A look at making the ADP procurement process more efficient—Temporary regulation 46

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INTRODUCTORY NOTE

This paper represents the view of the authors and in no way is to be taken as an official Government or General Services Administration position on the subject matter. It represents the authors' experience in acquiring a computer system under existing Federal Procurement Regulations.

BACKGROUND

The Brooks Act (Public Law 89-306) went into effect on October 30, 1965. The purpose of the act was to provide for the economic and efficient purchase, lease, maintenance, operation and utilization of Automatic Data Processing (ADP) Equipment by Federal departments and agencies. The Administrator, General Services Administration was given the authority and direction to provide the necessary mechanisms for the economic and efficient purchase, lease and maintenance of ADP Equipment by the Federal Government. As a result, GSA assumed the procurement authority for all general purpose computer systems to be acquired for Federal use. Appropriate Regulations regarding the acquisition of ADP Equipment were prepared and issued.

The procurement regulations developed and implemented for the purchase of ADP equipment put into effect at that time required all Federal Agencies to request a Delegation of Procurement Authority (DPA) from GSA for any acquisition over $50,000. This meant that an agency procuring ADP equipment with a cost greater than $50,000 had to include GSA review and approval in the procurement process. At the time the regulation went into effect few computer systems were being purchased for under $50,000. The net effect was that GSA had to expend some of its limited resources whenever a computer system was required by any agency in the Federal Government, regardless of the cost or size of the system.

Federal Agencies and the ADP industry in general also had a growing concern about the lengthy, complex and costly ADP procurement process. Much of this concern had been directed at the disproportionate cost to participate in and the large amount of time involved for a procurement to be completed. This issue was of particular concern in the case for which the dollar value was under $1,000,000. According to government studies, the average cost for the Federal Government to conduct a competitive procurement in this dollar range was about $12,000 in administrative costs. The average time to complete such a procurement was about 6 months.

The acquisition procurement of major computer systems by means of a traditional functional specifications ADP procurement was generally more time consuming and administratively costly than a non-competitive (sole-source) or equipment specification procurement. However, the potential benefits which could be realized through a fully competitive procurement would, in the long run, far outweigh the short term disadvantage. GSA was working on regulations which would speed up the process and reduce the cost of conducting procurements for low cost ADP equipment where the benefits of a traditional procurement were not as great.

In October 1976, the House Committee on Government Operations (the Brooks Committee) issued a report to Congress on the administration of the Brooks Act covering the procurement of ADP resources by the Federal Government. The report pointed out several areas where GSA, the Office of Management and Budget (OMB) and the National Bureau of Standards (NBS) had not administered and implemented the Brooks Act in accordance with the original wishes of Congress. The report also noted that 56 percent of procurement delegations in 1975 were for procurements under $250,000. These procurements mainly involved minicomputers, peripherals, software and maintenance where a highly competitive market exists. Agencies were in effect being required to follow the same procedures for small-dollar buys as they were for the purchase of major mainframe computer systems. GSA determined that the dollar value of these smaller procurements represented only about 6 percent of the total value of all ADP equipment procurements.

The Congressional report recommended that, in order to conserve the resources of both GSA and user agencies, new procedures had to be adopted which would allow agencies to procure small-dollar systems without having to obtain a delegation of procurement authority. While this approach was intended to speed up the procurement process and save the government time and money, it was in no way designed
to erode or eliminate the competitive aspect of the procure-
ment.

The most viable solution to making the needed changes involved the potential use of the small purchase procedures (which previously were not available for use with ADP equipment procurements) and a revision to the criteria for the use of the ADP schedule contracts issued by GSA’s Automated Data and Telecommunications Service. The expanded use of the schedule contracts would allow purchase orders to be placed expeditiously and at the least possible expense to both the Government and industry.

(Note: ADTS/ADP schedule contracts represent pre-nego-
tiated prices, terms and conditions under which the ADP Equipment manufacturers offer their products to the government. These contracts are negotiated on a fiscal year basis and establish the price for each of the items listed. A maximum order limitation (MOL) is specified in terms of a number of systems and/or a dollar value for each order to be placed. This limitation can be waived by GSA. Traditional ADP competitive procurements based on functional-type specifications have resulted in the participating vendors offering the government prices below those shown in their schedule contracts.)

TEMPORARY REGULATION 46

GSA implemented the recommendation in the Brooks Committee report by issuing Temporary Regulation 46 entitled “Use of Small Purchase Procedures and Schedule Contracts for Automatic Data Processing (ADP) Resources.” This temporary regulation prescribed the use of small purchase procedures for ADP procurements of up to $10,000, revised agency procurement procedures for competitive procurements which do not exceed a purchase cost of $300,000 and provided policies and procedures for the use of schedule contracts for ADP Equipment.

This regulation does not suggest or imply a non-competitive or sole-source procurement, but requires that maximum practicable competition be preserved and clearly documented by the procuring agency. All procurement statutes, policies and regulations that apply to a traditional ADP functional specification procurement also apply to a Temporary Regulation 46 (schedule contracts) procurement. A procurement of this type would take place as follows. First, the agency must have the necessary bona fide need, funding and authority to initiate the procurement. Then the agency’s requirements for the computer system must be defined and documented. Next, the literature and pricing guides of the computer systems available through the ADP schedule contracts must be reviewed and analyzed in terms of agency requirements and cost. Contact with and presentations given by the schedule contractors can be useful in performing this analysis. Included in this phase must be the accurate documentation of the actual technical and costing analysis performed and the identification of the system that best meets the agency’s needs in terms of cost, price, and other factors considered. (The total cost of the system is based on schedule purchase price regardless of method of acquisition. The cost may not exceed $300,000 under this procurement procedure. Annual maintenance is not included in calculating the total cost.) If the total cost of the system is under $35,000, the system can be ordered off the appropriate ADP schedule contract immediately. If the total system cost is greater than $35,000, then the government must publicize its intention to order the system by placing a synopsis in the Commerce Business Daily (CBD) in advance of placing the order. This permits interested vendors, who may not be available under the schedule contracts program, to demonstrate their ability to satisfy the agency’s requirements. If no responses are received by the deadline given in the synopsis, the procurement file is so documented and the order is placed with the selected schedule vendor.

If any responses are received from vendors who have not already been fully considered, the procuring agency must be able to document that the use of the ADP schedule contract will be most advantageous to the agency/government. (If that position cannot be demonstrated, the agency must revert to a traditional ADP competitive procurement.) Should the agency choose to select a system at other than the lowest price available under any GSA schedule contract, then the agency must justify its action.

The remainder of this paper discusses two Temporary Regulation 46 procurements within GSA, the results and an assessment of the success of these procurements.

FEDERAL COMPILER TESTING CENTER — MINI COMPUTER ACQUISITION

The Federal Compiler Testing Center (FCTC) (formerly known as the Federal COBOL Compiler Testing Service) was transferred from the Navy to the General Services Administration (GSA) in May 1979. The computer support provided by the Navy prior to the transfer was guaranteed until the end of the fiscal year. Part of the transition plans of the organization required the acquisition of an in-house computer system to handle the majority of the FCTC data processing workload. Since the estimated cost of a system was around $275,000, the procedures described in Temporary Regulation 46 established the applicable procurement vehicle by which the computer system should be purchased most efficiently.

The requirements for the computer system had to be defined in order to determine which computer systems available under the ADP schedule contracts could meet those needs. The requirements were developed in the form of a set of functional-type specifications. There were several reasons for this. First, the FCTC staff was accustomed to expressing technical requirements using this method of representation. Second, the FCTC needed a document for use in determining which vendors under the ADP schedule contracts met our minimum software/hardware requirements. Third, technical requirement had to be established for comparison and evaluation purposes. And finally, should the FCTC be placed in a position where a traditional ADP competitive procurement had to be initiated, the technical specifications would be ready.

From the collection of the Computer History Museum (www.computerhistory.org)
After the system requirements were defined, the schedule vendors with equipment which appeared to meet the minimum requirements were contacted and technical literature was requested.

One major software requirement that made it easy to identify which computer systems would be potentially acceptable was the requirements for an identifiable Low-Intermediate level of Federal Standard COBOL (COBOL 74) with the stipulation that the COBOL compiler had to have been officially validated at the time the system was purchased. This requirement was extremely critical since one of the major functions of the FCTC is to produce and maintain Compiler Validation Systems for COBOL. A second standard programming language, FORTRAN 77 (X3.9-1978 American National Standard Programming Language FORTRAN), was also necessary because the Center will be producing a FORTRAN Compiler Validation System for the FORTRAN standard for use beginning in calendar year '81.

Next, technical literature from each vendor which satisfied the basic programming language requirements was examined to determine if the rest of the mandatory requirements were met. Of the seven systems which met the programming language requirements that were being reviewed, several did not meet other mandatory requirements. For example, one system could provide a 9 Track 800 BPI magnetic tape drive but did not support a magnetic tape drive capable of handling 1600 BPI. Since 1600 BPI is the standard recording density used by the FCTC for distributing software, this deficiency would have created a time consuming and expensive situation if the in-house system could not be used to perform the simple task of copying magnetic tapes at the required 1600 BPI density.

At the conclusion of the elimination procedure utilized, five systems met all mandatory requirements. At this point, the ADP schedule contract price lists provided by each of the vendors were examined to determine the lowest cost system. This was not a simple task since there was generally insufficient information contained in the price schedules to determine how to configure a system and develop the associated cost for that system. Although the key items and associated prices could be identified, it was difficult to determine what devices were compatible with the CPU, the number of devices which a single controller could support, or whether all the necessary components and cabinets had been identified. To order a computer only to find out it could not be used without the purchase of additional equipment would be totally unacceptable and improper.

The vendors under consideration were contacted and asked to provide a presentation on their systems and answer questions regarding the configuring of each system. This process provided the final information necessary to complete the evaluations of the computer systems being considered. Shortly thereafter, the final analysis was performed and the most cost effective (least expensive) system that met the mandatory requirements had been identified. The official GSA prices under the ADP schedule provided by the vendors had to be closely monitored during the evaluation process. One vendor lowered his schedule prices requiring a recalculation of the total cost for that system.

Once the analysis was complete, a synopsis for the Commerce Business Daily was prepared and, along with the results of the analysis, was forwarded to the Contracting Officer in charge of the procurement. The synopsis contained a functional description of the computer system that had been selected. It was described in terms of the number of concurrent users that must be supported, the amount of mass storage space that was required, the number of magnetic tape drives required, etc. However, the Contracting Officer felt that the synopsis should reflect the exact system configuration that was to be ordered, rather than a general description. The synopsis which was developed on that basis included a description of the system and a notice of the intent to order the system from the selected ADP schedule contract and was published in the CBD. The synopsis gave public notice that eight days were being allowed for interested vendors to respond and demonstrate that they meet the requirements specified and could provide the equipment necessary to perform the job at a lower overall cost to the Government.

During the eight day response period, only one response was received from industry. The system offered in the response did not meet all of the mandatory requirements and was roughly 60 percent more expensive than the selected system. Once the final analysis and appropriate documentation of this response was prepared and provided to the Contracting Officer, the official procurement action was initiated the following day. Delivery was to take place within the next 90 days which is the standard time required under the ADP schedule contracts.

Assessment

The procurement was successful and completed in a little over three months as compared with a normal timeframe of up to 18 months to acquire an ADP system without employing the provisions of FPR 46. It took roughly five weeks from the time the Contracting Officer was assigned to the project until the delivery order was signed. Two of these five weeks were required because the initial synopsis that appeared in the Commerce Business Daily (CBD) allowed only one working day for responses (the time for the synopsis to be received and published by the Commerce Business Daily had been underestimated) and the synopsis had been somewhat garbled when rewritten in the Contracting Office before being mailed to the CBD. So a net time of three weeks time was required from the time the Contracting Officer was first involved. Approximately 50 hours were spent by the Contracting Officer in this procurement, several orders of magnitude less than would have been required using the traditional ADP procurement approach.

The time required to prepare the necessary justifications and the technical specifications was just under 240 hours spread over six weeks using the resources of four technical people. It is critical in this type of procurement that the time necessary for planning and defining the requirements for the acquisition are not reduced or else the result may be a genuine catastrophe. The review of the technical literature and the presentations provided by the vendors were extremely
useful since under Temporary Regulation 46 there is no benchmark or functional demonstration involved. This meant that the technical literature and vendors’ presentations had to be used to determine if the system could handle the Center’s workload. If the proper configuration cannot be determined, then it would be better to revert to the traditional ADP procurement which includes benchmarking and functional demonstrations rather than select a system that may not be adequate to meet the requirements of the agency. This review took about 150 hours over a three week period.

The problem areas in this procurement were few and easily identifiable. First, the Contracting Officer had not performed a Temporary Regulation 46 procurement before. Therefore, a learning process was involved. Temporary Regulation 46 was reviewed several times during the acquisition process and several detailed discussions were held with the Contracting Officer regarding the exact way to proceed at each step of the acquisition. A good part of the time the Contracting Officer was operating under the misapprehension that the procurement was sole-source and treated the procurement as such. Accordingly, it was not until late in the procurement process that the Temporary Regulation 46 procedures took hold. A similar type of problem with Contracting Officers not being familiar with Temporary Regulation 46 was also mentioned at the “Federal ADP Procurement” course (presented by AIIE, September 25-27, 1979 in Washington, D.C.) by several speakers and members of the audience. It appears that the process is so simple compared to other ADP procurement processes that contracting officers find it hard to believe that this new procedure is legal and become skeptical. However, this problem was overcome.

The second problem had to do with the price lists provided by the vendors under the ADP schedule contracts program. It was next to impossible to configure and/or price a complete system with the information provided. An improvement to the schedule price lists would be the inclusion of a configuration guide to help the reader understand what is necessary to combine hardware devices and configure a usable system. Some vendors’ literature was easier to use than others, but none were sufficient by themselves and help was required from the respective vendors to understand how to configure a system.

NATIONAL AUDIOVISUAL CENTER—ADP EQUIPMENT ACQUISITION

The second Temporary Regulation 46 procurement conducted by GSA involved the acquisition of ADP equipment for the National Audiovisual Center. While many similarities existed between this procurement and the one previously described, certain experiences were encountered which offer additional insight into the procurement process for small systems.

The National Audiovisual Center (NAC) required equipment to accommodate the processing of their audiovisual information and distribution systems. Requirements included both the conversion of existing systems and the development of new systems for implementation on new equipment. Documentation was available on existing systems and the new systems were described in detailed ADP design packages. Using this workload information, a requirements document was developed. The document contained a brief description of the workload, system interfaces and hardware/software requirements. Additionally, to meet the COBOL programming and conversion needs of the National Audiovisual Center, a requirement was included to the effect that any COBOL compiler considered for acquisition must have at a minimum been validated at the Low-Intermediate level of Federal Standard COBOL. (This requirement is consistent with Federal Property Management Regulation 101-36.1305-1 “Federal Standard COBOL” which requires that one of the four levels of Federal Standard COBOL be identified for any COBOL compiler that is to be brought into the Federal inventory.)

Upon completion of the requirements definition task, technical specifications were researched to determine candidate vendors. Eight vendors were identified who offered products of comparable size and capability which appeared to be able to satisfy the requirements. A more detailed analysis of the various system capabilities and the specific requirements (e.g. COBOL validation, serving as both a host system and a RJE system, etc.) revealed that five of these vendors failed to meet certain of the mandatory requirements. For the remaining three systems which had been identified, configuration charts were prepared. These charts were subsequently validated to ensure their accuracy. Cost comparisons were performed using ADP schedule prices and a recommended selection was made.

The contracting officer was apprised of the procurement selection rationale. He was provided a configuration list of the selected system, and a synopsis for publication in the Commerce Business Daily (CBD). The synopsis was published and fifteen days were allowed for responses. Unlike the announcement in the CBD for the Federal Compiler Testing Center (FCTC) procurement, this notice did not identify the selected vendor or provide a detailed configuration. As a result, inquiries were received from vendors requesting complete bidding information. All interested parties were sent supplemental information which included a detailed configuration showing actual model numbers. They were informed that the evaluation of all known schedule sources had been completed and a determination made that this specific configuration met all Government requirements. They were further told that if they could provide a system with an equivalent configuration and appropriate schedule price references, it would be fully considered. The reason “appropriate schedule price references” were requested was that we had found in our earlier analysis that the most recent ADP schedule prices were not always listed in the published documents. As mentioned in the FCTC procurement above, it was possible for schedule prices to have been lowered significantly during the fiscal year.

In total eleven vendors indicated an interest in responding to the notice. Only four actually submitted price quotations, one of which was invalid because it was received after the fifteen day lapse time. The three valid price quotations, in-
including one submitted by the selected offeror, was evaluated initially on price. The result was that all prices fell within a 10 percent range and the system which had been selected still represented the lowest cost to the Government. Therefore, only a cursory technical review was made of the other proposals. A recommendation was presented to the contracting office that a purchase order be issued for the selected system. This final step was accomplished in accordance with the recommendations provided.

Assessment

Several observations can be made in respect to this procurement. The resources required to conduct the procurement approximated those described for the FCTC procurement, with the exception that the contracting spent in the neighborhood of 22 hours. One significant difference from the FCTC procurement was the close competitive range of ADP Schedule price quotations for equivalent configurations. This situation leads us to believe that when new schedules are negotiated, in light of Temporary Regulation 46, the Government should be in a good bargaining position and vendors should be receptive to lowering prices for competitive reasons. Our experience indicates that a complete analysis of user requirements and the resulting hardware/software needs is important and well worth the time and effort required. Like the Testing Center participants, we also found that configuring from ADP schedules and accompanying literature is a difficult job. Both industry and the Government should strive for more standardized formats and descriptive narrative in the ADP schedules contracts in order to facilitate their use under Temporary Regulation 46.

SUMMARY

Based on the two procurements described above, the new procurement process established for limited dollar level ADP equipment appears to be a good one. The calendar time involved in the selection of this system was only around three months including the definition of the system requirements. The procurements, in terms of the time required from when the Contracting Officer became involved until the computer systems were ordered was a relatively short time—five weeks in the case of the FCTC which could have been three weeks except for the need to re-issue the CBD notice and four weeks for the NAC which would have been shortened to three weeks had they allowed only one week for comments on the synopsis in the CBD.

The approximately 400 hours of professional time (not including Contracting Officer time) that was spent by both the FCTC and NAC would have been at least three times that amount if a benchmark and live test demonstrations had been required for a traditional ADP equipment procurement. The time and expense of the vendors was limited to a few phone calls, providing copies of some of their technical literature, and several meetings. This certainly represents far less cost than had they participated in a traditional ADP procurement. Although the two Contracting Officers approached the procurements differently, the results were closely the same. The problems associated with a new procurement process (Temporary Regulation 46) will require the time necessary for government Contracting Officers to become familiar and comfortable with the new process. It appears that when dealing with the synopsis to be published in the Commerce Business Daily, a description of the the system (which has been selected) rather than a functional description is desirable. This method of announcement should keep down responses from vendors who were already evaluated and rejected early in the procurement. It would save the vendors time and money as well as avoiding unnecessary duplication of effort by the government which must review all responses regardless of previous determinations in the selection process.

REFERENCES
