year to year basis show that 90 percent of all bid protests that contractors file are denied. Perhaps the more important point is that the 8 or 10 percent that are granted by the Comptroller General are oftentimes simply empiric victories for the contractor.

I hate to talk this way, but I must confess that I cannot state flatly that a protest to the GAO is a completely effective remedy.

On the other hand, it is really the "only game in town," and I think you will agree with me after I discuss some of the other remedies.

The most significant and most active role of the Comptroller General is GAO's role in bid protests.

The remedies we are talking about stem jurisdictionally from the Budget and Accounting Act of 1921. There isn't anything in that statute which says the GAO can rule on bid protests, but it is more or less a "jurisdiction by implication." Over the years the Comptroller General has simply assumed this authority which was originally given to the Comptroller of the Treasury back before 1920 by the Dougherty Act. The authority is there. Congress has never interfered with GAO's exercising this authority to render advance decisions. It all stems from language in the statutes, which says that the GAO can render advance decisions on any question involving payment by a Government Disbursing Officer under a Government contract. So this is how the Comptroller General got into the jurisdictional area.

Now, what about the procedures related to this remedy? What are the factors involved?

One thing to recognize is that the Comptroller General's staff, the people who work for him and who decide these bid protests, have no firsthand knowledge of the facts. They rely



primarily on the facts set forth in the procurement agency's report in response to the protest. They do give credence to what contractors say, but whenever there is a disputed issue of fact, the General Accounting Office normally follows the Government's view of the facts. This frankly, in my personal opinion, is probably one of the most serious problems in the GAO's handling of these cases, because it impacts on the effectiveness of a protest as a remedy.

However, when you compare its availability and the cost with the alternative pre-contract remedies you will see that it is still the best way for a contractor to air his problems about any particular procurement.

I have not read a full summary of the Commission's report, but I have glanced at a summary. The summary does not really treat this issue well, and I think that is unfortunate. They do state in the summary portion of the report dealing with GAO procedures that they do not feel that GAO should have the full battery of due-process procedures available to it when it decides a protest. In other words they should not have hearings, arguments, cross-examination of witnesses, transcripts, and so forth. I do not disagree with that.

I do disagree with the omission of the discussion of this problem. I do feel that there should be some vehicle created whereby criteria can be set which will help the Comptroller General and his staff evaluate factual disputes with some other tool than simply saying: "Take the Government view."

#### How About Going to Court?

What about going to court?

You never used to be able to go to court if you were a frustrated bidder. Under dicta in a Supreme Court decision called *Perkins versus Lukens Steel*, everyone had the idea that no one had the right to a Government contract. That was changed in February 1970, in a case called *Scanwell versus Thomas*. Scanwell was the Administrator of the FAA. The case came down from the Court of Appeals for the District of Columbia.

Scanwell created standings, so that frustrated bidders could go to court and get the court to listen to them. This is still the law.

What happens after you get into court?

By virtue of post-Scanwell decisions, particularly from the District of Columbia, the Courts' role in these cases is extremely limited. There is a very heavy burden on contractors who go to court to seek to set aside procurement agency actions.

If a procurement agency can show to a court that its Temporary Restraining Order, preliminary injunction or any other form of equitable relief will somehow interfere seriously with the operations of the procurement agency, particularly military operations, there is very little likelihood that any contractor is going to get relief. Even if he gets relief from the District Court, the District Attorney will go to the Court of Appeals and reverse the District Court within 24 hours. The reason is that they do not want contractors interfering with the procurement and supply system of urgently and seriously needed items.

If you can show the Court that this is not the case and that the procurement agency can work out some kind of temporary formula whereby an incumbent contractor can keep supplying the needed items until the resolution of this pre-contract dispute in the Court you might have some chance.

There are other collateral problems to going into court for a contractor, one of which is that he must post a bond. If he posts a bond and loses and the Government can show the Court that there was no real basis for going to Court in the first place, he could be liable under the bond for large sums of money.

I would have to summarize by saying that court procedures are costly, time-consuming, have not yet provided thoroughly effective relief, and an unsuccessful contractor can expose himself to damages under the bond in case the Government decides to sue under the bond. In one case they were successful.

#### GAO and Court of Claims Best Pre-Contract Routes

All of these are reasons why I think the state of the law is such that the contractor, in his pre-contract remedies should confine himself to either one of two things: going to the GAO and hopefully falling into that ten percent category or going to the Court of Claims or the District Court and suing for his bid and proposal costs. Under two cases which were decided by the Court of Claims, *Hire Products* and the *Keco Industries Case*, the Court of Claims held that there is an implied obligation whenever a government issues any kind of a solicitation, that it will fairly and honestly evaluate your proposal. If you can come in and show clear evidence that that has not been done, you could be successful in getting your bid and proposal costs back. You will not get lost profits. The reason you will not get lost profits is because the court's reasoning is: how can you get lost profits when there has not been a contract entered into in the first place?

#### Contract Remedies

Now about contract remedies. How are disputes resolved during performance, regardless of whether they involve the GFP

clause or whether they involve a specification question or whether there are constructive changes claims in question?

### The Disputes Clause

What is the mechanism for the resolution of these?

Incidentally, I am not even getting into the substantive law of how these different disputes under different clauses are resolved. The mechanism is the Disputes Clause. The Disputes Clause is a standard Government contract clause in almost every contract. It is an outgrowth of the disputes settlement procedures which were originated in World War I.

The first authority to decide disputed questions of fact resides in the Contracting Officer. He is the one, and only one, that can commit the Government as far as dollars are concerned.

The Disputes Clause sets up a system whereby the Contracting Officer and a Board of Contract Appeals are the arbiters of these disputes. There are many Boards of Contract Appeals, many Government Departments have them. The most famous one is the Armed Services Board of Contract Appeals because the DOD has done the most procurement.

Those Boards of Contract Appeals have charters which say that they are the designated representatives of the Heads of Departments of their particular Departments, to decide disputed questions of fact. In this environment the contractor can have what is called in the law a *de novo* hearing on the evidence, a brand new hearing on the evidence.

He can put in evidence, he can swear witnesses, he can file briefs arguing his theory to the Board Member who hears his case. It is a full adversary proceeding, even more important in recent years because as a result of two or three Supreme Court cases, it is the only tribunal where you can present your evidence.

Even though there is a law called the Wunderlich Act, which allows you to go into the Court of Claims and review an adverse Board of Contract Appeals decision, you cannot get the Court of Claims to take new evidence. If you have something you want to present, make sure you put it in at the Board of Contract Appeals level.

The Board of Contract Appeals, by the Disputes Clause, which you agree to when you sign the contract, has the final say on all questions of fact. It is a quasi-judicial operation, so the Hearing Members are applying the law to these facts when they issue their written decisions. However, what they say about the law is not final. The fact-law dichotomy which you see so



many places in the law occurs right here.

The Board decides facts, but it cannot decide law. It can decide facts finally, but it cannot decide law finally. If you feel, under the Wunderlich Act, that the Board has given you an adverse decision which is insupportable, you can go to the Court of Claims and review that decision.

This Act, this Wunderlich Act, allows review of decisions of Boards of Contract Appeals which are shown to be capricious, arbitrary, fraudulent, or so grossly erroneous as not to reflect consideration of the law.

### Breach of Contract

The other area for contract remedies is the area of breach. Normally in standard commercial contracts, if you think one of your rights or obligations has been violated, you can sue in court for breach of contract.

The Government contract remedies, however, are not that simple. When you get into the question of breach of Government contract, you get into a whole maze of alternatives. It is often difficult to determine whether or not what the Government has done or not done rises to the level of a breach of contract which would permit you to go into court, or whether it is simply a claim arising under one of the contract's terms and therefore you would have to go to the Contracting Officer and then to the Board.

Suffice it to say that the present state of the law requires that all contractual forms of relief go first to the Contracting Officer and the Board, and then if you need a review in the courts you can get it.

This is a quick summary of the law that has given rise to disputes, disputes between different Government agencies.

There was an extremely important case decided in April of 1972 in the Supreme Court called the *S&E Contractors Case*. In this case a situation existed whereby the General Accounting Office reviewed a decision of the Atomic Energy Commission that had been favorable to the contractor. The General Accounting Office held that it had the authority to review Board of Contract Appeals' decisions, and that therefore it was essentially in the same position of the Court of Claims.

This was reversed by the Supreme Court. Under the *S&E Case* the Court held that GAO had no right to review Board decisions adverse to the Government. Neither did the Department of Justice have a right to review Board decisions adverse to the Government's interests.



The Procurement Commission disagrees with the *S&E Case* because it has recommended that the Government be granted judicial review of adverse decisions. This is contrary to the *S&E Case*, and I think this was a case where the rationale of the Supreme Court is correct.

That rationale was as follows: the Supreme Court said that the contractor, when he signs the contract with the Government, agrees to continue performance of the contract pending resolutions of the disputes under the Disputes Clause. If he wins under that Disputes Clause, and if either the Contracting Officer or the Board agrees with him, he should not be forced to go into another series of long litigations by virtue of the Justice Department coming in and appealing the Board's decision.

The objective leading to an end to litigation would not be served if Government officials other than the ones who are mentioned in the clause itself could simply veto the procurement agency's decision. I think that is a good decision, because I think most Boards of Contract Appeals are objective tribunals and have done a good job.

#### Public Law 85804: Another Remedy

Another contract remedy is Public Law 85804 which applies only to agencies connected with Defense. It provides for the correction of mutual mistakes, formalization of informal commitments and "requests for amendments without consideration." All the implementing regulations are in Section 17 of ASPER, but that is a military-related statute; it does not apply to civilian functions. The Commission on Government Procurement has recommended that it be broadened to cover civilian functions.

What about the General Accounting Office in disputes situations? Because of the *S&E Case* I do not think that the GAO will take much of an active role in disputes remedies, but it still has authority under the Act. The words are still in the Act; they were not thrown out by the Supreme Court. The Budget and Accounting Act still states: "All claims and demands by or against the Government, all accounts with which it is concerned, either as debtor or creditor, are to be settled by the General Accounting Office."

However, I think their role will be diminished by virtue of the thrust of the *S&E Case*.

Under the Act the Comptroller General can set off amounts owed the Government against sums owing to the contractor-claimant, so a contractor, upon final settlement with an agency

involved, may petition the Comptroller General to determine the amounts owing the contractor under his Government contract.

This does not normally occur. It is a secondary remedy only. Normally these things are resolved in the Disputes Clause.

The final remedy I would like to mention briefly is the liquidated damages remedy. If you are a contractor and you have liquidated damages assessed against you by the procurement agency, you can go into the General Accounting Office and seek to have those liquidated damages either wiped out or reduced. The Comptroller General has discretion under the law to make a decision on what he considers a just and equitable assessment.

That is a very quick review of the legal aspects of procurement.

## A PROPOSED GOVERNMENT SYSTEM FOR PROFESSIONAL SERVICES

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I WOULD LIKE TO PREFACE MY REMARKS ABOUT THE SYSTEM by saying that the Technical Analysis Division has been studying procurement for a good many years. In 1966, Dr. Cushen had the first Users-Producers Conference which emphasized the role of OR Analysts and what they could do in Government.

In 1969 a second conference was held which looked at the private sector and Government agencies and attempted to define what the Government expected of private agencies and vice-versa. In 1970, case studies in Federal domestic policy were given at the third Producers-Users Conference in an attempt to determine exactly how the roles of Government and private agencies fitted together.

### Early Attempts to Establish a System

About that time, the Technical Analysis Division was attempting procurement policies that would permit us to hire a particular specialist in economics, a mathematician or a private company to work on our contracts. It turned out that the average procurement time was somewhere on the order of 40 to 60 days. Some of our contract procurements ran as long as a year. The procurement people were telling us that we had to go out on open bid.

### A Basic Ordering Agreement

When this happened, many of the contracts were never finished. We just ran out of time. We could not procure on the outside, so the Division was in a quandary. The Technical Analysis Division, being what it was, proceeded to innovate. In 1971 the Division tried a basic ordering agreement for professional help. The idea was that we would issue a Basic Ordering Agreement in five major categories. As the need for contracting by the Bureau or by our Division arose, we could simply give out the contracts to the people who were on the Basic Ordering Agreement.

In 1971 as a result of this policy, letters were mailed out to all sorts of companies. We asked for solicitations to join in this Basic Ordering Agreement. Early in 1972 the Commerce Legal Department began to look over our basic Ordering

Agreement and stopped the entire ordering agreement.

In fact, here is what the lawyers said: "Although it is not stated explicitly, it indicates that competition would be obtained only from those firms holding Basic Ordering Agreements; thereby, other qualified firms not holding Basic Ordering Agreements would be deprived of the opportunity to submit proposals for individual projects."

They also said the procedure was inconsistent if it requires the Contracting Officer to solicit the maximum possible sources without regard to firms holding Basic Ordering Agreements.

The legal people said: "Government needs are indefinite at this time and cannot be a basis for a meaningful competition."

I think one of our previous speakers mentioned the idea of having a Basic Ordering Agreement for special services. Legal says that there is no way of specifically defining a task under the procurement regulations and at the same time having a Basic Ordering Agreement against it.

In fact, they went on to say: "In light of the fact that there is a myriad of organizations that are experienced and capable in one or more of the scientific areas it would be improper to award Basic Ordering Agreements to only one of several organizations, and to restrict competition to them based on the solicitations necessarily of broad and imprecise criteria.

"In fact, there is no assurance that the holders of Basic Ordering Agreements will be the best qualified organizations to perform a scientific task."

Loosely translated they were telling us that if we had something to build we could give you a specification with blue-prints, dimensions and some way of quality-control for checking it; and if I could further show that I needed that specific thing, as well-defined, and yet the quantities were variable as to when delivery was needed, then I could have a Basic Ordering Agreement, providing I went out on an open procurement in the first place.

However, when it comes to scientific help they say there is no way, either in applied or basic research, that we as an operating Division could have a Basic Ordering Agreement.

Finally, and I guess this is probably the toughest thing of all to contradict, they said: "National Bureau of Standards does not have the authority to contract for the needs of other agencies."



The Technical Analysis Division has many of its contracts from other agencies. It is our custom, when we need special expertise, to subcontract some of the work.

The Legal people are saying, in effect, that one Government agency cannot really act as an agent for another one. So it is illegal for us to set up a Basic Ordering Agreement for HUD, HEW or someone else, and then subcontract to a private industry.

With these objections, the pre-qualified bidders' list, the Basic Ordering Agreement that was originally set up, came to a halt.

### An Attempt to Meet the Legal Constraints

We then reopened negotiations with the Legal people in an attempt to generate another system that might work, a system that would at the same time meet all the constraints that were being imposed upon us.

The result of this series of meetings was the "Pre-qualified Bidders List." This is simply a variation on the two-step process that has been referred to before. However, it has some unique aspects. Our division has developed a working model of the system. At this point we would like to give it to other Divisions, but as it stands right now, the Technical Analysis Division is the one that is using the system.

### Here is How the System Works

First, the system is designed to comply with the open bidding requirements. One way to comply is to send to anyone who is interested a comprehensive document which contains test problems, and asks questions in a specific format, like:

"What types of personnel do you have who are specialists that you would like to submit as references?" and, "What types of special equipment, computers, do you have?"

Although there is no actual contract being given, we send these documents out. The 400 or 500 or so firms that are cooperating with us send back brochures describing what they can and cannot do. They also include the different areas in which they are interested.

When these brochures came back we discovered that it is possible to categorize one company in an area of specialty or it is possible to categorize one company in a group of areas of specialty. We have done this categorization.

This is really the first step of the process. At this point it is not different from any other process in the past. The possible exception is the way we ask the questions. But it does not stop there.

### The Second Step

We now ask three more pertinent questions:

"Are you a large or small business?

Are you a minority business?

Are you in a labor-surplus area?"

We have to ask these questions because we were told to look into how are we helping SBA, how we are helping EEO, how we are helping the Labor Department, and what else are we doing to equalize contracts.

### The Third Step

Finally, the legal people were worrying about the size of the market. They were saying that the Technical Analysis Division typically goes local. They were saying that we sit around the table and say: "Who knows somebody that can do the job?" This is not quite the way it works.

Under the new system, the idea would be to look under a general category and find out, by going through our list of pre-qualified bidders, how many people in the files are qualified to perform the work. This means that, in effect, we have all year to meet the open bidding requirements and to solicit examples of your work. These examples would be in artificial problems or series of problems. However, the problems would be a good indication of competency.

The actual RFP goes out to those people on our list that are in fact qualified. It gives us, as the technical people, time to read, and to discuss with the individuals that submit. We can write letters, we can call, we can converse; we are not doing anything against the Federal Code in terms of a specific contract. We are not biasing anything, because at this point we are qualifying you.

### Five Scientific Groups

Presently we are developing five scientific areas in the list. The system, of course, is flexible enough to expand in any direction, but these areas are designated as:

Health Programs  
Systems Engineering  
Transportation and Environmental Studies  
Urban Systems  
Behavioral Sciences

For each of these areas which we call a scientific activity, there are typical tasks and anticipated requirements. We present these to anyone interested in order for them to answer and comply with the open procurement regulations. It is only required for us to advertise every six months. If we advertise for these lists every six months, then we have fulfilled at least to Commerce Legal's satisfaction all the requirements for open procurement, assuming that we use our list.

This answers the first legal objection, which keeps competition open and unrestricted.

#### No Need for Precise Definitions

Since the list only constitutes potential contractors, the need for precise definitions of work is nonexistent. As a matter of fact, since the lists pre-qualify you, we do not have to define the tasks, as some of our prior speakers have been saying.

We can emphasize special criteria and special equipment that you have. We can talk in generalities without the need for a specific task description.

If someone proposes, there is no objection to putting them right on the list, assuming they are qualified. This means that if you are not on the list now, and you get word that there is some kind of an RFP going out or a contract we are looking for it is possible to do the two simultaneously. There are no restrictions in that form.

#### Why is this System Unique?

I would like to describe why this system is unique. First price is de-emphasized, and it is de-emphasized in a number of ways.

It has been our experience that large corporations have the ability to underbid small companies. They also have the ability to write newly formed companies right out of the procurement process under conditions existing today. Minority

businesses are always in trouble, and SBA and others are saying:

"Look, we have lists of companies that would like to get in on the action and do not know how. They have no way of circumventing the system to get in."

So we have it broken up into two parts. Assume for instance that TAD has a contract to release. It may be in the behavioral sciences or another discipline. We immediately go to this list called "Behavioral Sciences" and pick out from the pre-qualified bidders all those that appear to be reasonably qualified to do the job. It is immaterial whether they are large, small or in-between, just those who appear qualified to us from the information we solicited.

Those are the people that get the Request for Bid, and under this system you may even get a request without ever knowing that the project is coming up.

When you answer you will be given the usual time constraints. We will use any contract form in the Code of Federal Regulations and, as usual, we will still have the problem of defining the task. When your proposal comes back to the Government, we split it into two parts.

One part constitutes the technical side and one part constitutes the financial side. The Division that gave out the contract has a simple rating system. They are looking at the proposal in terms of technical content, the equipment that is offered, the types of requirements for people, your staff, the resumes that came in and so forth, and their honest opinion as to whether the job can be done.

The procurement people, on the other hand, are looking at how well the bid price was constructed in the first place, the credit of the company, their batting average on past procurements, and finally the bid price.

Since the bid price constitutes only 10 percent of the total award system, 90 percent of the criteria of an evaluation of the contract is for something else. The bias is on the technical side. In other words, 60 percent of the total point value is technical, and 40 percent has to do with administration. There is no attempt to equate administrative because we feel that the bias should be on the technical side. After all, that is what we are all talking about when we procure a company to do a job.

Then the two point categories are simply added up and the highest point total gets the award.



In order to further satisfy the Commerce people, we have set the system up mechanically, ready to be computerized, in order to generate procurement lists by types, for instance, by small business, by code, by minority business, or non-minority business, by labor surplus, by university, as well as other groups. The system is set up such that we can start classifying and even generating statistics on what has been happening to the lists and how they are working.

We have approached Commerce with this system and, of course, their procurement files are five times as large as ours.

The system lends itself to this situation.

To summarize the system simply amounts to this: to wait three or four months to get an RFP out the door, to wait another 30 days or even six months to get RFP's and responses back and also have to tie up all kinds of technical people's time means that the original question has probably changed anyway.

Commerce assures me that under this system it is conceivable for ordinary contracts to be turned around in less than 15 days. We can do this because we can openly procure, we can sole-source, in effect, if we can show that the lists contain only one vendor with special equipment.

An example of this came up recently in a behavioral science contract in which the behavioral scientists needed a special room which contained one-way mirrors and some movie camera equipment with which to do analysis. We only had one vendor who was qualified; hence it came out as a sole-source.

Since the system began February 1st we cannot tell you how effective it has been. It has not really started except as a working model. I can tell you that as a model it has answered the procurement and legal questions of Commerce. Mechanically it is workable. It is not complicated. It does not take much time for the Government to search the files to pre-qualify people.

We are at the stage in which we have a working model. As far as other Divisions, other Departments, the system is available; whether they will use it time will tell.

## PANEL DISCUSSION, QUESTIONS, AND COMMENTS

### PANEL TWO: THE PROCUREMENT PROCESS

QUESTION - DR. KRUEGER: "The Comptroller General's decision of September 11, 1972 provided the EPA, significantly restricts the number of situations where one agency can get goods or services from another under the economy provisions. Is your organization satisfied that the Federal Government is not competing with you?"

DR. KRUEGER: I am not thoroughly familiar with that particular act of GAO's, but I would certainly say that in general I am not satisfied, from past experience with regard to other agencies.

QUESTION - MR. BOND: "Comment on the Fairchild Industries case with NASA and on the reversal of the contract award for the ATS satellite contract. Was that taken beyond GAO, and does this set any precedent?"

MR. BOND: I believe in that case there may have been some contact with the Legislative Branch. I do not think that was controlling any more than I would think it would be controlling in any GAO protest.

It is standard procedure for contractors to alert their constituent Congressmen of a protest if they are vitally concerned. Sometimes this accomplishes an awareness on the GAO's part, if the Congressman's or Senator's staff takes an interest. They are after all a Congressional agency, so they are sensitive to this. I imagine they can be influenced but frankly my personal view is that the GAO, if it thoroughly examined a contested procurement issue and came to a decision, would never change its mind by virtue of Congressional interest. I have never seen it happen.

In the Fairchild/GE protest, the company talked to Congress, and I would not be surprised if it talked to someone in the White House. In my opinion, and again this is just one man's opinion, the determining factor in that turnaround was the fact that the Administrator of NASA did a reversal, and set up an evaluation group which came to a decision different from the decision made by the procurement agency. I think that is the primary reason why Fairchild won that protest.

QUESTION - JOHN MORIARTY: "In evaluation of proposals, you said 10 percent would be for cost, 60 percent for technical and 30 percent for administrative aspects of the proposal.

"Will you name or discuss some of the items under administrative aspects?"

MR. MORIARTY: Yes. First let me correct those percentages. It is 60 percent technical, 40 percent administrative. Those are the two major breakdowns; cost is one category within these.

As far as the administrative side goes, we are interested first in the credit rating. What is the credit history of a company? This is particularly useful information for new businesses just starting. Some of the companies that we deal with do have an interesting credit rating.

Secondly, we are interested in the bid price itself. We are interested in another category, which simply is: how was the bid price determined? What mechanism was used? Was there just somebody writing numbers down, or was there really some sort of a scheme or vehicle used to determine it?

Finally, in the last administrative category, we are interested in the financial solvency of the company and their ability to finish the contract.

QUESTION - DR. KRUEGER: "How much do you think grants are going out on the buddy system?"

DR. KRUEGER: Certainly a substantial number. In the agencies that use grants in the main, the people who are instrumental in letting them have close relationships with particular institutions.

I must certainly admit that the cumbersomeness of the procurement process is another reason for letting grants rather than contracts when the agency has a choice.

QUESTION - DR. WATERMAN: "How do you define professional services versus personal services?"

DR. WATERMAN: The professional services that I was referring to are those where a person is highly skilled in a particular line of endeavor: a physicist, a chemist, or a specialist in some kind of analytical process. The other type comes about in curious ways. We find it convenient to hire professional services who turn out to be clerical help because they are willing, intelligent and capable and begin to type in forms, fill in data, and assemble information. We have such a flood of paperwork required that there is a lot of pressure to get people to do these tasks.

I was distinguishing between those two things.

QUESTION - JOHN MORIARTY: "Will the new system provide for a face-to-face presentation in addition to responses to written questionnaires?"

MR. MORIARTY: It provides for face-to-face presentations in terms of the pre-qualifying.

For example, if we picked ten firms, selected ten firms from the list, at that point everything would be the same as it is in the standard Code. The real difference is getting around the time constraints on open procurement. If we just advertise in Commerce Business Daily, it is going to take weeks and weeks.

If we go to the list we can cut that time. Those people who are selected from the list are treated like any procurement process, except when the returns come back. This means that if ten people were solicited communications would go on with ten people. Or at least they should.

QUESTION - DR. KRUEGER: "Do your concerns, relative to Government competition, require legislation principally, or would action by the Executive Branch be adequate?"

DR. KRUEGER: Action by the Executive Branch would be adequate. That is, certainly an Executive Order in OMB stating substantial changes to A-76 along the lines of the earlier BOB documents, but particularly along the lines of the minority opinion of the Commission on Procurement, would make great changes in the conduct of the Government.

QUESTION - DR. WATERMAN: "I understood you to say that the Navy is trying to increase the use of price competition in processing professional services. If my understanding is correct, why do you feel this to be in the best interests of the Navy?"

DR. WATERMAN: I guess I was not quoted very accurately. I did not say that we are trying to devote more efforts towards competitive bidding. I think the important thing is that the best bidder should get the job if he is the most qualified.

QUESTION - JOHN MORIARTY: "Is it worth the bother for us to fill out the very complex pre-qualified bidders' list? In other words, how many professional services dollars does the Technical Analysis Division propose to contract outside in a year?"

MR. MORIARTY: As I said at the outset, TAD's role, or I should say its mission, is to try to develop working models to somehow bridge the "thin film" area that Dr. Cushen was talking about. In this case it happened to be a procurement question. The model is intended primarily to bridge this "film" as opposed to having us being the Government procurement agency. TAD would like to get working models established in other agencies.



QUESTION - MR. BOND: "Is there a vast volume of illegal sole-source consulting going on? If this is so, can a legal case be made? It is generally agreed that once an RFP appears in the Commerce Business Daily, it is already too late to bother."

MR. BOND: I have not made any survey, but I am trying to show that one of them right now is illegal. There is one sole-source procurement contract in HUD where we are protesting.

There seems to be a tendency in the civilian agencies of Government to go through a sole-source procedure without as much care and attention to justification as there is in the Department of Defense. When Defense does it they do a better job because they are more used to doing it.

In the Department of Defense they have more experience. Sole-sourcing itself is not illegal and it probably never will be illegal. However, you can see, if you look at the regulations, the procedures, and the justifications, a less than fully-developed approach in the civilian agencies, whereas DOD usually puts in more care.

The Federal Procurement Regulations are not as elaborate as the ASPER's are on sole source. Not as many criteria are set forth for sole-sourcing in the FPR as there are in the ASPER. In the military, departments implement the ASPER's with some of their own regulations.

DR. KRUEGER: I would like to comment on some aspects of that question.

Certainly there is nothing illegal. There are several layers of sole-source contracting. Some are the kinds that any private organization can get on the basis of a justification of uniqueness. But there is the sole-source that special agencies use namely: Federal Contract Research Centers or other types of not-for-profits, where procurement regulations make specific exception and say it is all right without any justification of uniqueness.

Here it is all right, but we believe the rules should be changed.

QUESTION - DR. KRUEGER: "What should be the basis for determining whether professional services should be accomplished in-house or by contract?"

DR. KRUEGER: Basically, the principle enunciated in the minority report of the Commission is as follows: if there exists in the private sector sufficient competitive resources, not a single one, then the matter should be let to contract.

There are certain possible exceptions that may be made with respect to some aspects of military work having to do with intimate conduct of a war, and other aspects which are proper. I do believe the current A-76 gives the military more excuses than they need relative to secrecy and other factors.

For example, security is an area where a private organization can be just as dependable as an in-house group or as a not-for-profit.

QUESTION - JOHN MORIARTY: "How does one obtain the pre-qualified questionnaire of the National Bureau of Standards? What is the agency and address? What is the procedure for updating a consultant's file under your new system? Anytime the consultant wishes, in response to specific inquiry, or upon periodic call from you?"

MR. MORIARTY: In answer to the first question, to get the forms you address your letter to Mr. John Moriarty, National Bureau of Standards, Technical Analysis Division, Room A166, Building 225, Washington, D.C. 20234. Or, one can call (301) 921-3565.

In answer to the second question, we take updates anytime during the year once the system goes into effect. We will advertise every six months. At that time you can update or you can update it anytime in between.

As a matter of fact, we can meet with you and show you what is in your file. We have already had occasions in which companies changed administrations. This change occurred over a period of a year, so we showed them what they had sent us, and they updated from there.

There are no restrictions on updating at all.

QUESTION - MR. BOND: "Can you comment on the recent actions of the Justice Department against professional trade groups and their non-competitive canons or ethics?"

"What effect on the procurement process regarding professional services do you foresee?"

MR. BOND: There are certainly two different questions there; the first one relates to the action which the Antitrust Division of the Justice Department has taken in suing certain professional groups. I have not been closely connected with those, but they seem to be doing a little bit of picking and choosing and not suing all. The responses from the trade associations have varied also; some have capitulated and immediately entered into negotiations for a consent order, and others appear to be more interested in fighting.

In answer to the second question, I do not think the Justice Department actions are really related to Federal procurement relationships with the companies of these various associations.

I think they relate to the provisions in the charters and by-laws of these organizations which they are alleging to violate the Sherman Act. The Justice Department says that they are basically setting prices.

I do not think they are talking about collusive bidding on Government contracts. I do not think there will be any direct impact from the suits on Government procurement.

Indirectly, I suppose there could be some, to the extent that these professional service associations change their pricing practices as a result of entering into consent orders. Their pricing practices with regard to the Federal Government will have to be consistent with those, but the attack the Justice Department is making does not go to collusive bidding practices, not on Government contracts.

QUESTION - DR. KRUEGER: "Most non-profits find grants an undesirable procurement form compared with contracts. Grants provide no fee and may require cost-sharing, yet there are many legitimate costs such as interest or the purchase of equipment, which must be paid from fees. I feel most non-profit organizations would support your effort to convert grants into contracts."

DR. KRUEGER: I certainly favor the end result espoused by the question. However, the fact that the grant process is still in use to a high degree makes me believe that a lot of people do not look at them as badly as you do. I hope more people like you, for reasons other than mine, are against grants so that open competitive contracts can exist.

QUESTION - MR. BOND: "You stated that the GAO decides only ten percent of bid protests in favor of the protester. Does this imply that all protests have an equally valid basis? What percentage of bid protests concerned formally advertised procurements, and how does this relate to contracts for professional services, which are essentially all negotiated contracts?"

MR. BOND: First I will answer the question pertaining to how many protests related to formally advertised procurements.

Historically, more protests have been filed on IFP's than RFP's or RFQ's. However, the GAO has, in more recent years, taken a more active role in the questions arising out of negotiated procurements, questions such as, what is the proper competitive range, and the whole question of what kind of

criteria should be set forth in RFP's, also questions such as what is a specification common to all bidders or offerors, and whether or not the RFP should set forth the weights specifically for the different criteria.

By no means does the GAO feel disinclined to hear protests on negotiated procurements. They are very interested.

I think the third question can be answered by saying that as far as professional services industry procurements go, which are mostly negotiated, an avenue is available as a remedy in the event there is a valid basis for complaint.

The fact that 90 percent of the protests are denied does not mean that the protests are invalid. Some of them have a thinner base for complaint than others. There is a variety of reasons why they are denied. Often a protest is filed after a contract is awarded, and that is a futile gesture because the GAO has historically been concerned about:

"What if we agree with the person protesting? What do we do? The contract has already been awarded; we do not want to cancel a contract and then expose the Government to a breach of contract suit for damages by the company that won the job."

That is why it is always wise, if you have a basis for protest, to get it in prior to the award being made.

Some of my earlier remarks might possibly have been misinterpreted. The GAO is taking a little stronger approach to protests now than it did two years ago. This is because there are some changes in the staff. But on the other hand, it is still a relatively effective remedy. If you are in the protester's seat, and you have gotten the GAO to go along with your view of the issues, you still may not get any effective relief because the Comptroller General has a history of usually just "spanking" procurement agencies on the wrist and saying:

"Now, that was wrong; we agree with the protester, we do not think it should be done that way, we think they have a valid complaint, and make sure you correct your procurement actions in the future."

What would that do for the protester, as far as it goes? Nothing. In a couple of cases, they have actually recommended to the procurement agencies that a contract awarded improperly be terminated for convenience, and I think that is what they should do. I think they have been a little more aggressive in the last couple of years, but on balance, they are still too timid.



QUESTION - JOHN MORIARTY: "How many contracts are necessary each year to justify your new system? Would it be worthwhile if you had, say ten or fewer a year?"

MR. MORIARTY: The answer is yes. We have no limitations on contracts, either on how many we are going to award to have you in the system, or how many you have to have had prior completions on to get on the system.

QUESTION - JOHN MORIARTY: "My firm has BOA's with OMB and Department of Transportation. Why doesn't the Government get together on procurement procedures?"

"Do you anticipate that the system which you describe will be used by agencies other than the National Bureau of Standards?"

MR. MORIARTY: The idea is that TAD develops a model and then we try to install the model in other Government agencies or departments. I guess the answer to the first question is yes, we are very hopeful that we can get it in use on a much wider basis than in our Division.

We have talked with other people in other agencies. We are negotiating with people down at Commerce at the present time to have it installed as a Commerce-wide system.

As far as other agencies go, TAD of course being a member of the Bureau of Standards is also constrained to what Commerce does. If you introduce other departments of Government, then it becomes a whole new ballgame.

At this point we have not done anything past Commerce, we are strictly limited to our own agencies and departments.

QUESTION - MR. BOND: "You recommend getting your protest in before the contract is awarded, but in general the contract has been awarded before the need for protest is apparent."

MR. BOND: That is a common problem in negotiated procurements where you do not really know what is going on. There are no requirements for the Contracting Officer in the very delicate phase prior to awarding a contract after proposals are in and he is making his evaluation. He has to be very careful that he does not tell you too much. It is the Government's business as to whom they want to award a contract to and you normally have to be very sensitive to what one thinks the RFP calls for, what you think the relative competitive situation is, what the requirements are for Government action during the evaluation phase, and you want to collect as much update information as you can as to what is going on. There is no other way

to do it and if you think that things are going on which are going to be improper or can act to your own company's detriment, that is when you have to protest.

You often have to file protests not having the real view of exactly what has happened. I am not encouraging people to simply protest with no basis, but there are ways to know. It seems, for example, in the negotiated procurements there is always a marketing team running all over Government collecting industrial intelligence as to prices. Everybody seems to know what everybody else's price is, even though officially they do not know.

If that is the case, if you think you are low bidder, and you have the best technical proposal, and there is no reason for your company not to get the award, and yet you are not going to get it and that is completely a mystery to you, maybe the best thing to do is protest before the award is made.

I want to say that I talked about pre-contract remedies and contract remedies. I have not had any questions about contract remedies. I have not had any questions about how you structure your business to properly perform the contract, how you proceed to perform the contract properly and also get the right cost recovery under the contract.

Contract remedies are the areas which I think are much more meaningful to companies than the pre-contract remedies.

The reason there are so many protests is because people compete so vigorously for these contracts that they get emotional about them and feel that they have to have the business. Once they get the business they do not pay enough attention to what is available for recovering excess costs and so forth. These are the areas which can be a lot more meaningful to a company than fighting over who is getting the contract.

QUESTION - MR. BOND: "You indicated that Boards of Contract Appeals are generally objective tribunals. I believe this is consistent with their transformation into quasi-judicial forums rather than as agents of the Executive Department. A quasi-judicial forum, it is generally equivalent to a court of original jurisdiction. What is so inequitable for the Government to request a review or appeal of the BCA decision on a matter of law?"

MR. BOND: I think where the inequity comes in is this: the contractor has given up something when he signs the contract. He has given up the right to go in and sue for breach of contract in court. In return for that, I feel that once he has exhausted the administrative process, and the decision is in his favor by the procurement agency he is entitled to rely on that and not have to go further.

Once a Contracting Officer has ruled in favor of the contractor, or the Board of Contract Appeals has reversed the Contracting Officer's decision against a contractor and ruled in favor of the contractor, usually several months, if not years, have passed. And this all stems from the Disputes Clause in the contract in the first place; it is part of the bargain.

So the rationale is the same rationale that the Supreme Court used in the *S&E Case*. I think that if a contractor is giving up his normal commercial common-law rights to sue for breach of contract, and has accepted an administrative remedy, via the Disputes Clause, that he is entitled to the benefit of his bargain.





PANEL THREE: MANAGING THE PROJECT



## GOVERNMENT PROJECT MANAGEMENT

Mr. T. Fred Noble

Technical Consultant  
National Information Systems Corporation  
Arlington, Virginia

I HAVE EXPERIENCE PRIMARILY IN THE PROCUREMENT ASPECTS OF DATA PROCESSING.

### A BOA for Systems Analysts

One of the things that we recently did at GSA was to develop a Basic Ordering Agreement for systems analysts and programmers, in which job descriptions were defined for a systems analyst. Everybody in the country knew what we were talking about, industry as well as Government. When we said: "Do you have a systems analyst?" the answer was: "We either have a systems analyst or we do not."

This program exists. There are about 90 companies on the Basic Ordering Agreement for Systems Analysts and Programmers. At GSA the system is already in effect and is being evaluated. Eighty companies have already received business under this Basic Ordering Agreement.

### Ten Well-Defined Job Descriptions

What is this all about? The Basic Ordering Agreement for Systems Analysts and Programmers, and software development includes ten well-defined but brief and concise job descriptions for various skills in the data processing area.

When we started out there were 50 responses to an RFP for a Basic Ordering Agreement. The one thing that GSA has is the responsibility for centralized procurement for data processing, hardware, including software. Recent regulations have required that all Federal agencies come to GSA with the requirements that they have for proprietary software packages.

I have given presentations as a Government representative to the data processing arm of the Secretary of Navy's Office, the Secretary of Army's Office, Department of Defense and most civil agencies. To my knowledge most agencies are familiar with the Basic Ordering Agreement for Systems Analysts and Programmers.

The State of Israel, Japan and 300 higher educational institutions are familiar with the Basic Ordering Agreement for Systems Analysts and Programmers. It has been found to be usable to the tune of \$4 million dollars a year.

### How the BOA Works

How does it work? First, anybody can get an RFP from the Business Service Center at GSA, GSA Region 3, Zip Code 20407. The title is: *Basic Ordering Agreement for Systems Analysts and Programmers*. It defines the scope of the contract. Eleven different areas are covered, and ten different job descriptions for the services to be performed.

Those job descriptions were established on the basis of the Civil Service standards, and all companies that have submitted information to various Government agencies, from Basic Ordering Agreements and from contracts that have been issued by OMB and the National Science Foundation. *Computer World* has had many articles about the Basic Ordering Agreement.

National Information Systems has recently requested from the General Services Administration that the Basic Ordering Agreement be expanded to computer time or that a new Basic Ordering Agreement be established for computer time. A new Basic Ordering Agreement has also been requested for Computer Output Microfilm. I also think that there are many, many other areas where the Basic Ordering Agreement may be used.

You all know that there are human resource pools in the Federal Government that are in use by many Federal agencies in which the agencies get their programming and systems analysis accomplished by a Government source. These pools are in existence in many GSA Regional Offices around the country.

I have asked the question, has A-76 been really analyzed by industry? I believe you will find that A-76 states that new starts will not be attempted by the Federal Government until it has been proven that they will do the work for less than a contractor. That is in the existing A-76. Has that point ever been challenged?

Do you know that there are Federal Data Processing Centers in most every region? The National Bureau of Standards assists many Federal agencies. I was very much involved on the original Ed Dwyer staff of the ADP coordination function on implementation of Public Law 89-306. I was a broker for every Federal agency to see whether or not there was computer time or systems analysts in the Government available, before a company went commercial.



Is Government really more economical than industry? Nobody really knows. But somebody had better find out if Government and business are to coexist. We all say we know what the overhead is, but I wonder if you know what the overhead of NBS is?

1,000,000 Hours of Unused Computer Each Month!

The law says that many agencies will support other agencies if they have excess computer time. How much computer time is available as unused in the Federal Government on a monthly basis? The answer based on the latest management information systems statistics is about a million hours a month of computer time.

Has anybody here tried to buy that excess computer time? How would you like to have some of this unused computer time? It is excess property, is it not? You can go out and buy an excess desk or what have you; has anybody tried to buy excess computer time? Once it is gone, it is gone.

Project management. I am not so sure that we can talk about specifics in project management. My own opinion is that we have to talk about the whole "umbrella." We have to talk about the dirty mess that we are involved in, both in industry and Government, before we can really say we are doing a good or bad job.

I know many fine project managers, industry-wise and Government-wise. I know a lot of the problems. Many of the problems are caused by turnover.

Primarily, most everybody wants to do a good job. I do not think there is anybody who wants to do a bad job. But one of the big problems of project management is just the fact that somebody did not know what they wanted in the startup in the first place. Nobody could really manage a project under those circumstances.

One of the big things that faces all of us is getting the loose ends tied together.

## MANAGING THE PRIVATE CONTRACTOR

Mr. Richard A. Walbrecker

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THE FIRST THING ABOUT THE PRIVATE CONTRACTOR THAT I WOULD LIKE TO GET ACROSS is that profit is a cost of doing business. It is not a luxury. It is not what is left over. We have to manage a private contractor to make a profit. We have to convince those people with whom we deal in the Federal Government that profit is not a luxury. It is not particularly a reward. It is a cost, just like overhead is a cost.

Let me say something more about the private contractor. We are transportation and urban planners. We have about 250 people, 160 professionals in our group. We are located in 17 offices in this country and five overseas. To give you a better view of the position from which I speak; we do about 25 percent of our total work with the Federal Government, about 25 percent with private industry, and 50 percent with local and state governments.

Of this, our contractual breakdown is 60 percent CPFF; the remaining 40 percent is split between time, materials, and fixed-price contracts.

I would like to trace a project from the RFQ through to the RFP, contract negotiations, managing the contract, and finally, what I would like to call "Federal evaluation" of the contractor.

I was pleased to hear Mr. Moriarty talk about RFQ's and pre-qualification. All of us have been spending too much money and time chasing things we should not chase. We have spent too much time being concerned about why we did not get it, insisting on debriefings, going after projects that should not have been sought.

We feel that an RFQ is the way to do business for the Federal Government. Perhaps we could get quicker response to our proposals if they did not have 50 to read, but we are limiting it to five or six qualified contractors for each proposal.

Take as an example a situation that has happened many times in the past. A contract worth \$200,000 has 40 proposals submitted on it. Let us say we go from one to two and a half

percent, as the cost of proposing. That would be somewhere between \$2,000 to \$5,000 that each contractor would spend to submit.

The cost to the Government, on an average of \$3,000 would be \$120,000, chasing a \$200,000 project. That is sort of ridiculous, isn't it.?

### First Step: Evaluate the RFQ

Our procedures, in trying to see that we make profit is to first evaluate as best we can the RFQ when it comes out. We try to get a feel for just what is going on in the minds of the people who want this job. What is behind it? What is not written? That is not because it was not written purposefully. We are looking for what was not said about what is being looked for in this job.

We try to see if there is a need for a team. We are increasingly getting into teaming on proposals, because the range of skills necessary for most of these proposals is far beyond that which is held within any one company.

We submit our qualifications and we are pleased if we are "short-listed," because we know our chances are at least one out of five or six. That is not a bad investment.

### Second: Evaluate the Competition

We would like to know who is the competition. We think we should be told. We think it is important. We think that if you know your competition you can develop the strategy for winning.

### Third: A Briefing by the Technical Manager

If there is not a formal briefing offered we proceed to get a briefing from the technical manager. At that point a decision is made. The proposals manager, who in most cases will be the project manager for the job, must fill out a form. It is a Proposal Request Number Form.

### The Proposal Request Number Form: A Thorough Analysis

This form insists that prior to his getting a proposal number, he knows: the competition, the value of the contract, has a good estimate as to when it will start, has met with the technical manager for the Federal agency, has a budget for what it is going to cost him to write that proposal or negotiate that contract.

This is all done before approval is given to go after that proposal. Then a number is assigned just as if it were a job number and all time is logged to that proposal number, printing costs, travel costs, et cetera.

We find this is the only possible way we can control our budget.

### Suggestions for Improved Government Service

What would we ask of the Federal Government in regard to proposals? We would ask that they respond more quickly, so that we do not have to go through the estimate of early start, likely start or late start.

As many of you know, in many cases it has been as long as one year from selection to the start of a contract. The Government is not getting the best that was offered. If they are, it is by chance, because we cannot keep people waiting for a project to start.

In contract negotiations, we have a Contracts Officer who is familiar with the processes and he generally negotiates at his peer level with the Contracting Officer for the Federal Government. It is very possible that in earlier stages of selection, our technical people or our proposal manager, were down to discuss some of the finite parts of our proposal and how they related to the RFP. When this is out of the way price negotiation begins.

We have seen the practice of negotiating concurrently with two or more people in the Federal Government. We think it is a waste of time. We think the amount of pressure that is put on the contractor is unreal. We also feel that the results are underbidding and overruns on jobs which are basically in no one's interest.

Negotiation should be a case of two intelligent negotiators getting together and knowing each other's business, so that you do not have to go through concurrent negotiations in order to feel absolutely positive someone was not "had."

We also recognize the statutory limit of ten percent on CPFF contracts, but that is based on the sharing of risks. With cost limitations as they are now put on CPFF contracts, we do not see a sharing of risk anymore. We also do not see any reason for a statutory limit of ten percent on these kinds of contracts.

Essentially, the "cost price-fixed fee" contracts that many of us are being met with today in the Federal



Government are not cost-price-fixed fee at all. They are essentially fixed-price contracts, at a ten percent or lower rate of profit. We would like to suggest that it would be in the best interests of the Federal Government to change this practice.

Now to the point of implementing and controlling the project as a private contractor.

### Monthly Cost Review

Each project manager has a monthly administrative and cost control review and a monthly technical review. It must be done on every project. We find that this review alerts us early enough to the problems that he is facing with his client. Basically project managers are reluctant to tell their top management of their problems much like many mayors of cities consider that all problems will just go away if ignored.

We try to find out if there is a client problem and get our project manager to admit it through a technical review.

We have monthly data available to him as to the cost he has incurred on his project. We review his completion estimates, because they relate to the monthly profit that is shown on that job. If you do not review them and then you try to discuss them thoroughly with the project manager his basic incentive is to keep management off his back and to show a favorable completion rate with what he has spent. If this occurs the only time you catch him is at the end of the project, that very last month. Then all of a sudden the job becomes a loss.

### Suggestions to Federal Contract Managers

What would we say to the Federal Government contract managers or project managers as suggestions for how to work appropriately with private contractors? First, understand the project. Know what you are after. Please do not force favors, do not get a project manager in a bind by saying: "Gee, I would just like you to do this little thing for me." Because he figures he should, it is an investment. What is latent in that kind of a suggestion is that "you will get your money faster and we will do something for you later in the project." It should not be done.

Follow the project, as the contract is written, and if not, revise it. If you as a Government project manager want something else done, pay the man for it. That is why you paid him in the first place, because you considered he had some knowledge you wanted and could do some work you wanted. But do not pressure the man.

We would like to suggest that you review promptly. It costs us a lot of money to have jobs delayed because we do not get prompt reviews of drafts or interim reports. This happens frequently. Do not delay the project unless it is absolutely mandatory. I do not mean delaying it through project reviews, but the project manager for the Federal Government should be our "friend in court." If for some bureaucratic reason they said: "Let us stop that job for a few months," you just have to imagine what that cost to a contractor is to stop and then try to start it up again. Realize his side of the problem. As the Government's proposal or project manager be his friend in court.

As a Federal employee dealing with a private contractor, please assist him in timely payments. Our payment received cycle right now is about four months from invoice to payment. That is too long. It is costly for everyone. It is not good business.

Finally, I would like to suggest that there be a process of evaluation at the end of the contract. It would help in the selection process on the next job, for qualification processes, if there could be some meaningful method of sitting down with a contractor, the project manager for the private contractor and his superior, and going over the project. What happened during the job, the satisfaction or the dissatisfaction, methods of improving your performance on the next one, would all be subjects during this review.

I suggest that these things are not just meant to make it easier for the private contractor. They are meant to allow him to do the job professionally that he is in this business to do. They are meant to allow him to do it at a profit, which I will remind you is a cost of doing business.

## MANAGING THE UNIVERSITY RESEARCH TEAM

Dr. Robert P. Boynton

Dean for Graduate Studies and Research  
The American University  
Washington, D.C.

I WOULD LIKE TO BEGIN BY SAYING "AMEN" TO THE last presentation.

That was almost a textbook presentation. Unfortunately, there are too few textbooks on this subject so you are to be congratulated on both the clarity with which it was expressed and the pleas that were made. Most of your points are applicable to universities.

I say most because you began and ended with the statement that profit is the cost of doing business. Unfortunately we have to absorb that cost. I also know that there are some others in the room who absorb profit as well.

I want to address my remarks today primarily to the unique characteristics of university research. I am going to do that by creating a caricature. My remarks do not describe any particular university. They are meant to describe the problems faced by universities.

I offer these remarks to you first because I recognize that many of you are our competitors. Although many of you know a good deal about the inside of university research, some of you have seen us *only* as competitors.

### A New Mode of Collaboration

I offer these remarks to you because I know many of you are our potential collaborators. Increasingly there is a new mode of collaboration, not only between universities and other not-for-profit agencies, but between universities and for-profit groups. We are presently engaged in responding to a request for proposal that involves us with a for-profit organization. It is my first experience in this area. I do not know whether it will work, but I am finding it fascinating.

I also offer these remarks to you because I know that in your heart of hearts, some of you wish you were in the university setting. I want to warn you off a bit. At any rate I would like to open your eyes before you jump in.

I suspect the perceived advantages of the university setting are essentially two.

The first one is the problem of fiscal responsibility. Thanks to tuitions we have that problem sewed up. The American University having been in business for some 80 years and not having gone bankrupt, we have quite a track record.

Related to this is the question of cash flow. Universities are in pretty good cash-flow positions. This is the other thing that makes them terribly attractive, particularly to other not-for-profit organizations.

There is also the prestige. Isn't it a strange thing, at least as viewed from the inside, that the least of all prestigious universities somehow have, in the research area, the equivalent kind of external prestige as all but the top four or five independent research firms? Again a false image, but one that sometimes looks very attractive when you do not have it.

I would like to create a caricature of those elements and problems which are relatively common to the university experience, and are less common in other research climates.

### Problems of University Research

There are a number of considerations which in some measure appear common to all university research. I might begin by pointing out that it takes a certain amount of courage to get up here and talk about university research. There are many forms and many organizations for it, and as many arrangements as is imaginable. It is not a unified endeavor. It is one that varies from the MIT's of this world down to the smaller schools. It also is handled in a great many different ways.

### Education: The Primary Function Not Research

However, they all have at least one thing in common. With few exceptions, research is a primary function of a university that is, how we distinguish the university from the undergraduate research institution. But it is not the principal function of the university. Education and learning holds a position with which the research function cannot compete. Research can only complement education, it cannot successfully compete with it.

In addition, universities are essentially non-performance and non-evaluation oriented. The manager of university research has to operate in that environment.

The third thing I would like to say is that the art of management is as primitive in the higher education setting as it is in any enterprise in contemporary Western culture.

These three conditions provide the unique challenge



for the university research manager. We all recognize the commonplace formulation that the university's social goals are education, research and public service. An expected assumption follows from this formula: that all elements in this core are fundamentally co-equal; education, research and public service.

Such, however, is not the case. The principal functions of almost all universities, public and private, are education, the learning process, and most importantly, its certification.

Research and community service are accepted as uneasy partners only so long as the pursuit of these goals does not hamper the pursuit of education and the manifold steps that lead to the certification of the educated. This means:

1. Research is best which does not interfere with classes or faculty office hours devoted to students.
2. That research which involves students is better than research which does not involve students.
3. That research is good when it brings monies into the educational system.

Those are the three conditions under which universities prefer to do research.

There abounds in all universities the myth that research and teaching commitments are antithetical. It is simply a fact of life, wherever you go, be it Princeton, MIT, Berkeley, TAU, Georgetown or Montgomery College. You will find the student body thoroughly believes that one reason it cannot get to its faculty is because they are deeply engaged in research. This myth is prevalent in those institutions where research is very difficult to locate.

It is part of the rhetoric of faculty and student politics. Its assumed truth is often used as a justification for one form of retreat from the evaluation system on the part of the faculty, students, and administration.

#### Judgment No Longer Proper Evaluation in Universities

The universities in the United States have taken great pride in the standards upon which they evaluate both their colleagues and their students. However, a rather interesting thing is happening in universities. Many of us who have been out of the university system for some time do not realize the degree

to which universities are no longer considering judgment evaluation as appropriate behavior.

Instead, universities are tending to become, in some rather interesting ways, remedial and therapeutic. This posture extends not only to the students, but to the colleagues, the staff and the whole university system. This means that the university is not in a very good position to be an evaluator of the research contract situation in which it finds itself. It takes heroic and sometimes extraordinary efforts to engage in evaluation.

### University Departments Are Loathe to Judge Research Quality

The university as a therapeutic system is not the only source of evaluation which has crept into contemporary institutions of higher education and thereby created problems for research management. Pure science demands a latitude of independence from institutions in order to remain true to the dictates of its paradigm. All such scientific enterprises, viewed in a certain light, can be seen as pure science.

The source of that light, in the university setting, is an organization called a "department," a collection of scholars and students focusing upon a single discipline. That organization, the department, both defines and judges research. And as I have suggested, it has become less and less judgmental.

Departments, however, are really very loathe to actually judge research. The reason is professionalism. If research is demanded as a part of the personnel selection process, it is better judged by pages and pounds than by impact or by innate quality. It is a simple matter of professional courtesy not to look too closely at the work of specialists.

Therapy, science and professionalism, by themselves, do not account completely for the non-evaluative character of contemporary universities. Our habits of behavior have been, or are in large measure the result of having lived in a rather affluent society for a period of two decades. Their impact has been made more intense by the relatively higher level of resource allocation and demands placed upon institutions of higher education for the last two decades. You did not evaluate, regulate or control individuals or the research projects because you did not want to lose them. You do not want to lose the researchers at a time when society is making great demands on you. Society is no longer making the same demands on universities.

### Management: A Primitive Art in Universities

The last point that I would like to make is the

relatively primitive state of the art of management in universities. It is primitive at least as compared to the levels of technology in application attained by industry, Government and other public enterprises.

The reason for the underdeveloped nature of higher educational administration is not hard to find. The management of educational enterprises is most legitimate when it is least technical or professional. That is, management by professors, and sometimes by students collectively, or by delegation to a colleague, is the only legitimate form of academic management.

I am a Dean for Graduate Studies and Research, a management position. I am a Dean for Graduate Studies and Research because before that I was a full professor on tenure. I made my credentials as an academic. What that has to do with my capacity to manage, nobody has quite ever pointed out to me.

Such management should be severely limited, according to the academic tradition, both in its ability to initiate action, to utilize resources or to evaluate the academic enterprise, including research.

I have overstated these three conditions of academic research management in order to highlight the differences that exist among the various participants in the "national research partnership" and to focus on critical considerations affecting university performance.

I am not suggesting that whatever shortcomings exist within the academic community need to be tolerated forever by the other partners in a situation as a price for doing business with us. Some problems can and will be remedied; others can or have been modified. A critical consideration that affects the management of university research teams is that individual researchers tend to have additional primary obligations in non-research related organizational homes.

#### Increased Responsibilities of Faculty Inhibits Research

Research management must compete with other university activities for the time and talents of the researcher. The demands upon the faculty researcher's time are increasing rather than decreasing within the university system. They are increasing because of the democratic governments of universities these days; i.e., the amount of time spent by the average faculty member in committee would result in the development of at least 450 new journals.

There are degrees of organizational isolation, varying from slight separation to complete lack of contact and/or

sympathy, separating researchers routed in different disciplines or colleges. The problems of multidisciplinary research in the normal setting in universities are horrendous.

The bridging of these organizational gaps can cause traumas to the roots of organizational arrangements; that is, to the disciplinary control over the activities of its members. The easy way out, and the way that most universities have taken, is to create separate research entities that meet the needs of the contractors and do not disrupt the on-going process of the department.

This is an easy way out. All of us who have any relationship with the universities, and I govern several of these institutions, are familiar with this.

This is the easy way out, and it is a route most often taken. The disadvantages of going this route, however, are as real as are its obvious management advantages.

#### Disadvantages of Special University Research Organizations

In the first place, it separates the researcher from the classroom and the classroom from the researcher.

Second, it can and often does break the still-honored model of the scholar-researcher-student relationship.

Third, it separates the researcher from his colleagues, creating a research agency often housed off campus.

It limits the researcher's interactions with his natural peers on the campus to his occasional trips to the Faculty Club.

Fourth, it places universities directly in the not-for-profit research business, where in order for the now-isolated facility to stay alive, the university must compete with established research and consulting agencies in a marketplace designed for them and not for the university. Once separated from the hard monies of academia, university research organizations at the point of decline of funding act very much like any other organization under attack and attempting to stay alive. They will often grasp at straws to stay alive. In doing so they will come into direct conflict with the fiscal managers of the university. That is, they will begin to behave like the independent consultant who, in order to maintain himself, puts in response to RFP's he has no business dealing with in the first place. Universities do this all the time. They start getting into the cost-fixed-price business. Universities have very little business in that area.



Fifth, the individualistic and collegial mores of the university community make it difficult for any central university agency, such as the Office of Vice President for Research, or the Dean for Graduate Studies and Research in my case, to effectively monitor the research performance at the departmental level at any point prior to the completion of the project. Even at this point monitoring is limited by convention to that of noting whether the obligations have been met. Very little can be done by way of judgment of quality.

Sixth, another consideration is that management information systems at most universities are inadequate to meet the needs of day-by-day operation. The management research system is grossly inadequate to meet the requirements of long-term research planning and development by universities. This means that most universities are at the present moment going at it blind.

The information systems at universities reflect the decentralized character of these enterprises. Where such systems exist they are geared to the primary needs of the system, to produce certified graduates (the Registrar's office), to collect income from the process of certification (the Treasurer's office).

This is a correctable problem. It is nevertheless the state of the art within the university.

Seventh, the determination of university overhead rates and their relevance to the university's research enterprise is a political question, outside the university system, with the Government, and within the university system as well. The answers to this political question affect the university's ability or willingness to engage in contract research.

You must remember that in most cases, engaging in contract research is done because of two conditions in the university. There are researchers within the university community who seek this kind of professional fulfillment, and also it provides a margin of comfortable living for the university. It is one of the elements that decreases the private university's dependency on tuitions.

Most universities have huge overhead as replacement costs for services expended in contract administration. It is very difficult to ever trace the relationship between the overhead that comes in and the generation of research that goes on.

The funds, however, seldom find their way to the level where the original costs were accrued. Research groups, teaching units and individual researchers need development monies, and

this kind of risk money is rarely more than a very thin trickle in any university setting.

This brief statement suggests most of the problem areas in university research management. It has not focused attention upon the decline of some of the more traditional resources of university research support, nor the shift in research monies to new areas of national concern. My paper clearly overstates the problem areas and the current conditions in order to dramatize the unique problems of getting into bed with the university in the research enterprise.

### A Decrease in Universities Doing Research

At the present moment, universities are in a period of adjustment. They are reflecting upon their needs and society's needs in the future. I will predict a simple outcome that should be of interest to you as partners in the research enterprise. There will be fewer universities and colleges in the future that will actively engage in research. The glamor has gone out of research. The soft monies that never hardened have left a great many universities in dire straits. A great many of the state universities that began the model of moving in research enterprise situations are now backing off because of the tremendous demands that are being placed on them as educational enterprises quite apart from the research enterprises.

This does not mean that universities will not continue to compete at the point of grants and other areas where a single principal contractor or single principal investigator can deal with the Government directly. It does mean that a great many universities are not going to take any organized efforts to move deeper into the research field.

I think we will find over the next few years, in the university research market, that there is going to be an increasing classification of universities as graduate, or as universities that appeal more to the needs of the local market, to the educational process, and to those graduate and professional fields which can be accomplished without any great research enterprise.

The ones that continue will be better equipped to provide the research services that are needed. They will be much more competitive, both with the for-profit and with the other not-for-profit groups.

I wish I could say at this moment that the state of the art in universities follows the model that was set out for us by Mr. Walbrecker. It is a significant model. It is one that we all think and dream about. However, it is one that at the present moment we are unable to enforce.

## PANEL DISCUSSION, QUESTIONS, AND COMMENTS

### PANEL THREE: DEVELOPMENT OF THE PROBLEM

QUESTION - MR. WALBRECKER: "How can Government improve its specification of services?"

MR. WALBRECKER: I would hope that more definitive work statements could be written for RFP's. We find many cases where there are three pages of description of the work statement and the job to be achieved, for as much as two and a half man-years of effort.

We think that one of the motivations for this is to not explain it fully so as to create ingenious responses. I do not think that is the case most of the time. I think it has not been that well thought out.

We have seen some that apparently looked like the supervisor of the department came by and said: "Haven't you got that RFP out yet?" Responding to this they submitted what was ready.

We think that if work statements could be more clearly defined, better thought out, discussed with some consultants, perhaps, before they go out, there might be an opportunity to develop some fixed-price contracts. There might be an opportunity to get us away from the cost-plus-fixed-fee which basically is a sharing of risk.

QUESTION - MR. NOBLE: "If by a systems analyst you mean a computer systems analyst, I can understand that he can be adequately defined. If, however, you refer to the broader type of systems analyst, I would like to hear either you or someone else define him." In this area I was talking in terms of computer systems analysts.

MR. MORIARTY: I think the question was: "Can you define a broader analyst, as opposed to strictly a computer systems analyst?"

MR. NOBLE: My opinion is that in many of these definitions, Government and industry really do not know what they are after. I believe the answer is a joint effort to come up with definition of a systems analyst "for everything."

I believe that these job descriptions can be defined. Every company that I know of has some type of definition for the skills that they possess. A systems analyst for one company is not the same as a systems analyst for another. I believe that

this is the type of thing that should be brought together so that both industry and Government can agree on what a "systems analyst" should be.

QUESTION - DR. BOYNTON: "Many university overhead charges are as high as 60 percent of direct costs in research study. What are some of the cost factors that make up this overhead charge?"

DR. BOYNTON: I can best explain in terms of ours at The American University.

I will be the first to point out that there are certain inherent mysteries in university overhead that in some cases may be worth probing, but the deeper you probe the less you see.

In the case of American University, our overhead is 57 percent of the personnel costs. This is our overhead as audited by HEW. There is a certain percentage which is chargeable to the central administration management of research, a certain amount of the decentralized management of the university, i.e., the colleges and the departments, are chargeable to the management of the research.

A certain amount of the fiscal management of the university is chargeable. Such things as the Library and other research-relatable, usable facilities are also allocated to research.

QUESTION - ENTIRE PANEL: "One RFP stated that the contractor must name and make assurances that proposal teams be the project teams.

"Comment on the Government specifying that the contractor must use the personnel who wrote the proposal in performing the project."

MR. WALBRECKER: We found that in terms of making a profit it only makes good sense that the people that write the proposal do the work.

We find that it is the best business practice, and it is the best thing for the Government. When the Government asks us: "Will this man be available?" and we say, "Yes," it is based on a timely start. Having the same team together depends upon getting the project started by the anticipated time.

If it comes at some other time we will negotiate having that man or men available.

DR. BOYNTON: I think from the university's point of



view, almost all of our contracts are undertaken with this stipulation. It would be a rare and accidental occurrence where such was not the case.

MR. NOBLE: I think you will find that the man or team that spends nine months to 18 months writing the proposal, and wants the answer between 9 and 18 days from the contractor generally is the man or team who stays on the project.

Why shouldn't it be the same to have the proposal writer be the project manager if the Government proposal writer is going to be the project manager?

QUESTION - DR. BOYNTON: "Most relevant applied research today is of interdisciplinary or systems nature. Universities tend to reward individual research with many publications over a short period of time, while interdisciplinary work has a longer time requirement.

"This would tend to imply that universities should discontinue this type of business, as you seemed to imply.

"How about changing the reward system at universities so that interdisciplinary team approaches can be effectively managed?"

DR. BOYNTON: This is what many of us are working on.

The problem is to create an interdisciplinary research effort which at the same time is not completely pulled free of the academic setting. To walk that tightrope and at the same time create those kinds of research experiences which are necessary for faculty and students generally, graduate students particularly, is my obligation.

But there are relatively few conventional ways of accomplishing this, so it is a matter of inventing the appropriate devices.

For those of you in social science research there is the Survey Research Center at the University of Michigan, which has gone a long way toward accomplishing this by focusing on one particular methodology. In the sense of focusing on applied research and interdisciplinary research there is no really very good way of doing it.

The American University had spun off more institutes and centers than you can imagine because the marriage could not be consummated. I would hate to simply produce something which would have the same kind of history.

QUESTION - MR. NOBLE: "Comment on the problem

encountered by Mr. Moriarty in using the BOA. Doesn't the objection raised by the Department of Commerce lawyers on the NBS-BOA apply to all Government agencies?"

MR. NOBLE: I think we are talking about two different things.

I did not have time to explain the Basic Ordering Agreement for software development. What is really happening is that the 80-plus companies that are on the software development Basic Ordering Agreement of GSA have been checked for financial stability and prices have been established per hour for a particular type of skill to be performed.

The final contracting is accomplished by the agencies themselves, their contracting staffs by selecting through the capability files maintained by GSA and index registers that are maintained by skill, specialty or subject matter. This is done by sending to at least two companies a task or specification and having those companies respond by the number of man-hours required and rates established, on how long, and what the costs will be to accomplish the job.

There is a difference, because where the basic ordering agreement is primarily for a particular skill, let us say a physicist in social sciences, or a particular professional skill, the job descriptions of the GSA Basic Ordering Agreement are under the programmer and then that programmer may be a physicist who is qualified on the Exec-2 operating system or UNIVAC 1108. Primarily you are looking for skill.

QUESTION - MR. WALBRECKER: "Please discuss the differences between a co-equal teaming arrangement and the more familiar 'prime sub' arrangement?"

"What are the salient benefits and pitfalls in your experience for each of these arrangements?"

MR. WALBRECKER: The best way I can interpret that question is to define "co-equal" as a joint venture agreement of two parties.

In our teaming arrangements, we prefer the prime-subcontractor type of relationship. We find that someone must be responsible for the technical work. Someone must be responsible for the administrative work and the fact that the job is done on time within budget. Most of our teaming arrangements, and there have been many, are based on a prime-subcontractor role.

MR. MORIARTY: At this time we would like to open up to questions from the audience.

QUESTION: I have a question for Mr. Noble. It seems that BOA's exist within Government procurement, yet Congress slaps your wrist for doing BOA's. There seems to be a very flagrant conflict between the two. Either they exist for everybody or they do not exist at all. I do not understand.

MR. NOBLE: I believe the Basic Ordering Agreement is the answer to many small companies' prayers. I also believe that under the present procurement system, where the Contracting Officer and the independent office can make their own determinations of whether it is good or bad, is the problem that you are talking about.

This is not in accordance with what was envisioned with centralized procurement under the Brooks Bill, Public Law 89-306, in 1966.

There are many Federal agencies that are also saying that unless a company is on the Basic Ordering Agreement they will not do business with them.

DR. CUSHEN: There is standardizing among the agencies. Each agency tends to be somewhat independent, and to set up its own systems, its own security system, and so on.

Part of the feedback we have from the Department of Commerce General Counsel's Office suggests two things.

First, they really were not administratively set up to process an awful lot of cases. Therefore, we would be making them build a bigger staff to process work that some other agency really ought to be handling.

The second thing was that there was some question as to whether or not it would have been the intent of the Congress to have the Department of Commerce have this privilege. That would give a degree of freedom to, say, HEW, that their appropriations subcommittee had no intention of giving them.

People are very wary of that kind of thing as well. I guess I am almost acclimated to the notion that there will be a number of systems in parallel that are not in fact consistent among themselves.

MR. NOBLE: In Fiscal Year 1971 there were 15 Basic Ordering Agreements for software development around the Washington area.

I can name a half a dozen major agencies that cancelled their BOA's and are using GSA's. I think this is either what it is all about or should not be all about, but the point is

that at least they are playing off the same "sheet of music."

You have the HEW Contracting Officers, you have the Navy Contracting Officers, you have the Army Contracting Officers, and all of them interpret this type of thing differently. Am I right, Dr. Waterman?

DR. WATERMAN: Yes.

MR. NOBLE: What I am saying is that this type of question will still exist and continue to exist until such time as they all play off the same "sheet of music." I am not only speaking of Government. I am speaking of industry as well.



SUMMARY OF THE CONFERENCE

DR. WALTER E. CUSHEN



## SUMMARY OF THE CONFERENCE

Dr. Walter E. Cushen

I feel what we were hunting for in this conference were recommendations that would help solve the problem of how to make it possible for Government agencies to get better response from the industrial processing community?

I believe I see ten kinds of recommendations coming from what happened here today. I will attempt to summarize these for you.

No. 1: Commercial suppliers can and should be used to provide some professional services contracts.

This will have to come from a lot of different people. The White House could articulate this message in an Executive Order. OMB could promulgate it through a revised doctrine. The Secretaries of the various Departments and the heads of the agencies could just simply pronounce: "Let's get with it."

However, along with this there is a lot of homework to be done on the attitudes of bureaucrats who tend to automatically think that if something has to be done they wonder, "Do I have the people to do it?" If they do not have the people to do it, they think about going outside. They just automatically think that way.

No. 2: The management consultant should get into the process earlier. A mechanism should be developed that would make it possible.

This was suggested because he can help to formulate the problem which is what he is trained to do.

No. 3: New techniques for getting contracts out need developing.

Mr. Moriarty had one, the Brooks Bill was cited as another possibility.

It would seem that we have a couple of programs going here with BOA's representing new ways of contracting. We need to experiment with these and evaluate and determine if they are workable.

No. 4: Standardization is needed between programs. We are inadequately standardized among the agencies with respect to

these different contract procedures. It seems that you are suggesting further standardization.

No. 5: Better Liaison on Needs. The fifth seems to be that in part we do not know what each other is doing. In part you do not know what we want to buy, and in part we do not know who to talk to. Furthermore, the people inside of both systems are inadequately trained to track the targets on both sides here.

No. 6: Investment in New People Needed. It would appear that we need to make an investment in new people rather than to promulgate situations in which the 90-year-old guy is the expert, gets the grant and when he dies nobody else is qualified to do the job.

No. 7: Better time-phase plans needed. Part of the thrust of my remarks was that there are a lot of tasks we cannot specify too well. Along these lines the recommendation that I see coming from the conference sounds like this:

"Please, OMB; please program officers, please budget justifiers, insist that your people develop a better time-phase plan for what you want. Even though it is incompletely specified you are moving in the right direction and putting the firepower behind it."

No. 8: Better evaluation and feedback on performance is needed. The seventh group of recommendations are that we in Government do not really evaluate either what it is you do or how you perform. You do not really get much of a sense of what we do with your work after it is submitted. In order to make the system healthier, this has to be rectified.

My own exposure to a number of agencies tells me that they are too thinly staffed to do this kind of thing now. Therefore this means that they have to get more people to do it, or contract out to have it done, or stop doing something else and do this instead.

So this recommendation has some economic consequences.

No. 9: New administrative improvements needed. I heard a number of administrative improvements that you seem to think are needed. I wrote down several:

- A) Fix up Circular A-76 and the other similar circulars.
- B) Try, if you can, to avoid the fourth quarter fiscal rush.
- C) Change the overhead authorization rules.
- D) Get a specialist in the Bureau of Domestic Commerce for the professional services industries.



- E) Recalibrate your rules so that universities can be better participants in the process.
- F) Give us faster reactions to our progress reports.
- G) Industry could make use of some surplus Government facilities, including computer time.
- H) Change the rules on cost-plus fixed-fee.
- I) Tell us who is competing against us.
- J) Process vouchers faster.

No. 10: Keep the system honest. The final category of suggestions that I heard was that somebody has to keep the system honest. Although the Department of Commerce Counsel and procurement people will do their best to keep us honest as we go through this pre-qualified bidders' procedure, that still is an inadequate guarantee.

This is the thrust of what I see you saying today.

#### Comment on Summary

MR. NOBLE: In Item 4, I would like to see industry involved in standardization as well as agencies. Standardize among agencies, but also standardization between industries as well.

DR. CUSHEN: I would hope that we would get a lot of industry objection to that, wouldn't we?

COMMENT: I think it is good that industry gets involved, because if they are the ones that are going to be using it they might as well get their thinking into it, rather than have it be a one-sided deal.

QUESTION: It is one thing to sit here today and come up with a list of ten recommendations, but then, do they just get pushed up the system and then kind of die somewhere? Is there going to be some kind of follow-up so that some of these recommendations will be actually incorporated?

DR. CUSHEN: I think about the only thing we can say is that we will follow them as far as we can. We are not known for being bashful in my Division. We will push them to the point where somebody says; "If you do not drop dead, I will guarantee that you do."

Basically we are talking about actions that occur at levels for which I am a "sub-optimal sub-optimization."

QUESTION: Is somebody going to be a follow-up person? Will we be able to call and find out whether or not anyone

actually accomplished anything in terms of any one of those recommendations?

DR. CUSHEN: I think you should ask Mr. Moriarty. In spite of some of the things we said about the Department of Commerce today, I assure you that they were very helpful participants in making this Conference possible. While I am sure that some of you may have drawn the false inference that we thought they were part of the problem, the fact is that they were part of the solution. I think that those people down there are probably our best bet for making a change.

You also have access to Dr. Krueger and his National Council of Professional Services Firms in Free Enterprise and John Magnotti who is its Executive Secretary. I can assure you, from personal experience, that they do have an effect.

You could also contact the President's Advisory Council for Management Improvement.

You also should feel free to make your suggestions directly to the Office of Management and Budget. I suspect that whatever happens, they are likely to be the ringleaders of any modification that takes place.

QUESTION: Is there anticipation of some kind of a follow-up meeting? At that time there would be some continuity in the sense that this conference is providing the first dialogue that you want to follow in more depth,

DR. CUSHEN: I think that more dialogue is needed. We clearly need to have other constituencies believe that it is worthwhile to participate in this session. The Government people who are here do not really represent the program managers about whom we were talking. I really would like to have your advice as to what do we do next, if anything. I really would like to have your frank appraisal as to whether or not you felt today was very well spent.

We would like to have suggestions for change. As I mentioned in my own talk, I believe that the tone of this Administration is beginning to filter down in a very effective way. I think that you will see more Government agencies being required to admit that making an honest profit is not un-American. I think they are going to start paying more attention. I suspect that the timing of our recommendations is probably pretty good to get something done, if anybody is going to change anything.

COMMENT: A lot of recommendations do not have to be formalized by anybody. They just have to be done by the Government agencies in procurement and by industry, for example,

being able to get in to talk to the Government project manager before the job comes out. This is not a matter of anything formal.

DR. CUSHEN: I think we would be fooling ourselves if we thought we would internalize this just by virtue of having vented our feelings. Recommendations need to be written and then sent to action points so that follow-up can occur.

Thank you for coming today. The Conference stands adjourned.

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