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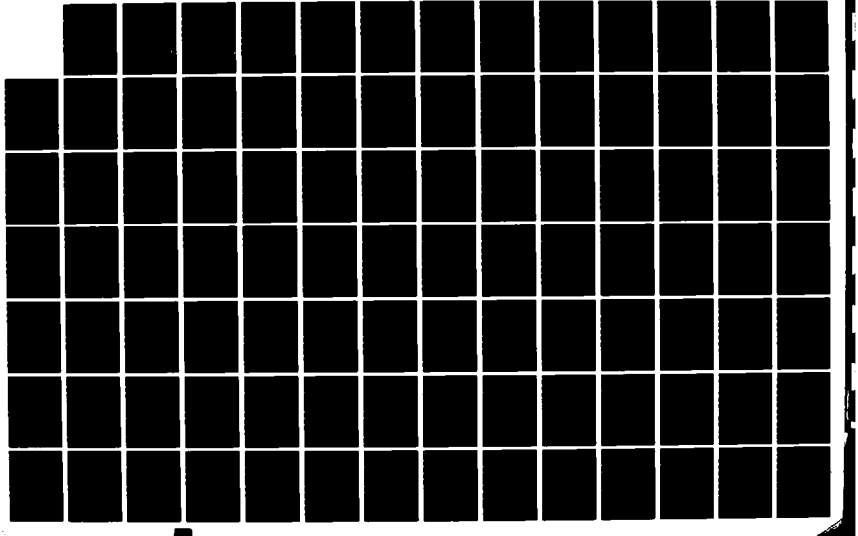

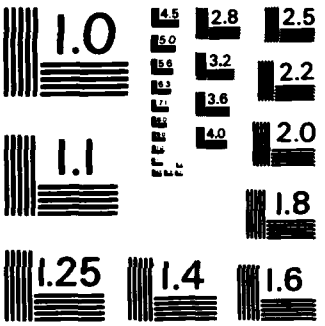

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WEAPON SYSTEM SOURCE SELECTION: AN ASSESSMENT OF AIR FORCE SOURCE SELECTION APPROACHES

THESIS

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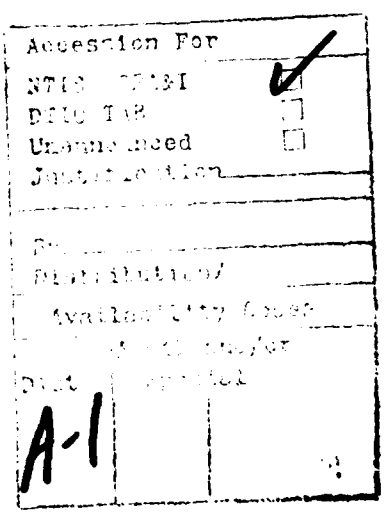

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WEAPON SYSTEM SOURCE SELECTION:

AN ASSESSMENT OF AIR FORCE

SOURCE SELECTION APPROACHES

THESIS

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Systems Management

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Table of Contents

List of Tables

Abstract

This investigation examined the different approaches used in the Air Force source selection process. Specifically, this research surveyed the opinions of source selection personnel towards different aspects of each approach in an attempt to identify the approach best suited for varying acquisition situations. The study also accessed the adequacy of the Request for Proposal technical requirements definitions and determined the amount of source selection training personnel receive before participating in a source selection.

The analysis was accomplished by sending a survey questionnaire to source selection personnel in six Air Force Systems Command product divisions. The results show that the conventional approach is the overall preferred approach. The results also show that the technical aspects of a weapon systems are adequately defined for the contractor in the Request for Proposal. Finally, the results show that 89 percent of source selection personnel do not receive training prior to participating in their first source selection.

WEAPON SYSTEM SOURCE SELECTION:AN ASSESSMENT OF AIR FORCE SOURCE SELECTION APPROACHES

I. The Research Problem

Introduction

In recent years, the United States Air Force has come under close scrutiny concerning how it is spending the taxpayers' money. Congress, the news media, and the Department of Defense are all monitoring the procurement process, trying to insure that the Government purchases quality products at fair and reasonable prices. The procurement of major weapon systems and subsystems is of particular interest since large amounts of money are involved.

Background

The acquisition of major weapon systems and subsystems in the United States Air Force is a very important and complicated process. The acquisition process involves large expenditures of taxpayers' money in procuring the equipment and services our country requires for defense. The basic principles underlying the acquisition process have changed and grown over the years. The process is continually being modified by legislative and administrative actions. The modifications are attempts to develop a system providing safeguards "against graft, favoritism, questionable ethics,

collusion, and inefficiency, and to protect the integrity of the competitive and public bidding system" (4:146). As of April 1, 1984, all new government acquisitions must follow the guidelines outlined in the Federal Acquisition Regulation (FAR). The FAR has been in development since the 1972 Commission on Government Procurement Report called for a simplification of the procurement regulations and a reduction in the regulatory differences among government agencies. The FAR combines the main elements of the Department of Defense (DOD) Defense Acquisition Regulation (DAR), the NASA Procurement Regulations, and the GSA Federal Procurement Regulations which applied to non-DOD and non-NASA procurements (5:25-26).

Under the FAR, the two principle acquisition techniques are formal advertising and negotiations. Formal advertising is the traditional, most frequently used method of doing business with private firms. The FAR lists 17 exceptions to formal advertising as conditions for using negotiations. The formal advertising method is a technique which minimizes the individual judgment factor in awarding contracts by having sealed bids opened in public and by awarding the contract to the lowest responsive bidder (14:55). Off-the-shelf equipment purchases and service contracts are the most common applications of the formal advertising technique.

Government acquisitions through formal advertising are not always practical, especially in the research and

development and the DOD weapon system acquisition areas. Over the past 25 years, the United States has made great advances in the high technology fields of electronics, aerospace, computers, and communications. The DOD determined that the contractors' bids must be evaluated on technical and management capabilities as well as cost. Negotiations allow the DOD to procure the best possible systems to meet our national defense objectives at a reasonable cost while giving the Air Force greater flexibility in the selection of the best contractor to do the required work (2:4).

During July, 1984, Congress passed the Deficit Reduction Act. As a result of this act, the Office of Management and Budget (OMB), which is responsible for setting acquisition policy in the executive branch of the government, issued new acquisition guidance to all Federal agencies. The Deficit Reduction Act is intended to increase the competition for the government's business by putting formal advertising, renamed sealed bids, and negotiations, renamed competitive proposals, on an equal basis for awarding contracts. The act, which went into effect in April 1985, changed the conditions for conducting source selections. Two methods of choosing a contractor via competitive proposals, the conventional approach and the four step approach, have been carefully designed to minimize the risk of lawsuits by using procedures that give all contractors an equal opportunity to obtain the contract.

In order to achieve equal opportunity, every negotiated acquisition must pass through a rigorous evaluation procedure known as the source selection process . According to Department of Defense Directive (DODD) 4105.62, the source selection process must satisfy three major objectives. These objectives are to:

> 1. select the source whose proposal has the highest degree of realism and credibility and whose performance is expected to best meet Government objectives at an affordable cost;
>
> 2. assure impartial, equitable, and comprehensive evaluation of competitors' proposals and related capabilities; and
>
> 3. maximize efficiency and minimize complexity of solicitation, evaluation, and the selection decision.[23:2]

DODD 4105.62 further states that each "DOD component shall develop, and consistently apply, procedures which create the environment for an impartial, balanced and realistic appraisal of all proposals submitted" (23:2). In response to this directive, the Air Force has developed its own source selection policy and procedures in Air Force Regulation (AFR) 70-15.

The major objective of Air Force source selection is stated as follows.

> The prime objective of proposal evaluation and source selection is to assure impartial, equitable, and comprehensive evaluations of competitive proposals and to assure selection of that source whose proposal, as submitted, offers optimum satisfaction of the Government's objectives including cost, schedule, and performance. [21:1-1]

Air Force Systems Command uses two primary approaches in order to satisfy source selection requirements. They are the conventional approach and the four step approach. Both approaches use the Source Selection Evaluation Board (SSEB) to evaluate the details of each contractor's proposal. The approaches differ in in the way they address the proposal contents.

The conventional approach uses the SSEB to evaluate all technical and cost aspects of proposals together. The SSEB identifies any proposal deficiencies to the appropriate contractor and assures that all proposals meet minimum Government requirements. The SSEB negotiates with all the contractors and then forwards each contractor's "best and final offer" to the Source Selection Advisory Council (SSAC) where the documentation and recommendations of the SSEB are reviewed. After the SSAC review, all recommendations and proposals are given to the Source Selection Authority (SSA) for a final decision on contract award.

The four step approach requires the contractors to submit the technical and cost proposals separately. The technical proposals are evaluated first. During this evaluation, the contractors are contacted only if clarification is needed on technical issues. Next, the cost proposals are submitted for evaluation. After both evaluations are completed, a single contractor is chosen to enter into final negotiation with the Government. If the

Government cannot negotiate an acceptable contract with the chosen contractor before a mutually established deadline, the Government has the option to cease negotiations with that contractor and pick another contractor for negotiations.

Criticisms of the conventional approach led to the development of the four step approach. The four step approach was designed to shorten the time required for the source selection process and also to reduce the number of people required to research and evaluate the contractors proposals.

Problem Statement

Since 1978, when the four step approach was first authorized for Air Force use in negotiated procurements, very few source selections have used it. Source selection personnel may not use the four step approach because they are biased towards the conventional approach or one of its streamlined modified forms. This bias could be due to the level of military and civilian education of source selection personnel, previous source selection experience, or a lack of source selection training. Source selection personnel also may not use the four step approach because the weapon system or subsystem could have underlying characteristics which make it unsuitable for four step evaluation techniques. The purpose of our research is to determine why Air Force Systems Command source selection personnel choose one source selection approach over another.

Research Objectives

1. Determine if an adequate data base (source selection records and personnel) exists and is accessible for research.

2. Match a completed four step acquisition with an equivalent conventional acquisition and determine if contract relationships can be used to characterize a specific approach's use.

3. Determine if source selection approach familiarity plays a role in which source selection approaches Air Force Systems Command personnel consider during the Source Selection Plan generation.

4. Determine if source selection personnel prefer a specific source selection approach based upon an acquisition's characteristics.

5. Determine if source selection personnel have preconceived notions about the time and manpower requirements for a given source selection approach.

6. Determine if the source selection process is being used as a means to further define weapon system requirements.

7. Determine the perceptions of source selection personnel towards the major identifying characteristics of each source selection approach.

8. Determine what training source selection personnel receive in the area of source selection.

Scope and Limitations of Research

For fiscal year 1986, 40 billion dollars (over 36 per cent of the Air Force budget) is projected to go to Air Force Systems Command (AFSC) for the acquisition of major weapon systems and subsystems (12). Of AFSC's share of the budget, 90 per cent of these funds will be spent by AFSC Product Divisions (12). Because the bulk of the Air Force's acquisition funds are spent in AFSC Product Divisions, only source selection records and personnel from AFSC will be investigated during this research project. Procurements conducted outside of AFSC Product Divisions will not be considered.

II. Literature Review

Introduction

Procurement of major weapon systems and subsystems in the United States Air Force is a very complex process. Each procurement involves coordination among many different Air Force agencies. It also requires the development of the draft system specification requirements, a task that can take considerable time and effort. Once the Air Force is able to specify the desired system requirements and define proposal evaluation criteria, potential contractors are notified by means of a Request for Proposal (RFP). The RFP conveys a complete description of the work to be performed. In response to the RFP, contractors interested in building the system prepare proposals for submission to the Air Force. The proposals allow the Government to determine the contractor's capability and the price of his efforts.

The process of evaluating proposals is a critical step in the Air Force procurement process. "There are a number of qualified sources in the United States that have the prerequisite experience, capabilities, and facilities for the development and production of major systems and subsystems" (1:2). The potential of having a large number of proposals for a given system exists; therefore, the Air Force developed a process of evaluating proposals called the source selection process.

The source selection process gives all interested contractors the right to compete for any program involving the expenditure of public funds. All proposals received are considered, and the source selection process determines the company or companies best able to build a system. The primary objectives of the source selection process are:

1. maximize competition;

2. minimize the complexity of the solicitation;

3. ensure impartial and comprehensive evaluation of an offeror's proposals; and

4. ensure selection of the source whose proposal has the highest degree of realism and whose performance is expected to best meet stated Government requirements. [25:16937]

At present, two main source selection approaches are used in the source selection process. They are the conventional approach and the four step approach. The conventional approach also has two modified forms which have become known as streamlined approaches. The purpose of this section is to present an overview of the characteristics common to all approaches and then summarize each approach.

Characteristics Common To All Approaches

The Air Force initiates the source selection process by generating a Source Selection Plan (SSP). The SSP specifies the course of action to be followed throughout the source selection process for a given acquisition. It also establishes the standards and criteria to be used in evaluating contractors' proposals by identifying broad

general areas of the program such as logistics, management, engineering, etc and ranking the areas in order of relative importance to the program (2:21).

Source Selection Plan Preparation. The Source Selection Plan (SSP) "documents the criteria to be used for the evaluation and selection" process (2:22). A SSP must be written by the government for all acquisitions above $1M. The SSP is prepared by the government agency in charge of the source selection.

The parts of the SSP are:

1) a description of the (source selection) organization structure;

2) proposal presolicitation activities;

3) a summary of the acquisition strategy;

4) a statement of the *proposed* evaluation factors and their relative importance;

5) a description of the evaluation process, methodology, and techniques to be used; and

6) a schedule of significant milestones. [25:16941]

This plan controls the entire evaluation and selection process and must be approved by the Source Selection Authority (SSA). The SSA is "an official designated to direct the source selection process, select the sources, and announce the contract award" (7:636-637). Normally, the SSA is the Secretary of the Air Force or his designated representative.

Establishing the Evaluation Criteria. Establishment of the evaluation criteria is a complex, critical task and is the heart of the selection/evaluation process (14:202). The definition of evaluation criteria usually occurs during the SSP preparation and becomes a part of the SSP and the RFP. The evaluation criteria break down the two basic considerations of a proposal that are analyzed in the selection process. One consideration describes the product or service being procured, and the other consideration addresses the ability of a company to furnish the product or service (2:28). There are no set rules for establishing the criteria. Factors generally included in the criteria are cost realism, technical excellence, management capability, personnel qualifications, experience, past performance, and schedule (25:16937). Cost must always be included as an evaluation factor but is not necessarily the driving factor in a source selection.

The standards for rating and grading the contractor proposals against the evaluation criteria are developed during SSP generation. "A standard is defined as an acknowledged measure of comparison. A standard, in order to be useful, must be measurable" (19:27). A contractor's work efforts are measured by comparison to the established standards. The purpose of the comparison is to ascertain the quality of the contractor's work. Contractor proposals are evaluated against the SSP established standards and not

against each other. The standards are never released to the contractors. The evaluation criteria and standards provide the framework for conducting the evaluation of the proposals. The establishment of standards and subsequent evaluation of contractor proposals against them is a process designed to provide "consistency, objectivity, and comparability between proposals" (19:27).

Request for Proposal Preparation. The RFP is the official government document inviting private firms to submit proposals for a contract to the government. RFP guidelines are set forth in AFSC Pamphlet 70-4. The RFP contains a model contract - the "key communication to potential contractors on exactly what, how, and when the Government needs to buy" (14:205). According to the Weapons Systems Acquisition Guide by Major James Huffman and others (14:58-59), a typical model contract is broken down into the following sections:

A. Contract Form - Usually Standard Form 33, Part 1 (Solicitation, Offer, and Award, and acknowledgment of Agreements).

B. Supplies/Services and Prices - A brief description of the items being acquired. If a specification has been approved, the specification number would be cited in this section. The contractor must build the equipment in accordance with this specification.

C. Description/Specifications - When a brief description in section B is not sufficient to permit a full competition, this section is included to provide more detail. Government performance requirements or Statements of Work (SOW) may be printed in their entirety in this section or they may be included as attachments in Section J.

D. Packaging and Marking - Packaging and marking requirements, if any.

E. Inspection and Acceptance - Describes the place of inspection and place of acceptance.

F. Deliveries or Performance - Describes when and where items are to be delivered.

G. Contract Administration Data - Instructs paying offices and administrative contracting offices.

H. Special Provisions - Includes any special (not mandatory by law) clauses that will apply to the acquisition.

I. General Provisions - General contract provisions required by law.

J. List of Documents, Exhibits, and other Attachments - The documents, exhibits, and attachments that make up the request for proposal. A list of deliverable data, the Contract Data Requirements List (CDRL) is usually found in this section.

K. Representations, Certifications, and Other Statements of Offeror - An extensive list of statements the

contractor must certify to. He must fill out the certifications and return the package with his proposal.

L. Instructions, Conditions, and Notices to Offerors - Additional instructions such as the type of contract desired, permission to submit alternate offers, and directions for obtaining copies of any documents. This section can include any instructions the Government feels is necessary.

M. Factors other than price which will be given paramount consideration in the awarding of the contract.

The RFP lists the evaluation criteria in order of importance to the government. The criteria become the guidelines for the contractors in preparing their proposals.

If required in the SSP, a draft RFP is released to industry prior to the formal release of the RFP. Draft RFPs allow the government and industry to communicate on the RFP package as a whole and to clarify any ambiguous information prior to the release of the formal RFP (14:203). In DOD, a review of all RFPs is conducted by a Solicitation Review Panel (SRP), also called a "murder board," prior to release of an RFP to industry.

> The SRP makes sure each RFP provides a basis for a sound viable contract; reflects desired program objectives; conforms to current acquisition, contracting, manufacturing, and Quality Assurance policy; outlines in clear, concise terms exactly what the Government intends to buy; and eliminates excessive or non-essential contractual requirements. [14:203]

Characteristics Peculiar to Specific Approaches

The source selection characteristics described in the preceding section are common to all major weapon system and subsystem source selections. The SSP guides the entire acquisition process with established evaluation criteria for all contractor proposals submitted in response to the government's RFP.

During the SSP development, the Air Force must make a decision on which source selection approach to use in order to evaluate the RFPs. The Air Force currently has two major source selection approaches available. The following is an overview of each approach and their modified forms.

Overview of the Conventional Approach

Historical Application of the Conventional Approach. Acquisitions made under the conventional approach in accordance with Air Force Regulation 70-15 require a great deal of time and manpower (2:10). A review of ASD source selection records indicates that during the period from 16 January 1981 until 2 March 1984, Aeronautical Systems Division (ASD) completed six major source selections utilizing the conventional approach. The average time required for each ASD source selection from RFP release until contract award was 182 days. The average number of Source Selection Evaluation Board (SSEB) members was 276 people. Table 2.1 summarizes the six ASD conventional source selections from 16 January 1981 to 2 March 1984.

TABLE 2.1

ASD Conventional Source Selections*

ASD WEAPON SYSTEM	DAYS FROM RFP RELEASE UNTIL CONTRACT AWARD	NUMBER OF SOURCE SELECTION EVALUATION BOARD MEMBERS
Alternate Fighter Engine	177	246
Operational Support Aircraft	126	146
Transport C-17 Aircraft	188	560
Special Airlift Mission Aircraft	207	360
Next Generation Trainer	186	186
European Distribution Support Aircraft	209	160
AVERAGE	182 days	276 people

* Compiled from ASD source selection records

After the SSP is completed, the Government issues the RFP which asks industry to submit contract proposals (14:205). The RFP contains a specific cut-off date for the submission of proposals. Late proposals are rejected. After the cut-off date, the Source Selection Evaluation Board (SSEB) evaluates the proposals against the standards associated with each evaluation criteria factor. After an initial evaluation of all the proposals, a "competitive range" is defined by the Contracting Officer in charge of the source

selection. The competitive range defines both the minimum and maximum requirements in each functional area that the government expects to see in the final contract. All proposals within the competitive range proceed into parallel negotiations.

During the parallel negotiations phase, the Contracting Officer negotiates definitive contracts with all the companies within the competitive range. At the same time, the evaluation board requests clarification of any ambiguous proposal items and correction of proposal deficiencies from the companies in the competitive range. The negotiation phase is concluded with the contractor's submission of a "best and final offer" and a signed contract to the government agency (14:204).

The "best and final offer" of each contractor is evaluated by the SSEB against previously established evaluation criteria. After the evaluation, the SSEB forwards its recommendations to the Source Selection Advisory Council (SSAC). The SSAC reviews the SSEB recommendations and in-turn submits the recommendations to the Source Selection Authority (SSA). The SSA makes the final source selection, and the Contracting Officer executes the selected firm's contract for the government. The SSA sends a short letter notifying the unsuccessful contractors of the contract award. Formal debriefings are held for unsuccessful contractors if requested.

The Conventional Approach. The conventional approach consists of three main phases. The following is an overview of each of these phases.

Phase One - Evaluation of Proposals. After the cut-off date stated in the RFP, the SSEB grades each submitted proposal against established evaluation criteria. Usually, the SSEB is broken down into panels that correspond to the functional areas outlined in the RFP. The four main functional areas are technical, management, cost, and logistics (14:198). The functional panels perform an independent evaluation of each proposal and assign an objective rating based on the previously defined standards for each criteria element. "Evaluators must not make the mistake of rating proposals in relation to each other" (2:50). Next, the SSEB formulates the Proposal Analysis Report (PAR) which summarizes the facts and findings of how well each company met the requirements reflected in the RFP (2:59). The PAR is prepared for the Source Selection Advisory Council (SSAC) and the Source Selection Authority.

The SSEB membership, a group of military and civilian personnel, is based solely on the functional areas and the evaluation criteria defined in the Source Selection Plan. The criteria define "the disciplines that require analysis and the skills within these disciplines" (2:49). Each source selection requires a unique combination of personnel to conduct the evaluation, and therefore, no permanent board for source selection is maintained.

> SSEB duties will take precedence over the evaluator's normal duty assignment. All members are required to be available for the entire evaluation period which will commence with the first meeting of the SSEB membership and extend through the final preparation of findings to the Source Selection Authority. [2:49]

Phase Two - Fact Finding and Negotiations. The "competitive range" includes all contractor proposals that fall between a government established minimum and maximum requirement level. The Contracting Officer, the official point of contact between the contractors and the government, establishes the competitive range based upon the results of the initial SSEB evaluation of the proposals (14:204). Only those proposals within the competitive range continue into parallel negotiations.

> Negotiation involves bargaining between the contractor and Contracting Officer to arrive at a common understanding on contract essentials such as delivery schedules, specification, prices, and terms. [14:60].

During the proposal evaluation phase, the SSEB generates a number of Deficiency Reports (DR) and Contractor Inquiries (CI). A DR records a part of the proposal that does not meet the minimum requirements of the RFP. A CI seeks information in addition to the proposal or a clarification of a part of the proposal. DRs and CIs are submitted through the Contracting Officer to the contractor and must be satisfactorily resolved before a suitable contract can be negotiated (2:63).

Parallel negotiations are formally ended at a date common to all contractors and the results of the negotiations are confirmed by the contractors submitting their "best and final offer" (17:I-1;I-2). A signed contract must be included with the offer. Upon receipt of the best and final offers, the government will not hold any further discussions with the contractors "unless it is clearly in the Government's interest to do so [or the] information available at that time is inadequate to reasonably justify contractor selection" (25:16940).

Phase Three - Selection of Contractor. The Source Selection Authority reviews the best and final offers as well as all other reports pertaining to the proposals before selecting the source. The SSA chooses the proposal that is "most advantageous to the Government consistent with the established evaluation factors" (25:16940). When the decision is made, the winning contractor is notified and the Contracting Officer formally executes the contract by signing it. All unsuccessful contractors receive written notification of the contract award. Details concerning the rejection of a contractor's proposal are not disclosed in the written notification. The contractor must request a formal debriefing from the government to obtain this information.

Overview of the Streamlined Approaches

Origin of Streamlined Approaches. The streamlined source selection processes came into being as a result of a need to reduce the time and manpower requirements associated with the use of the conventional approach. Historically, the conventional approach divided the SSEB organization into "Areas, Items, and Factors which have been established in the evaluation criteria" (2:10). According to the handbook, The Source Selection Process (2) printed by Aeronautical Systems Division, the division of the SSEB organization has resulted in large numbers of personnel gathering to evaluate contractors' proposals over prolonged periods of time. The result of these evaluations has been "voluminous reports at each level of the evaluation without regard to the probable impact of the factor on the selection process" (2:10). In addition, much of the data is fragmented and overemphasizes "relatively small strengths and weaknesses which have little or no impact on the decision process" (2:10).

Criticisms such as these led to the development of source selection approaches which could shorten the time required for the conventional approach and also reduce the number of personnel required to research and evaluate the contractors' proposals. The approaches developed are modified forms of the conventional approach and have become known as streamlined approaches.

The Streamlined Approaches. Presently there are two streamlined approaches - the Aeronautical Systems Command (ASD) approach and the Ballistic Missile Office (BMO) approach.

The ASD Streamlined Approach. The ASD streamlined approach as outlined in ASD Pamphlet 800-7 modifies the conventional source selection approach by allowing the SSA to establish a Source Selection Evaluation Committee (SSEC) consisting of a group of experienced senior military and government civilian personnel. The head of the SSEC assumes "the responsibilities and tasks belonging to the SSAC and SSEB Chiefs" (2:10). The SSEC Chief makes decisions concerning the source selection process based upon written conclusions submitted by an assigned evaluator in each of the facets of the program.

> . . . the evaluator in the SSEC organizational structure is charged with the total evaluation of a facet of the program and given the responsibility for acquiring expert advice and consultation as may be required. Evaluators consolidate advice obtained with their own findings and furnish the SSEC Chief a document that summarizes the dominant strengths and weaknesses of proposals under review and the relative acceptability of each. [2:10]

The expert advice and consultation mentioned above can be sought from designated experts either within the government or from the civilian community. Use of advisors and consultants, however, is recommended only "when a particular, narrow problem arises which an evaluator cannot resolve" (2:10). The advisor or consultant is not required

to submit a written statement; each is only sought for a short discussion with the evaluator.

The end result of utilizing the ASD streamlined approach, in lieu of the conventional approach, is that "the total committee personnel involved, including advisors and consultants, should be in the area of 25 or 30 rather than in the hundreds" (2:10) as utilized by conventional source selections.

The BMO Streamlined Approach. The BMO streamlined approach modifies the conventional approach in four ways. First, the BMO streamlined approach limits the number of pages a contractor can submit in a proposal for evaluation. In the past, contractors were given a "suggested page count" for proposals, but contractors for the most part ignored this suggested limit. Contractors continued to submit volumes of information which cost the contractors money to generate and also made the job of proposal evaluation more time consuming and difficult. Under the BMO streamlined approach, it is stated emphatically that the evaluators will only read up to the specified maximum number of pages. "Pages in excess of the maximum are removed from the proposal and filed to insure they are not evaluated" (13:6). The goal of imposing this page limit on the contractor is:

> reduce technical and management information from our previous combined high of 350 pages to a maximum of 100 pages total. The aim is to eliminate information which is not necessary to the decision making process. We do, however, tailor page amounts to the acquisitions (e.g.,

on large dollar value, complicated acquisitions we may require 150 pages of technical and management information).[13:5]

Secondly, the BMO streamlined approach reduces the number of SSEB members to a maximum of 25 and replaces the functional area teams with a single evaluation panel (13:9). Each member of the evaluation panel is required to be experienced in many disciplines related to the particular source selection being conducted. Each panel member evaluates all aspects of a submitted proposal except cost considerations which are evaluated separately. In some cases where the SSEB and SSAC have been combined, the panel members will also have to perform comparative analysis between the proposals.

Thirdly, the BMO streamlined approach establishes a nine week time standard from proposal receipt to contract award. The following is an example of how a source selection could be accomplished in a nine week period.

TABLE 2.2

Example Timeline For BMO Streamlined Source Selection [13:18]

EVENTS		TIME(WEEKS)
FROM	TO	
Proposal receipt	Competitive range	3
Competitive range	Best and final offer	4
Best and final offer	Contract award	2
	TOTAL	9

Lastly, the BMO streamlined approach adds contractor presentations to the source selection process in order to reduce the total reliance on written proposals. The presentations take place after the competitive range is established. The purpose of the presentation is to allow panel members to gain greater insight into what each contractor is really offering the government and also to provide panel members with a question and answer session to help resolve proposal deficiencies. The results of these discussions are included in the final proposal.

Overview of the Four Step Approach

Four Step Origin. The four step source selection process was first proposed by Mr. James Plummer, an Under Secretary of the Air Force (17:I-2,4). It was developed in response to criticism from the Department of Defense and industry that the conventional approach was too complex, took too long to acquire the system, and "tended to obscure technical and management differences between competing offers" (17:I-2,4).

Mr. Plummer's four step approach was studied by the Department of the Air Force while used in seventeen source selections over a period of two years (17:ii). The favorable results of the study led to the issuance of the September 1978 Defense Acquisition Circular (DAC) which authorized the four step procedures to be included in the Defense Acquisition Regulations (DAR) (22:3).

When the Four Step is Applicable. The DAR made the four step approach "mandatory for all competitively negotiated research and development acquisitions" (2:206) with some exceptions. Recently, however, the Federal Acquisition Regulation Supplement paragraph 15.613 deleted the mandatory use of the approach and leaves the choice of the procedure to "the discretion of the Contracting Officer for competitively negotiated research and development acquisitions with an estimated value of two million dollars or more" (24:15.6-2). The FAR Supplement further states that the four step approach should not be used for acquisitions where extensive negotiations are anticipated and that the procedures will not be used for any acquisitions which:

> 1. are negotiated pursuant to FAR 15.202 [Public exigency];
>
> 2. are solely for personnel services;
>
> 3. are for architect-engineer services; or
>
> 4. have an estimated value of less than two million dollars. [24:15.6-2]

The Four Step Approach. The four step approach to source selection, as the name suggests, consists of four main steps. These steps are defined in FAR Supplement paragraph 15.613 and are further discussed in Guide For Weapon Systems Acquisition (14:205,206), 4-Step Source Selection (17:I-10,11), and The Source Selection Process (2:13-15). The following explanation of the four step

approach has been compiled from these sources and is intended to briefly summarize each step.

Step One - Evaluation and Discussion of Technical Proposals. In step one, technical proposals are solicited from all contractors desiring to bid on the construction of a new system. The technical proposals are evaluated on the basis of how well they satisfy Government requirements, but no deficiencies in a proposal are discussed with the contractor. The only discussion allowed is for the purpose of achieving understanding and clarification of the contractor's proposal. "Cost estimates which illustrate the impact of tradeoffs upon projected production and operating/support costs are required" (14:205). After the evaluations are completed, unqualified bidders are eliminated.

Step Two - Evaluation and Discussion of Cost/Price Proposals. After all technical proposals are analyzed, a fully documented cost/price proposal is obtained from the bidding contractors. Using the cost/price proposals, a competitive range is established. The competitive range is based upon the feasibility of a system being procured for a given amount of money. If a contractor's bid is outside the competitive range, he is eliminated from the selection process and notified that he is no longer in contention for the contract. Cost/price discussions are then held with all remaining contractors. The discussions may serve to correct

mathematical errors, correlate cost to technical efforts, or clarify the Government's requirements for logistic support, performance factor trade-offs, or delivery schedules (24:15.6.4). Following these discussions a contractor can still be eliminated from the selection process for the following reasons:

> 1. when the proposal was initially included in the competitive range because it might have been susceptible of being made acceptable; or
>
> 2. because there was uncertainty whether it was in the competitive range, and in either case, through discussions relating to ambiguities and omissions, it becomes clear that the proposal should not have been included in the competitive range initially. [24:15.6-4]

Contractors are not advised of how high or low their bid fell in the competitive range or of proposal deficiencies.

Step Three - Common Cutoff. During step three, a common cutoff date is established for the receipt of all technical and cost/price proposal revisions. If a revision is made, it must be fully documented with supporting data describing the conditions that brought about the change. An unsubstantiated revision will not be accepted. After the cutoff date, no additional proposals or revisions will be solicited unless approved by an official at a level no lower than the head of a contracting activity. Repetitive calls for cost/price proposals in order to auction the contract to the lowest bidder are not allowed.

After the cutoff date, all proposals and revisions are evaluated and a single contractor is selected to enter into

final negotiations. (More than one contractor can be selected if multiple sources are desired.) The selection is "based on an integrated decision, involving consideration of technical approach, capability, management, design to cost, operating and support cost objectives, historical performance, price/cost and other factors" (24:15.6-5). Following the selection, all contractors are notified of the decision.

Step Four - Final Negotiations and Contract Award. During the final negotiations, the Government and the selected contractor strive for a definitive contract acceptable to both parties. The negotiations attempt to disclose and resolve all technical deficiencies and unsubstantiated areas of cost. They do not involve "material changes in the Government's requirements or the contractor's proposal which would affect the basis for the source selection" (24:15.613). If such changes are necessary, FAR 15.606 contains procedures to be followed. In the event the Government and the contractor cannot agree on a definitive contract before a mutually established deadline, the Government has the option to terminate the negotiations and choose another contractor. "The final negotiated contract must represent a reasonable probability that the Government's requirements will be satisfied at a fair and reasonable cost/fee or price" (24:15.6-6). After the contract is signed, all eliminated contractors desiring to know their proposal deficiencies are formally debriefed.

III. Methodology

Introduction

The research project was conducted in three separate phases. The first phase involved telephone and personal interviews to determine if a sufficient number of source selection records and experienced source selection personnel would be available to permit the research. The second phase was a review of completed source selection records at different AFSC product divisions. In the third phase, a mail survey was used to gather background and opinion data on different aspects of the source selection process. The surveys were sent to personnel in the AFSC product divisions experienced in the source selection process. Each phase is described in detail below.

Phase I - Data Availability

In order to accomplish research objective one, we first had to determine if the required source selection records and names of experienced source selection personnel were available. Telephone and personal interviews with the Source Selection Department Chiefs at the Aeronautical Systems Division (ASD), Electronic Systems Division (ESD), Space Division (SD), and Eastern Space and Missile Center (ESMC) were conducted. In the interviews, we were looking for two general areas of information. First, we had to determine the accessibility of the source selection records

required to meet research objective two. The initial records review research focused on the four step approach because it has seldom been used by the Air Force since the approach's release in 1978. The records had to contain the following information to accomplish this objective:

a) the number of completed four step source selections in each product division since 1978;

b) the names of the principal points-of-contact for completed four step source selections; and

c) the names of any other personnel who might provide insight, comments, or opinions on the four step source selection process.

The second general area of information required was to assess the difficulty involved with generating a mailing list of experienced source selection personnel. This information was critical if the mail survey questionnaire phase of the research was to be accomplished.

Finally, after reviewing the results of the source selection personnel interviews, a decision had to be made on whether the research objectives could be accomplished.

Phase II - Records Review

Data Collection. A review of completed source selection records of both the conventional and four step approaches was conducted at the different AFSC product divisions. The data gathered during the records review was required in order to accomplish research objective two.

Due to the limited number of four step source selections since 1978, we decided to attempt a review of all four step records. Only a random sampling of the conventional approach records would be evaluated due to the large number of conventional source selections occurring each year.

The following list contains the data required from each source selection record:

a) the number of personnel serving on the Source Selection Advisory Council (SSAC) and Source Selection Evaluation Board (SSEB);

b) the level of the Source Selection Authority (SSA);

c) the security classification of proposals;

d) the final contract award price;

e) the total time (in days) from RFP release to final contract award announcement;

f) the product division responsible for the source selection;

g) the type of acquisition - system, subsystem, or modification;

h) the number of bidders submitting proposals to the SSEB;

i) the average number of pages in each submitted proposal (broken down into functional areas if possible - technical, cost, management, and logistics support);

j) the source selection approach used; and

k) the contract type - Fixed-Price plus Incentive, Cost plus Incentive, Fixed-Price.

Using the Data to Meet Research Objective 2. Research objective two attempted to match a completed four step acquisition to an equivalent conventional acquisition. After the match was made, contract relationships would be used to characterize a specific approach's use. The following list is the criteria used for matching similar four step and conventional source selections:

1) the product division responsible;
2) the type of contract;
3) the type of acquisition; and
4) the final contract award price.

Once the matching of approaches was accomplished, an analysis would draw conclusions based on the following areas:

a) number of bidders;
b) average number of pages in each submitted proposal;
c) number of people on the SSEB; and
d) total time from RFP release to final contract.

Phase III - Mail Survey Questionnaire

Data Collection and Analysis. Two sets of data were collected during this phase of the research. First, the mailing list for the survey was generated. Second, the survey questionnaire was constructed, sent to the field, and the survey responses analyzed.

Mailing List Construction. Due to the time limitations on the research team and the transitory nature of the AFSC job environment, it was impossible to identify the entire source selection population of interest. Therefore, a mailing list (sample) representative of the source selection population was compiled. The sample had to consist of people from different AFSC product divisions, diverse functional areas, and different military/civilian ranks. A nonrandom (nonprobabilistic) sample selection plan was used for two reasons. First, people experienced in the source selection process were in the best position to provide the information needed. According to Emory, the requirement for expert judgment or opinion often necessitates the use of nonrandom sample selection (18:88). The second reason was that the entire population could not be identified, thus eliminating the possibility of any type of random sampling.

The researchers decided on a two-step process for generating the mailing list. The first step was to ask each Source Selection Department Chief to provide the names and phone numbers of 20 experienced source selection personnel from their respective product divisions. Letters with the request were sent to the following offices:

1. Aeronautical Systems Division (ASD/PMP)
2. Electronic Systems Division (ESD/PKP-2)
3. Space Division (SD/PMOM)

4. Armament Division (AD/PMP)

5. Ballistic Missile Office (BMO/PMP)

6. Eastern Space and Missile Center (ESMC/PMP)

The team recognized that using this method of sampling presented the possibility of a bias towards a particular approach. In an attempt to eliminate this bias, the letter to the Department Chiefs did not disclose any details of the survey subject matter.

The second step in the survey mailing process was to expand the name list to 200 names. This step involved making telephone calls to the people identified by the Department Chiefs and requesting 2 or 3 additional names of experienced people in the source selection process. The telephone calls served two purposes. First, they allowed us to expand our mailing list and second, they allowed us to verify the experience of each source selection personnel identified by the Department Chiefs. Again, care was taken not to divulge the subject matter of the survey in an attempt to keep approach bias to a minimum.

Survey Construction, Mailing, and Analysis. This section of Phase III methodology used a mail survey and the Statistical Package for the Social Sciences (SPSS) computer package. The section consists of 3 steps. The first step involved preparing the survey instrument and obtaining Air Force approval to administer the survey. The second step consisted of mailing the survey to the 208 source selection

personnel identified in the previous data collection section. Finally, the results of the survey were analyzed and conclusions drawn from the analysis. The following is a discussion of the three steps.

Survey Instrument Preparation. A mail survey questionnaire was chosen as the primary instrument to gather source selection data not currently available from experienced source selection personnel. Two possible methods of data collection were considered, the mail survey and the telephone interview. Telephone interviews have an excellent response rate, but can be very time-consuming (a:39). A trial run of a typical telephone interview required 45 minutes or more of the interviewee's time. A mail survey covering the same questions would only require 15 minutes. Since indepth comments were not required by the team, the mail survey was chosen as the least costly method in terms of manpower and time.

Next, the actual questions were formulated. Respondent background characteristics and expert opinions/preferences were the two types of information required to meet our research objectives. Background information (demographics) are contained in Part I, questions A thru L of the survey. The background information was required for categorizing the survey results during the analysis step. The questions in Part II of the survey were the result of the research team's perceptions of the problems and issues facing source

selection personnel in today's environment. These questions were formulated after extensive interviews with the source selection department chiefs and other experienced source selection personnel in AFSC. Part II dealt with four general areas of opinions and preferences. The first area questioned the participant's preferred source selection approach when associated with a specific system characteristic (Part II, questions A, B1 thru B7). The second question area dealt with the time and manpower requirements of the various approaches (Part II, questions C1 thru C4). The third question area addressed the problem of using the source selection process to further define system requirements (Part II, questions D and H). Source selection personnel perceptions of the current attempts to improve the source selection process were covered in the fourth area of the survey (Part II, questions E,F,G,I,J, and K). The final section titled "Other Comments" invited respondents to express additional opinions on the source selection process.

After preparing the survey, the next step was to test the survey instrument. Two Intermediate Program Management (SYS 400) Professional Continuing Education courses at AFIT were selected for test runs. The majority of personnel attending this course were field grade officers or civilian equivalents with acquisition experience. Based on the comments received from the classes, changes were made as necessary to improve the survey instrument.

The final step was to obtain approval from the Air Force Survey Control office to administer it. A survey package was prepared and submitted for approval. The package included a description of the purpose and objectives of the survey, a description of the population and sample, an estimate of the total costs to be incurred, a copy of the survey cover letter, and a copy of the survey.

Administering the Survey. Once the Air Force Survey Control Office approved the survey, the team prepared a survey packet for each survey participant. The survey packet contained a copy of the cover letter, a survey, and a return envelope. The cover letter requested that the surveys be returned within 7 days of receipt. Appendix A contains a copy of the cover letter sent to ASD personnel and appendix B contains a copy of the mail survey questionnaire. A special cover letter was prepared for each product division in order to show the team's coordination with each product division source selection Department Chief.

Analysis of Results. This section presents a brief overview of the statistical techniques used during the analysis of the survey responses. The actual analysis techniques applied to each research objective will be discussed later in this chapter.

The SPSS computer package on the ASD Cyber computer system was used to store the coded survey responses and

generate the required statistics. Returned surveys were numbered sequentially and dated upon receipt. The responses to the questions were coded and entered into a Cyber data file. The date the survey was input into the data file was also placed on the survey.

The survey responses, as coded into the computer data file, were examined for their level of measurement. The level of measurement determines which statistical techniques can be applied to the data. According to S.S. Steven, there are four traditional levels of measurement: nominal, ordinal, interval, and ratio. The level of measurement assigned to a data field is a result of the ordering and distance properties of the data. All data fields associated with the survey responses were limited to the nominal (lowest) level of measurement, except the Yes/No questions which are discussed later in Chapter III. In the nominal level of measurement, the values divide the data field into distinct categories and each data field "value itself serves merely as a label or name for the category". (15:4)

Due to the nominal level of measurement of the data fields, two SPSS routines were selected for use: FREQUENCIES and CROSSTABS. FREQUENCIES calculate one-way frequency distribution tables on the data fields. The tables are used to give the researcher a general idea of how the responses are distributed. An understanding of the distribution characteristics of a data field is important

before progressing to the analysis of the relationships between data fields (15:194). SPSS was used to generate a simple frequency distribution table and a histogram for each data field. Additional statistics, such as the measures of central tendencies, were not generated because they are meaningless for nominal (categorical) data.

After analyzing the frequency distribution tables, relationships between the background information and opinion responses were established to analyze the data in terms of the research objectives. One statistical technique available for the analysis of nominal data field relationships is CROSSTABS. Using CROSSTABS produces a contingency table that is a "joint frequency distribution of cases according to two or more classificatory variables" (15:218).

> The contingency table is an extremely versatile and valuable instrument which paradoxically finds frequent inappropriate employment because of its simplicity and yet is often erroneously overlooked in favor of complex parametric models requiring highly questionable assumptions about the data. (27:196)

A contingency table provides a row by column representation of the frequency of occurrence between different categories of two data fields. For example, a contingency table of product division by preferred approach would have the different product divisions listed above the columns and the different approaches listed down the side of the table. The intersection of a row and a column contains the percentage of the product division personnel who picked the approach associated with that column.

CROSSTABS was used to examine the relationships between the background characteristics of the respondents and the opinion/preference questions that involved a selection of a particular approach.

The Yes/No type questions allowed the team more latitude in the selection of statistical techniques. The Yes/No data fields are dichotomies (two possible values). "Any dichotomy can be treated as though it were an interval-level measure" (15:5). Therefore, we performed an analysis of variance on these data fields. The SPSS manual describes Analysis of Variance as follows:

> Analysis of variance is a statistical technique that assesses the effects of one or more categorical independent variables, measured at any level upon a continuous dependent variable that is usually assumed to be measured at a interval level. Conceptually, the cases are divided into categories based on their values for each of the independent variables, and the differences between the means of these categories on the dependent variable are tested for statistical significance. (15:9)

For the purpose of this research, the SPSS statistical routine ONEWAY was used for the analysis of variance. ONEWAY is a special form of analysis of variance limited to only one independent variable. The independent variable can be nominal but the dependent variable must be measured at least on an interval level (dichotomy). Thus, the background information data fields were used as the independent variables. ONEWAY shows any statistical differences in the Yes/No responses based on the background categories (groupings).

IV. Findings

Introduction

This chapter presents the results of the three phases of the research project described in Chapter III. The first phase involved a data availability check. This check determined if the source selection records needed to accomplish the records review in Phase II were accessible by the team. The check was also used to assess the difficulty in generating a list of experienced source selection personnel in support of the third phase, the mail survey questionnaire.

Phase I - Data Availability

The primary points-of-contact during Phase I were the following Source Selection Department Chiefs: Mr. Jim Helmig, Aeronautical Systems Division; Ms. Irene Biddy, Electronic Systems Division; Mr. Joe Kruger, Space Division; and Mr. Herb Wasserman, Eastern Space and Missile Center. These Department Chiefs were contacted by telephone or visited between September and December 1984. From the contacts, the research team made two determinations. First, an insufficient number of four step source selection records were available to perform Phase II of the research. Second, numerous source selection personnel could be identified for a mail survey questionnaire.

The actual number of four step source selections that have occurred since 1978 is small. According to Mr. Helmig, ASD has initiated only five four step source selections. Of the five four steps initiated, the team could obtain access to only 1 set of records. Two sets of records were stored off-base in a vault, one set was classified, and one four step converted to the conventional approach during the source selection process. In ESD, Ms. Biddy was aware of only one four step source selection and it was currently in-progress. The records of that source selection would not be accessible until the source selection was complete. No completion date was available.

Mr. Herb Wasserman at ESMC was able to obtain the records for one completed four step source selection. A review of the existing four step source selection records at Space Division revealed only partial data was available. In the final analysis, the team decided that the three full sets of four step records and the partial sets would not be sufficient to perform Phase II of the research project.

All the department chiefs indicated that their product divisions conducted numerous source selections during any given year and that many people were involved with each source selection. As a result, we concluded that a sufficient pool of experienced source selection personnel existed and was available for the survey questionnaire in Phase III.

Phase II - Records Review

During Phase I of the research, the team determined the records review phase could not be accomplished due to the relatively small number of completed four step source selections, the incompleteness of the some records, and the inaccessibility of other records.

Phase III - Mail Survey Questionnaire

Phase III Overview. Five steps were followed in this phase of the research. They were:

1. the mailing list was constructed;

2. the survey was constructed;

3. Air Force approval to administer the survey was obtained;

4. the survey was sent to the field; and

5. the responses from the survey participants were analyzed.

Step One - Mail List Construction. All the source selection department chiefs replied to our request for a list of personnel experienced in the source selection process. The team expanded the mailing list by calling the people provided by the department chiefs and requesting additional names. The completed mail list contained 208 people.

Step Two - Survey Construction. The survey was initially constructed in September 1984. The survey instrument was administered to two SYS 400 Professional

Continuing Education (PCE) courses at AFIT. As a result of the comments received from the SYS 400 classes, several minor changes to the instrument were made.

Step Three - Survey Approval. The Air Force survey approval process took approximately 7 weeks due to the time required to coordinate with local labor unions at each product division. On May 31, 1985, verbal approval was received from the Air Force Survey Control Office to administer the survey. The survey control number 85-41 was assigned to the survey and appeared on each survey cover letter.

Step Four - Survey Administration. The team finalized the survey packets and mailed the surveys on the same day approval was received. The cut-off date for acceptance of surveys was 15 July 1985.

Step Five - Survey Results. The results of the survey were divided into four main sections. The first section presents the response rate and background of the survey participants. The second section presents the survey participants preferences for a source selection approach in different acquisition situations. The third section presents the survey participants' opinion of the time and manpower requirements needed for different source selection approaches. The final section presents the survey participants opinions about the source selection process and the differing characteristics of each source selection approach.

The descriptive statistics in this chapter are presented in tabular form and the responses from several survey questions may be included in the same table. All percentage figures in the tables are computed based upon the number of survey participants who answered a specific question and do not reflect the total number of survey participants who were eligible to answer.

Section One - Response Rate and Background. This section contains a summary of the responses to the background questions from the survey (Part I).

Response Rate. The source selection survey questionnaire was sent to 208 source selection personnel in Air Force Systems Command. One hundred forty of the surveyed personnel returned a completed survey. The overall response rate was 67.3 percent. Table 4.1 summarizes the response rate by product division, and table 4.2 contains the response rate by military rank and civilian grade. A majority of the responses were from the middle and upper management areas, giving the researchers confidence in the experience level of the population sample.

Background Information. Tables 4.3 thru 4.5 summarize the demographic questions from the survey (questions D, F, and G). The tables show the highest education level achieved by the survey participants, their current functional area, and the type of procurement they

TABLE 4.1

Product Division Response Rate

PRODUCT DIVISION	SURVEYS MAILED	COMPLETED SURVEYS	RESPONSE RATE(%)
ASD	88	51	58.09
SD	41	21	51.2
ESD	38	34	89.5
AD	18	14	77.8
BMO	12	7	58.3
OTHER	14	13	92.9
TOTAL	208	140	67.3%

TABLE 4.2

Military Rank or Civilian Grade of Survey Participants

RANK/GRADE	NUMBER	PERCENT OF TOTAL
COL	6	4.3
LTC	13	9.3
MAJ	13	9.3
CAPT	11	7.9
1LT	4	2.9
2LT	3	2.1
SES	4	2.9
GM-15	17	12.1
GM-14	16	11.4
GM-13	20	14.3
GS-14	2	1.4
GS-13	16	11.4
GS-12	15	10.7
TOTAL	140	100%

TABLE 4.3

Education Level of Survey Participants

DEGREE	NUMBER	PERCENT OF TOTAL
HIGH SCHOOL	7	5.0
ASSOCIATE	4	2.9
BACHELORS	35	25.0
MASTERS	85	60.7
DOCTORATE	9	6.4
TOTAL	140	100%

TABLE 4.4

Current Functional Work Area of Survey Participants

FUNCTIONAL AREA	NUMBER	PERCENT OF TOTAL
PROGRAM MANAGEMENT	37	26.4
CONTRACT OR MANUFACTURING MGMT	32	22.9
ENGINEERING	20	14.3
CONFIGURATION MGMT	6	4.3
PROGRAM CONTROL MGMT	12	8.6
LOGISTICS MGMT	10	7.1
TEST AND EVALUATION	4	2.9
OTHER	19	13.6
TOTAL	140	100%

are most familiar with. Table 4.6 shows the grouping of the survey participants by the total number of source selections they have participated in. Approximately half of the responses were from personnel with more than 5 source selections, again, indicating a high experience level.

TABLE 4.5

Type of Procurement Survey Participants are Familiar With

PROCUREMENT TYPE	NUMBER	PERCENT OF TOTAL
AIRCRAFT	25	18.8
ELECTRONICS	52	39.1
ARMAMENT	9	6.8
SPACE/MISSILES	29	21.8
OTHER	18	13.5
TOTAL	133	100%

TABLE 4.6

Number of Source Selections Survey Participants Have Participated In

NUMBER OF SOURCE SELECTIONS	NUMBER	PERCENT OF TOTAL
LESS THAN 5	73	52.1
6 TO 10	26	18.6
11 TO 20	23	16.4
GREATER THAN 21	18	12.9
TOTAL	140	100%

Source Selection Experience and Training. The results of survey question J are contained in Table 4.7. The table shows how the survey participants gain most of their source selection experience. Table 4.8 shows the approaches the participants are familiar with (survey question L), and Tables 4.9 and 4.10 summarize the two

survey questions on training (H and I). A majority of the survey participants did not receive any training prior to their first source selection (Table 4.10) and 35.7% have received no formal Air Force training in source selection. Table 4.11 shows that a majority of the survey participants have participated in a conventional source selection but participation in other approaches is limited.

TABLE 4.7

Major Source of Source Selection Experience

SOURCE	NUMBER	PERCENT OF TOTAL
FORMAL MILITARY TRAINING COURSES	1	.7
ON-THE-JOB TRAINING	99	71.6
INDIVIDUAL STUDY	34	24.3
NO EXPERIENCE	2	1.3
OTHER SOURCES	3	2.1
TOTAL	139	100%

TABLE 4.8

Type of Source Selection Approaches Survey Participants Are Familiar With

APPROACH	NUMBER	PERCENT OF TOTAL *
CONVENTIONAL	133	95.0
FOUR STEP	103	73.6
ASD STREAMLINED	51	36.4
BMO STREAMLINED	37	26.4
OTHER	33	23.6

* NOTE: Multiple answers were possible.

TABLE 4.9

Military Training Courses Survey Participants Have Attended

TRAINING COURSE	NUMBER	PERCENT OF TOTAL *
INTRO TO SYSTEMS ACQUISITION (SYS 100)	41	29.3
ACQUISITION PLANNING AND ANALYSIS (SYS 200)	23	16.4
CONTRACT ADMINISTRATION (PPM 152)	18	12.6
GOVERNMENT CONTRACT LAW (PPM 302)	28	20.0
LOGISTICS MGMT (LOG 224)	8	5.7
OTHER	37	26.4
NO TRAINING	50	35.7

* NOTE: Multiple answers were possible.

TABLE 4.10

Did the Survey Participants Have Source Selection Training Prior to their First Source Selection?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	15	11.0
NO	121	89.0
TOTAL	136	100%

SSP Generation. Table 4.12 shows that a majority of the survey participants have participated in a Source Selection Plan generation (survey question K). This experience level was important in the analysis of research objective 3 - approaches considered during SSP generation.

TABLE 4.11

What Source Selection Approaches Have the Survey Participants Participated In?

APPROACH	NUMBER	PERCENT OF TOTAL *
CONVENTIONAL	115	82.1
FOUR STEP	40	28.6
ASD STREAMLINED	35	25.0
BMO STREAMLINED	11	7.9
OTHER	30	21.4

* NOTE: Multiple answers were possible.

TABLE 4.12

Have Survey Participants Participated in a Source Selection Plan Generation?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	117	83.6
NO	23	16.4
TOTAL	140	100%

Section Two - Preferred Approaches. The following sections present the computed results from Part II of the survey. This section shows the participant's preferences for a specific source selection approach under varying acquisition situations. Table 4.13 summarizes the results of question A and shows that, overall, most survey participants prefer the conventional approach.

TABLE 4.13

Overall Preferred Approach

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	54	50.9
FOUR STEP	5	4.7
ASD STREAMLINED	16	15.1
BMO STREAMLINED	14	13.2
OTHER	11	10.4
NO PREFERENCE	6	5.7
TOTAL	106	100%

Preferred Approach - Technology. Tables 4.14 and 4.15 show the survey participant's approach preference given the two extremes of technology - state-of-the-art technology and proven technology (survey questions B.1 and B.2). For state-of-the-art technology, a majority of the survey participants chose the conventional approach. For proven technology, the survey participants were evenly divided between the conventional approach and the streamlined approaches.

Preferred Approach - Contract Cost. Tables 4.16 thru 4.18 show the preferred approaches considering contract cost (survey questions B.3 to B.5). The contract cost options were less than $1 million, between $1 and $5 million, and more than $5 million. Only in the case of a contract cost of more than $5 million was an approach selected by a majority of the survey participants. In this case, the conventional approach was preferred.

TABLE 4.14

Preferred Approach for State-of-the-Art Technology

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	55	51.4
FOUR STEP	14	13.1
ASD STREAMLINED	11	10.3
BMO STREAMLINED	14	13.1
OTHER	4	3.7
NO PREFERENCE	9	8.4
TOTAL	107	100%

TABLE 4.15

Preferred Approach for Proven Technology

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	39	36.8
FOUR STEP	10	9.4
ASD STREAMLINED	21	19.8
BMO STREAMLINED	17	16.0
OTHER	8	7.5
NO PREFERENCE	11	10.4
TOTAL	106	100%

Preferred Approach - Number of Bidders.

Tables 4.19 and 4.20 summarize the preferred approach based on the number of expected bidders in response to the RFP (survey questions B.6 and B.7). The number of bidders did not appear to effect approach choice.

TABLE 4.16

Preferred Approach for a Contract less than 1 Million Dollars

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	19	17.9
FOUR STEP	9	8.5
ASD STREAMLINED	28	26.4
BMO STREAMLINED	21	19.8
OTHER	18	17.0
NO PREFERENCE	11	10.4
TOTAL	106	100%

TABLE 4.17

Preferred Approach for a Contract between 1 and 5 Million Dollars

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	30	28.3
FOUR STEP	7	6.6
ASD STREAMLINED	24	22.6
BMO STREAMLINED	19	17.9
OTHER	16	15.1
NO PREFERENCE	10	9.4
TOTAL	106	100%

TABLE 4.18

Preferred Approach for a Contract greater than 5 Million Dollars

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	59	55.7
FOUR STEP	5	4.7
ASD STREAMLINED	11	10.4
BMO STREAMLINED	13	12.3
OTHER	14	13.2
NO PREFERENCE	4	3.8
TOTAL	106	100%

TABLE 4.19

Preferred Approach for Four or more Bidders

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	39	37.1
FOUR STEP	15	14.3
ASD STREAMLINED	17	16.2
BMO STREAMLINED	17	16.2
OTHER	5	4.8
NO PREFERENCE	12	11.4
TOTAL	105	100%

TABLE 4.20

Preferred Approach for less than Four Bidders

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	48	45.7
FOUR STEP	7	6.7
ASD STREAMLINED	16	15.2
BMO STREAMLINED	16	15.2
OTHER	6	5.7
NO PREFERENCE	12	11.4
TOTAL	105	100%

Section Three - Time and Manpower Requirements. Section three presents the computed results of the survey participants opinions of the time and manpower requirements each approach requires. Table 4.21 summarizes the results of survey question C.1 (longest time between proposal receipt and contract award), Table 4.22 summarizes question C.2 (shortest time), and Table 4.23 summarizes question C.3 (fewest personnel for proposal evaluation). The conventional approach was identified as the longest approach by a majority of the personnel. The streamlined approaches were chosen as the shortest approaches and the approaches requiring the fewest number of people. Table 4.24 shows the results of survey question C.4 (most deviations from RFP). The high non-response and no preference rates precluded further use of the results of this question.

TABLE 4.21

Approach Requiring the Longest Time between Proposal Receipt and Contract Award

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	57	52.3
FOUR STEP	31	28.4
ASD STREAMLINED	2	1.8
BMO STREAMLINED	2	1.8
OTHER	Ø	Ø.Ø
NO PREFERENCE	17	15.6
TOTAL	1Ø9	1ØØ%

TABLE 4.22

Approach Requiring the Shortest Time between Receipt of Proposal and Contract Award

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	9	8.4
FOUR STEP	14	13.1
ASD STREAMLINED	27	25.2
BMO STREAMLINED	25	23.4
OTHER	13	12.1
NO PREFERENCE	19	17.8
TOTAL	1Ø7	1ØØ%

TABLE 4.23

Approach Requiring the Fewest Personnel for Proposal Evaluation

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	6	5.7
FOUR STEP	8	7.6
ASD STREAMLINED	32	30.5
BMO STREAMLINED	25	23.8
OTHER	13	12.4
NO PREFERENCE	21	20.0
TOTAL	105	100%

TABLE 4.24

Approach with the Most Deviations from Request for Proposal Criteria

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	19	19.4
FOUR STEP	13	13.3
ASD STREAMLINED	6	6.1
BMO STREAMLINED	2	2.0
OTHER	0	0.0
NO PREFERENCE	58	59.2
TOTAL	98	100%

Section Four - Opinions Concerning the Source Selection Process and Differing Approach Characteristics. Section four presents the survey participants opinion of various aspects of the source selection process and also of the major identifying characteristics of each source selection approach.

Definition of System Requirements. Table 4.25 summarizes the results of survey question D. A majority of the survey participants believe the RFP is adequately defining the technical aspects of the system. Tables 4.26 and 4.27 indicate a majority of the participants believe the evaluation process is being used to further define the system requirements (survey question H).

TABLE 4.25

Does the RFP Adequately Define the Technical Aspects of the System for the Contractor?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	111	85.4
NO	19	14.6
TOTAL	130	100%

TABLE 4.26

Is the Evaluation Process Used to Further Define the System Requirements?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	72	52.9
NO	64	47.1
TOTAL	136	100%

TABLE 4.27

Approach Most Used to Further Define System Requirements

APPROACH	NUMBER	PERCENT OF TOTAL
CONVENTIONAL	14	19.2
FOUR STEP	5	6.8
ASD STREAMLINED	Ø	Ø.Ø
BMO STREAMLINED	1	1.4
ALL APPROACHES ARE USED	34	46.6
DON'T KNOW/ OTHER	19	26.1
TOTAL	73	1ØØ%

Identifying Characteristics of Source Selection Approaches. Tables 4.28 thru 4.32 contain the participants opinions on whether attempts to modify the source selection process are advantageous or not. The modifications presented in the survey include putting a page limit on the contractor's proposal (question E), having a contractor presentation (question F), evaluating the technical and cost proposals separately (question G), limiting the number of people on the SSEB (question I), combining the SSEB and SSAC (question J), and establishing a time limit (question K). Only the separate evaluation of the technical and cost proposals and the time limit were viewed as being not advantageous to the source selection process by a majority of the participants.

TABLE 4.28

Is Putting a Page Limit on a Contractor's Proposal an Advantage in the Evaluation Process?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	117	86.7
NO	18	13.3
TOTAL	135	100%

TABLE 4.29

After the Competitive Range Has Been Established, Would a Contractor Presentation be an Advantage?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	83	63.4
NO	48	36.6
TOTAL	131	100%

TABLE 4.30

Is Evaluating Cost and Technical Proposals Separately an Advantage?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	47	39.8
NO	71	60.2
TOTAL	128	100%

TABLE 4.31

Is Limiting the Number of People on the SSEB an Advantage?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	73	57.5
NO	54	42.5
TOTAL	127	100%

TABLE 4.32

Would Combining the SSEB and SSAC be an Advantage?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	94	75.8
NO	30	24.2
TOTAL	124	100%

TABLE 4.33

Is a Pre-established Time Limit between Proposal Receipt and Contract Award an Advantage?

RESPONSE	NUMBER	PERCENT OF TOTAL
YES	57	43.5
NO	74	56.5
TOTAL	131	100%

V. Analysis and Discussion

Chapter Overview

This chapter contains an analysis of the research objectives presented in Chapter I. Each research objective's analysis contains the survey questions associated with the objective, the statistical techniques applied on the questions, and the findings.

Research objectives three thru eight deal with the opinions of experienced source selection personnel concerning different aspects of the source selection process. The analysis of these objectives is based upon the SPSS computer subprograms: FREQUENCIES, CROSSTABS, and ONEWAY. Tables and analysis of variance were initially generated using numerous different combinations of the opinion results and background information. This chapter contains only those results that were determined to be significant to the research effort.

Research Objective 1

> Determine if an adequate data base (source selection records and personnel) exists and is accessible for research.

Data Availability. The research team made two determinations in response to research objective one. First, the source selection records required for a comprehensive research study were incomplete and often inaccessible for research.

Secondly, each product division in AFSC routinely made source selections and had many individuals experienced in the source selection process. This determination enabled the team to complete the survey questionnaire portion of the research study.

Research Objective 2

> Match a completed four step acquisition with an equivalent conventional acquisition and determine if contract relationships can be used to characterize a specific approach's use.

Research objective two was not able to be met due to incomplete and inaccessible four step source selection records as discussed in Chapter IV.

Research Objective 3

> Determine if source selection approach familiarity plays a role in which source selection approaches Air Force Systems Command personnel consider during the Source Selection Plan generation.

Survey Questions and Statistical Techniques. CROSSTABS was used to examine the relationship between two survey questions: Part I, Question K (approaches considered during the SSP generation process) and Part I, Question L (source selection approaches personnel are familiar with). An additional contingency table was generated for analysis, adding product division as the third factor.

Source Selection Plan Generation Analysis. Of the 140 people surveyed, 117 (83.7%) had participated in an SSP

generation (reference Table 4.11). These results are broken out by product division as follows: 42 - ASD; 19 - SD; 26 - ESD; 14 - AD; 7 - BMO; and 9 - other. The following table shows the number of approaches source selection personnel considered during SSP generation:

TABLE 5.1

Number of Approaches Considered During SSP Generation

NUMBER	PERSONNEL	PERCENT OF TOTAL
Ø	4	3.4
1	49	42.2
2	34	29.3
3	24	20.7
4	5	4.3
TOTAL	116	100%

A clear majority of survey participants considered less than 3 approaches when they participated in the SSP generation process.

Table 5.2 is a summarization of the contingency tables generated showing the approaches considered during SSP generation by the approaches source selection personnel were familiar with. Tables 5.3 thru 5.6 summarize the contingency table results by product division. The summary tables show only the relationships between source selection approaches personnel are familiar with and the source selection approaches they considered in SSP generation. The unfamiliar, not considered, and other statistics were not

included due to the relatively small number of responses in these areas.

TABLE 5.2

Approaches Familiar With By Approaches Considered During SSP Generation

APPROACH	NUMBER FAMILIAR	NUMBER CONSIDERED	PERCENT
Conventional	114	90	78.9
Four Step	94	46	48.9
ASD Streamlined	46	34	73.9
BMO Streamlined	36	19	52.8

TABLE 5.3

Summary Table - Conventional Approach

PRODUCT DIVISION	NUMBER FAMILIAR	NUMBER CONSIDERED	PERCENT
ASD	39	29	74.4
SD	19	18	94.7
ESD	26	24	92.3
AD	14	10	71.4
BMO	7	4	57.1
Other	9	5	55.6

TABLE 5.4

Summary Table - Four Step Approach

PRODUCT DIVISION	NUMBER FAMILIAR	NUMBER CONSIDERED	PERCENT
ASD	32	15	46.9
SD	18	7	38.9
ESD	20	13	65.0
AD	11	6	54.5
BMO	6	2	33.3
Other	7	3	42.9

TABLE 5.5

Summary Table - ASD Streamlined Approach

PRODUCT DIVISION	NUMBER FAMILIAR	NUMBER CONSIDERED	PERCENT
ASD	34	28	82.4
SD	3	Ø	Ø.Ø
ESD	2	1	5Ø.Ø
AD	4	2	5Ø.Ø
BMO	Ø	Ø	Ø.Ø
Other	3	3	1ØØ.Ø

TABLE 5.6

Summary Table - BMO Streamlined Approach

PRODUCT DIVISION	NUMBER FAMILIAR	NUMBER CONSIDERED	PERCENT
ASD	6	Ø	Ø.Ø
SD	16	8	5Ø.Ø
ESD	2	1	5Ø.Ø
AD	5	3	6Ø.Ø
BMO	7	7	1ØØ.Ø
Other	Ø	Ø	Ø.Ø

Source selection personnel who had participated in a SSP generation indicated they considered the conventional approach 78.9% of the time if they were familiar with the approach. Analyzing the breakout by product division shows that each product division considered the conventional approach in over half of their source selections. No product division appeared to differ significantly from this figure.

The four step approach was considered 48.9% of the time even though more than 8Ø% of the people (94 of 117) were

familiar with the approach. Only ESD and AD personnel considered the approach more than half of the time (65% and 54.5%, respectively), while BMO and SD personnel considered the four step approach 33% and 38.9% respectively.

BMO and ASD considered their streamlined approaches a majority of the time within their respective product divisions (ASD - 82.4% and BMO - 100%). The other product divisions are limited in the number of people familiar with either streamlined approach with the exception of SD. Space Division has a relatively large number of people familiar with the BMO streamlined approach, but only half of the SD personnel familiar with the BMO approach considered it in the SSP generation process.

Research Objective 4

> Determine if source selection personnel prefer a specific source selection approach based upon an acquisition's characteristics.

Survey Questions. The responses to eight survey questions were reviewed in the analysis of this objective. The survey questions are:

1. Part II, Question A - preferred approach.

2. Part II, Question B1 - preferred approach for implementing state of the art technology.

3. Part II, Question B2 - preferred approach for using proven technology.

4. Part II, Question B3 - preferred approach for a contract award less than $1 million.

5. Part II, Question B4 - preferred approach for a contract award between $1 million and $5 million.

6. Part II, Question B5 - preferred approach for a contract award greater than $5 million.

7. Part II, Question B6 - preferred approach when 4 or more bidders are anticipated.

8. Part II, Question B7 - preferred approach when less than 4 bidders are anticipated.

Statistical Techniques. FREQUENCIES generated the percentage of occurrence of each approach within a question. Further analysis of this research objective required the use of CROSSTABS to generate contingency tables between the questions described above and the background variable product division.

Overall Approach Preference. Table 4.13 indicates that 50.9% of all survey participants familiar with two or more source selection approaches prefer the conventional approach. Table 5.7 shows the crosstabulation of each product division with their source selection approach preference. All product divisions prefer the conventional approach overall except ASD and BMO. ASD was evenly divided between the conventional approach and ASD streamlined approach. BMO was 100% for the BMO streamlined approach.

TABLE 5.7

Contingency Table -- Preferred Approach by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVENTIONAL	13	13	20	5	0	3	54
	24.1	24.1	37.0	9.3	0	5.6	50.9
	39.4	61.9	83.3	35.7	0	42.9	
	12.3	12.3	18.9	4.7	0	2.8	
FOUR STEP	0	1	2	1	0	1	5
	0	20.0	40.0	20.0	0	20.0	4.7
	0	4.8	8.3	7.1	0	14.3	
	0	.9	1.9	.9	0	.9	
ASD STREAMLINED	13	0	0	2	0	1	16
	81.3	0	0	12.5	0	6.3	15.1
	39.4	0	0	14.3	0	14.3	
	12.3	0	0	1.9	0	.9	
BMO STREAMLINED	1	3	0	2	7	1	14
	7.1	21.4	0	14.3	50.0	7.1	13.2
	3.0	14.3	0	14.3	100.0	14.3	
	.9	2.8	0	1.9	6.6	.9	
NO PREFERENCE	2	1	1	1	0	1	6
	33.3	16.7	16.7	16.7	0	16.7	5.7
	6.1	4.8	4.2	7.1	0	14.3	
	1.9	.9	.9	.9	0	.9	
OTHER	4	3	1	3	0	0	11
	36.4	27.3	9.1	27.3	0	0	10.4
	12.1	14.3	4.2	21.4	0	0	
	3.8	2.8	.9	2.8	0	0	
COLUMN TOTAL	33	21	24	14	7	7	106
	31.1	19.8	22.6	13.2	6.6	6.6	100.0

Approach Preference for State-of-the-Art Technology. Table 4.14 indicates that 51.4% of all survey participants prefer the conventional approach for source selections implementing state-of-the-art technology. Table 5.8 shows

the crosstabulation of each product division with their choice of approach for purchasing state-of-the-art technology. Every product division chose the conventional

TABLE 5.8

Contingency Table - State-of-the-Art by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVENTIONAL	15	14	15	6	0	5	55
	27.3	25.5	27.3	10.9	0	9.1	51.4
	44.1	66.7	62.5	42.9	0	71.4	
	14.0	13.1	14.0	5.6	0	4.7	
FOUR STEP	2	3	6	2	0	1	14
	14.3	21.4	42.9	14.3	0	7.1	13.1
	5.9	14.3	25.0	14.3	0	14.3	
	1.9	2.8	5.6	1.9	0	.9	
ASD STREAMLINED	10	0	0	1	0	0	11
	90.9	0	0	9.1	0	0	10.3
	29.4	0	0	7.1	0	0	
	9.3	0	0	.9	0	0	
BMO STREAMLINED	2	2	0	2	7	1	14
	14.3	14.3	0	14.3	50.0	7.1	13.1
	5.9	9.5	0	14.3	100.0	14.3	
	1.9	1.9	0	1.9	6.5	.9	
NO PREFERENCE	3	1	3	2	0	0	9
	33.3	11.1	33.3	22.2	0	0	8.4
	8.8	4.8	12.5	14.3	0	0	
	2.8	.9	2.8	1.9	0	0	
OTHER	2	1	0	1	0	0	4
	50.0	25.0	0	25.0	0	0	3.7
	5.9	4.8	0	7.1	0	0	
	1.9	.9	0	.9	0	0	
COLUMN TOTAL	34	21	24	14	7	7	107
	31.8	19.6	22.4	13.1	6.5	6.5	100.0

approach except for BMO which unanimously chose the BMO streamlined approach.

Approach Preference for Proven Technology. Table 4.15 indicates that 36.8% of survey participants prefer the conventional approach for source selections implementing proven technology while 35.8% prefer one of the streamlined approaches. Table 5.9 shows the crosstabulation of each product division with their choice of approach for purchasing proven technology. Every product division except for ASD and BMO chose the conventional approach. ASD personnel preferred the ASD streamlined approach with 52.9% favoring its use. BMO personnel were 100% in favor of the BMO streamlined approach.

Preferred Approach for Varying Contract Award Costs. Tables 4.16, 4.17, and 4.18 indicate that a majority of survey participants are in favor of using a streamlined approach for source selections with a contract value less than five million dollars. As the contract award increases in value, the number of survey participants preferring the conventional approach also increases. Table 4.18 indicates that 55.7% of survey participants prefer the conventional approach for contract awards greater than five million dollars. Table 5.10 shows that this trend is true for all product divisions except for BMO. The majority of BMO personnel prefer the BMO streamlined approach regardless of contract award value.

TABLE 5.9

Contingency Table - Proven Technology by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	5	10	17	4	0	3	39
	12.8	25.6	43.6	10.3	0	7.7	36.8
	14.7	50.0	70.8	28.6	0	42.9	
	4.7	9.4	16.0	3.8	0	2.8	
FOUR STEP	2	2	3	1	0	2	10
	20.0	20.0	30.0	10.0	0	20.0	9.4
	5.9	10.0	12.5	7.1	0	28.6	
	1.9	1.9	2.8	.9	0	1.9	
ASD STREAMLINED	18	0	0	2	0	1	21
	85.7	0	0	9.5	0	4.8	19.8
	52.9	0	0	14.3	0	14.3	
	17.0	0	0	1.9	0	.9	
BMO STREAMLINED	1	5	1	2	7	1	17
	5.9	29.4	5.9	11.8	41.2	5.9	16.0
	2.9	25.0	4.2	14.3	100.0	14.3	
	.9	4.7	.9	1.9	6.6	.9	
NO PREFERENCE	4	2	3	2	0	0	11
	36.4	18.2	27.3	18.2	0	0	10.4
	11.8	10.0	12.5	14.3	0	0	
	3.8	1.9	2.8	1.9	0	0	
OTHER	4	1	0	3	0	0	8
	50.0	12.5	0	37.5	0	0	7.5
	11.8	5.0	0	21.4	0	0	
	3.8	.9	0	2.8	0	0	
COLUMN TOTAL	34	20	24	14	7	7	106
	32.1	18.9	22.6	13.2	6.6	6.6	100.0

Preferred Approach for Varying Number of Bidders.

Tables 4.19 and 4.20 indicate that a majority of source selection personnel prefer the conventional approach regardless of the number of bidders. Tables 5.11 and 5.12 show that the conventional approach is slightly more favored

TABLE 5.10

Contingency Table - Contract Cost by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	16	14	19	7	0	3	59
	27.1	23.7	32.2	11.9	0	5.1	55.7
	47.1	70.0	79.2	50.0	0	42 9	
	15.1	13.2	17.9	6.6	0	2.8	
FOUR STEP	0	2	1	1	0	1	5
	0	40.0	20.0	20.0	0	20.0	4.7
	0	10.0	4.2	7.1	0	14.3	
	0	1.9	.9	.9	0	2.8	
ASD STREAMLINED	9	0	0	1	0	1	11
	81.8	0	0	9.1	0	9.1	10.4
	26.5	0	0	7.1	0	14.4	
	8.5	0	0	.9	0	.9	
BMO STREAMLINED	2	1	0	2	7	1	13
	15.4	7.7	0	15.4	53.8	7.7	12.3
	5.9	5.0	0	14.3	100.0	14.3	
	1.9	.9	0	1.9	6.6	.9	
NO PREFERENCE	1	1	2	0	0	0	4
	25.0	25.0	50.0	0	0	0	3.8
	2.9	5.0	8.3	0	0	0	
	.9	.9	1.9	0	0	0	
OTHER	6	2	2	3	0	1	14
	42.9	14.3	14.3	21.4	0	7.1	13.2
	17.6	10.0	8.3	21.4	0	14.3	
	5.7	1.9	1.9	2.8	0	.9	
COLUMN TOTAL	34	20	24	14	7	7	106
	32.1	18.9	22.6	13.2	6.6	6.6	100.0

for source selections with less than four bidders. BMO is the only exception and unanimously favored the BMO streamlined approach regardless of the number of bidders.

TABLE 5.11

Contingency Table - Less than 4 Bidders by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	10	10	18	7	0	3	48
	20.8	20.8	37.5	14.6	0	6.3	45.7
	30.3	47.6	75.0	53.8	0	42.9	
	9.5	9.5	17.1	6.7	0	2.9	
FOUR STEP	0	2	4	0	0	1	7
	0	28.6	57.1	0	0	14.3	6.7
	0	9.5	16.7	0	0	14.3	
	0	1.9	3.8	0	0	1.0	
ASD STREAMLINED	13	0	0	2	0	1	16
	81.3	0	0	12.5	0	6.3	15.2
	39.4	0	0	15.4	0	14.3	
	12.4	0	0	1.9	0	12.4	
BMO STREAMLINED	1	5	0	2	7	1	16
	6.3	31.3	0	12.5	43.8	6.3	15.2
	3.0	23.8	0	15.4	100.0	14.3	
	1.0	4.8	0	1.9	6.7	1.0	
NO PREFERENCE	5	3	2	1	0	1	12
	41.7	25.0	16.7	8.3	0	8.3	11.4
	15.2	14.3	8.3	7.7	0	14.3	
	4.8	2.9	1.9	1.0	0	1.0	
OTHER	4	1	0	1	0	0	6
	66.7	16.7	0	16.7	0	0	5.7
	12.1	4.8	0	7.7	0	0	
	3.8	1.0	0	1.0	0	0	
COLUMN TOTAL	33	21	24	13	7	7	105
	31.4	20.0	22.9	12.4	6.7	6.7	100.0

TABLE 5.12

Contingency Table - 4 or more Bidders by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	10 25.6 30.3 9.5	7 17.9 33.3 6.7	17 43.6 70.8 16.2	3 7.7 23.1 2.9	0 0 0 0	2 5.1 28.6 1.9	39 37.1
FOUR STEP	2 13.3 6.1 1.9	5 33.3 23.8 4.8	4 26.7 16.7 3.8	2 13.3 15.4 1.9	0 0 0 0	2 13.3 28.6 1.9	15 14.3
ASD STREAMLINED	14 82.4 42.4 13.3	0 0 0 0	0 0 0 0	2 11.8 15.4 1.9	0 0 0 0	1 5.9 14.3 1.0	17 16.2
BMO STREAMLINED	1 5.9 3.0 1.0	5 29.4 23.8 4.8	0 0 0 0	3 17.6 23.1 2.9	7 41.2 100.0 6.7	1 5.9 14.3 1.0	17 16.2
NO PREFERENCE	4 33.3 12.1 3.8	3 25.0 14.3 2.9	3 25.0 12.5 2.9	1 8.3 7.7 1.0	0 0 0 0	1 8.3 14.3 1.0	12 11.4
OTHER	2 40.0 6.1 1.9	1 20.0 4.8 1.0	0 0 0 0	2 40.0 15.4 1.9	0 0 0 0	0 0 0 0	5 4.8
COLUMN TOTAL	33 31.4	21 20.0	24 22.9	13 12.4	7 6.7	7 6.7	105 100.0

Research Objective 5

Determine if source selection personnel have preconceived notions about the time and manpower requirements for a given source selection approach.

Survey Questions. Three survey questions were used in the analysis of this objective. The survey questions are:

1. Part II, Question C1 - approach with the longest period of time between receipt of proposal and contract award;

2. Part II, Question C2 - approach with the shortest period of time between receipt of proposal and contract award;

3. Part II, Question C3 - approach with the fewest number of people for proposal evaluation.

Statistical Techniques. The statistical techniques used in the analysis of this objective were the same as those used for Research Objective 4.

Time Requirements Analysis. Only 109 survey participants responded to this set of questions. Table 4.21 shows that most survey participants (52.3%) believe the conventional approach requires the longest period of time from RFP release to contract award; 28.4% believe the four step takes the longest. Table 5.13 shows this response trend is not true across product divisions. SD and BMO appear to differ significantly from the overall response. A majority of SD respondents (47.6%) believe the four step approach takes the longest time. BMO is equally split between the four step and conventional approaches.

The majority of the survey participants (60.7%) were split between the streamlined approaches and "other" approaches for the approach requiring the shortest period of time (reference Table 4.22). As expected, the contingency table for shortest time by product division (Table 5.14)

TABLE 5.13

Contingency Table - Longest Time by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	24	8	12	7	3	3	57
	42.1	14.0	21.1	12.3	5.3	5.3	52.3
	66.7	38.1	50.0	50.0	42.9	42.9	
	22.0	7.3	11.0	6.4	2.8	2.8	
FOUR STEP	7	10	6	3	3	2	31
	22.6	32.3	19.4	9.7	9.7	6.5	28.4
	19.4	47.6	25.0	21.4	42.9	28.6	
	6.4	9.2	5.5	2.8	2.8	1.8	
ASD STREAMLINED	2	0	0	0	0	0	2
	100.0	0	0	0	0	0	1.8
	5.6	0	0	0	0	0	
	1.8	0	0	0	0	0	
BMO STREAMLINED	0	1	0	0	1	0	2
	0	50.0	0	0	50.0	0	1.8
	0	4.8	0	0	14.3	0	
	0	.9	0	0	.9	0	
NO PREFERENCE	3	2	6	4	0	2	17
	17.6	11.8	35.3	23.5	0	11.8	15.6
	8.3	9.5	25.0	28.6	0	28.6	
	2.8	1.8	5.5	3.7	0	1.8	
COLUMN TOTAL	36	21	24	14	7	7	109
	33.0	19.3	22.0	12.8	6.4	6.4	100.0

reveals that the majority of ASD and BMO personnel picked their own product division's streamlined approach as being the shortest. SD also strongly supported the BMO streamlined approach as the shortest approach. ESD and AD had no clear choice for the shortest approach.

TABLE 5.14

Contingency Table - Shortest Time by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	0	2	7	0	0	0	9
	0	22.2	77.8	0	0	0	8.4
	0	10.5	29.2	0	0	0	
	0	1.9	6.5	0	0	0	
FOUR STEP	4	1	7	2	0	0	14
	28.6	7.1	50.0	14.3	0	0	13.1
	11.1	5.3	29.2	14.3	0	0	
	3.7	.9	6.5	1.9	0	0	
ASD STREAMLINED	22	1	0	2	0	2	27
	81.5	3.7	0	7.4	0	7.4	25.2
	61.1	5.3	0	14.3	0	28.6	
	20.6	.9	0	1.9	0	1.9	
BMO STREAMLINED	2	12	1	2	7	1	25
	8.0	48.0	4.0	8.0	28.0	4.0	23.4
	5.6	63.2	4.2	14.3	100.0	14.3	
	1.9	11.2	.9	1.9	6.5	.9	
NO PREFERENCE	2	1	8	5	0	3	19
	10.5	5.3	42.1	26.3	0	15.8	17.8
	5.6	5.3	33.3	35.7	0	42.9	
	1.9	.9	7.5	4.7	0	2.8	
OTHER	6	2	1	3	0	1	13
	46.2	15.4	7.7	23.1	0	7.7	12.1
	16.7	10.5	4.2	21.4	0	14.3	
	5.6	1.9	.9	2.8	0	.9	
COLUMN TOTAL	36	19	24	14	7	7	107
	33.6	17.8	22.4	13.1	6.5	6.5	100.0

Manpower Requirements Analysis. Table 4.23 shows that the survey participants were evenly divided between the ASD streamlined approach (30.5%), BMO streamlined approach (23.8%), and no preference (20%) for the approach requiring

the fewest number of people. Table 5.15 indicates that ASD and BMO personnel strongly favored their respective product division's streamlined approach. SD strongly supported the BMO streamlined approach and ESD did not respond favorably to either streamlined approach. Most ESD personnel chose either the conventional approach, the four step approach, or had no preference. Only 1 in 19 people chose a streamlined approach. ESD did not respond favorably to the streamlined approaches because only 4 people in ESD were familiar with one or more streamlined approach.

Research Objective 6

> Determine if the source selection process is being used as a means to further define weapon system requirements.

Survey Questions. Survey questions Part II, D and H were the basis of this analysis.

Statistical Techniques. The data for analysis of this objective was obtained by running FREQUENCIES and several ONEWAY analysis of variance on the responses to the above survey questions . Two ONEWAY analysis of variance tables were generated using the responses to the previously described questions as the dependent variables and product division as the independent variable. We were looking for any significant difference of opinion between the product divisions using a 95% confidence interval (significant difference if F-probability is less than .Ø5).

TABLE 5.15

Contingency Table - Manpower by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
CONVEN-TIONAL	0	0	6	0	0	0	6
	0	0	100.0	0	0	0	5.7
	0	0	26.1	0	0	0	
	0	0	5.7	0	0	0	
FOUR STEP	0	1	7	0	0	0	8
	0	12.5	87.5	0	0	0	7.6
	0	5.3	30.4	0	0	0	
	0	1.0	6.7	0	0	0	
ASD STREAMLINED	23	1	1	4	1	2	32
	71.9	3.1	3.1	12.5	3.1	6.3	30.5
	65.7	5.3	4.3	28.6	14.3	28.6	
	21.9	1.0	1.0	3.8	1.0	1.9	
BMO STREAMLINED	1	15	0	2	6	1	25
	4.0	60.0	0	8.0	24.0	4.0	23.8
	2.9	78.9	0	14.3	85.7	14.3	
	1.0	14.3	0	1.9	5.7	1.0	
NO PREFERENCE	4	2	9	4	0	2	21
	19.0	9.5	42.9	19.0	0	9.5	20.0
	11.4	10.5	39.1	28.6	0	28.6	
	3.8	1.9	8.6	3.8	0	1.9	
OTHER	7	0	0	4	0	2	13
	53.8	0	0	30.8	0	15.4	12.4
	20.0	0	0	28.6	0	28.6	
	6.7	0	0	3.8	0	1.9	
COLUMN TOTAL	35	19	23	14	7	7	105
	33.3	18.1	21.9	13.3	6.7	6.7	100.0

Request For Proposal Technical Definition. A majority of survey participants (85.4%) indicated that RFPs adequately define the technical aspects of a weapon system for the contractor (Table 4.25). The analysis of variance

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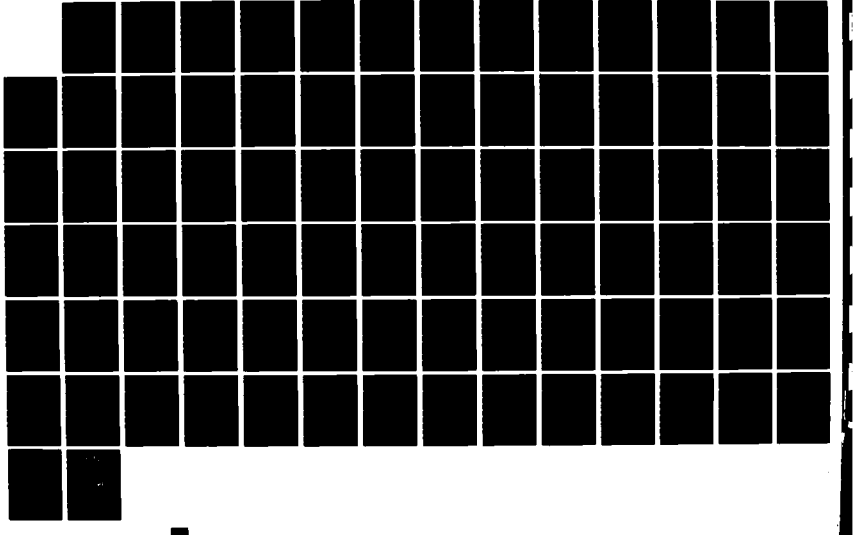

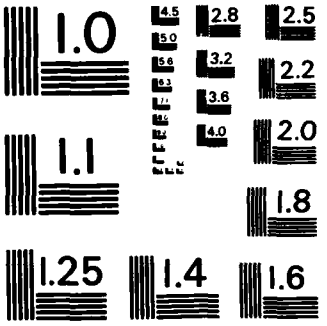

shows no statistical difference between the product divisions responses in this area (see ANOVA Table C-1, Appendix C).

Requirements Definition in the Source Selection Process. The results in Table 4.29 indicate that a small majority (52.9%) of survey participants believe the source selection evaluation process is used to further define system requirements. When the survey responses are broken down by product division, an analysis of variance shows no statistical difference exists between the product divisions (reference ANOVA Table C-2, Appendix C).

The results in Table 4.30 indicate that 72.7% of the survey participants believing that the source selection process is used to further define system requirements either did not know which approach was used more prevalently to define system requirements or thought that all approaches were used.

Research Objective 7

> Determine the perceptions of source selection personnel towards the major identifying characteristics of each source selection approach.

Survey Questions. There were six survey questions associated with this objective. They are:

1. Part II, Question E - putting a page limit on a contractor's proposal;

2. Part II, Question F - having contractor presentations after initial proposal evaluations;

3. Part II, Question G - having the technical and cost proposals submitted separately;

4. Part II, Question I - limiting the number of people on the SSEB;

5. Part II, Question J - combining the SSEB and SSAC; and

6. Part II, Question K - having a pre-established time limit on the evaluation process.

Statistical Techniques. FREQUENCIES generated the percentage of Yes and No responses for each question. ONEWAY analysis of variance generated additional analysis data to determine if there were any differences of opinion between product divisions (independent variables). The responses of at least two product divisions would be considered statistically different if the F-probability was less than .05 (95% confidence interval). ONEWAY does not tell which two product divisions differ in their responses, only that some significant difference exists. Therefore, the Tukey post hoc contrast test was used for this purpose.

Page Limit on Contractor's Proposal Analysis. A majority of the respondents (83.6%) considered a page limit to be an advantage in the proposal evaluation process (reference Table 4.26). The results of the ONEWAY analysis of variance indicate that there is no significant difference between

product division responses (reference ANOVA Table C-3, Appendix C).

Contractor Presentation Analysis. Table 4.27 shows that 63.4% of the survey participants favored a contractor presentation after the competitive range had been established. ONEWAY results show no significant difference in opinion between product divisions (reference ANOVA Table C-4, Appendix C).

Separate Evaluation of Technical and Cost Proposals Analysis. Most responses to the question were generally negative. A majority (60.2%) of survey participants do not believe evaluating the technical and cost proposals separately is an advantage in the evaluation process. There was no significant difference in opinion between the product divisions on this question (reference ANOVA Table C-5, Appendix C).

Limiting the Number of People on the SSEB Analysis. A slight majority (57.5%) of the respondents consider limiting the number of people on the SSEB to be an advantage in the evaluation process. ONEWAY results indicate that product divisions differ significantly in their response to this question (F-probability less than .05) (reference ANOVA Table C-6, Appendix C).

The Tukey post hoc contrast test for systematically comparing all possible pairs of product division responses reveals that the difference in responses identified by the

ONEWAY analysis occurs between ASD and BMO. Table 5.16 shows that BMO is 100% in favor of limiting the number of people on the SSEB while 58.3% of the ASD responses are against the limitation.

TABLE 5.16

Contingency Table - Limit Number of People on SSEB by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
YES	20	14	18	6	7	8	73
	27.4	19.2	24.7	8.2	9.6	11.0	57.5
	41.7	77.8	60.0	46.2	100.0	72.7	
	15.7	11.0	14.2	4.7	5.5	6.3	
NO	28	4	12	7	0	3	54
	51.9	7.4	22.2	13.0	0	5.6	42.5
	58.3	22.2	40.0	53.8	0	27.3	
	22.0	3.1	9.4	5.5	0	2.4	
COLUMN TOTAL	48	18	30	13	7	11	127
	37.8	14.2	23.6	10.2	5.5	8.7	100.0

Combining the SSEB and SSAC Analysis. Table 4.32 shows that a majority (75.8%) consider combining the SSEB and SSAC functions an advantage in the source selection process. The ONEWAY analysis of variance indicates that there is no significant difference of opinion between product divisions on this question (reference ANOVA Table C-7, Appendix C).

Pre-established Time Limit Analysis. A majority (56.5%) of survey participants do not consider a pre-established time limit between proposal receipt and contract award an

advantage, but the analysis of variance reveals that at least two product divisions differ significantly in opinion on this issue (reference ANOVA Table C-8, Appendix C).

The Tukey post hoc contrast test indicates that BMO responses differ significantly from both SD and ESD. Table 5.17 reveals that BMO is 100% in favor of a time limit while 71.4% of SD personnel and 73.3% of ESD personnel do not think a time limit is an advantage in the source selection process.

TABLE 5.17

Contingency Table - Time Limit by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
YES	23	6	8	6	7	7	57
	40.4	10.5	14.0	10.5	12.3	12.3	43.5
	48.9	28.6	26.7	42.9	100.0	58.3	
	17.6	4.6	6.1	4.6	5.3	5.3	
NO	24	15	22	8	0	5	74
	32.4	20.3	29.7	10.8	0	6.8	56.5
	51.1	71.4	73.3	57.1	0	41.7	
	18.3	11.5	16.8	6.1	0	3.8	
COLUMN TOTAL	47	21	30	14	7	12	131
	35.9	16.0	22.9	10.7	5.3	9.2	100.0

Research Objective 8

Determine what training source selection personnel receive in the area of source selection.

Survey Questions. Three survey question responses were analyzed for this objective. The survey questions are:

1. Part I, Question H - formal Air Force training courses attended;

2. Part I, Question I - training prior to first source selection; and

3. Part I, Question J - bulk of source selection experience.

Statistical Techniques. Initially the relative frequencies of the above questions were analyzed. In addition, CROSSTABS was used to generate additional data for analysis showing the relationships between the above survey responses and the respondent's product division.

Training Prior to First Source Selection Participation. Table 4.10 indicates that 89% of survey participants did not receive source selection training prior to participating in their first source selection. Table 5.18 shows that this trend holds true across all the product divisions.

Military Source Selection Training. Table 4.9 indicates that 35.7% of survey participants have never had any formal Air Force training courses covering the source selection process. Table 5.19 shows that ASD has the smallest percentage of personnel (29.4%) who have not attended a formal course while BMO has the largest percentage (57.1%).

TABLE 5.18

Contingency Table - Training Prior to First Source Selection by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
YES	5	2	3	1	1	3	15
	33.3	13.3	20.0	6.7	6.7	20.0	11.0
	10.0	10.0	9.4	7.1	14.3	23.1	
	3.7	1.5	2.2	.7	.7	2.2	
NO	45	18	29	13	6	10	121
	37.2	14.9	24.0	10.7	5.0	8.3	89.0
	90.0	90.0	90.6	92.9	85.7	76.9	
	33.1	13.2	21.3	9.6	4.4	7.4	
COLUMN TOTAL	50	20	32	14	7	13	136
	36.8	14.7	23.5	10.3	5.1	9.6	100.0

Source Selection Experience. Table 4.7 indicates that 95% of survey participants cite on-the-job training or individual study as their major source of source selection experience. Table 5.20 shows that all product division agree with this finding.

TABLE 5.19

Contingency Table - Formal Training by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
NO COURSES	15	8	12	7	4	4	50
	30.0	16.0	24.0	14.0	8.0	8.0	35.7
	29.4	38.1	35.3	50.0	57.1	30.8	
	10.7	5.7	8.6	5.0	2.9	2.9	
ONE COURSE	13	8	13	3	1	3	41
	31.7	19.5	31.7	7.3	2.4	7.3	29.3
	25.5	38.1	38.2	21.4	14.3	23.1	
	9.3	5.7	9.3	2.1	.7	2.1	
TWO COURSES	15	1	6	4	1	6	33
	45.5	3.0	18.2	12.1	3.0	18.2	23.6
	29.4	4.8	17.6	28.6	14.3	46.2	
	10.7	.7	4.3	2.9	.7	4.3	
THREE COURSES	8	3	3	0	1	0	15
	53.3	20.0	20.0	0	6.7	0	10.7
	15.7	14.3	8.8	0	14.3	0	
	5.7	2.1	2.1	0	.7	0	
FOUR COURSES	0	1	0	0	0	0	1
	0	100.0	0	0	0	0	.7
	0	4.8	0	0	0	0	
	0	.7	0	0	0	0	
COLUMN TOTAL	51	21	34	14	7	13	140
	36.4	15.0	24.3	10.0	5.0	9.3	100.0

TABLE 5.20

Contingency Table - Source Selection Experience by Product Division

COUNT / ROW PCT / COL PCT / TOT PCT	ASD	SD	ESD	AD	BMO	OTHR	ROW TOT
	0	0	0	0	0	1	1
FORMAL TRAINING	0	0	0	0	0	100.0	.7
	0	0	0	0	0	7.7	
	0	0	0	0	0	.7	
	42	12	23	8	4	10	99
ON-THE-JOB TRAINING	42.4	12.1	23.2	8.1	4.0	10.1	71.2
	84.0	57.1	67.6	57.1	57.1	76.9	
	30.2	8.6	16.5	5.8	2.9	7.2	
	6	8	9	6	3	2	34
INDIVIDUAL STUDY	17.6	23.5	26.5	17.6	8.8	5.9	24.5
	12.0	38.1	26.5	42.9	42.9	15.4	
	4.3	5.8	6.5	4.3	2.2	1.4	
	0	0	2	0	0	0	2
NOT EXPERIENCED	0	0	100.0	0	0	0	1.4
	0	0	5.9	0	0	0	
	0	0	1.4	0	0	0	
	2	1	0	0	0	0	3
OTHER	66.7	33.3	0	0	0	0	2.2
	4.0	4.8	0	0	0	0	
	1.4	.7	0	0	0	0	
COLUMN TOTAL	50	21	34	14	7	13	139
	36.0	15.1	24.5	10.1	5.0	9.4	100.0

VI. Conclusions and Recommendations

Chapter Overview

This chapter summarizes the conclusions that can be drawn from this study on the source selection process. This study's large sample size and high survey questionnaire response rate indicate that conclusions made for the sample of source selection personnel should be indicative of the entire Air Force source selection population.

The chapter is broken into three sections - Training, Preferred Approaches and Identifying Characteristics, and the Request For Proposal. Each section contains conclusions that can be drawn, a discussion of the conclusions, and recommendations.

Training

Conclusions. The following is a list of the conclusions drawn from the research data concerning source selection training:

1. One of the most significant conclusions which can be drawn from the data is that Air Force personnel are not receiving adequate training prior to source selection participation. Only 11 percent of Air Force personnel surveyed receive training before participating in their first source selection.

2. Formal Air Force training courses are not covering the source selection process in enough detail.

Thirty-six percent of source selection personnel have never attended formal training. Personnel gain the bulk of their source selection experience from on-the-job training and self study.

Discussion. The lack of source selection training has a definite impact on the source selection process. Comments from source selection personnel contained in Appendix D indicate that the evaluation process frequently gets bogged down due to inexperienced and unqualified personnel. Source selection personnel need training in areas ranging from how to fill out basic source selection forms to what to look for during the evaluation. Personnel working in source selections have totally different concepts of what the source selection process is intended to do, how the process is expected to work, and what their role in the process is. Some personnel perceive source selections as something to be avoided due to this mystery and the uncertainty surrounding them.

Limited source selection training also affects SSP generation. The lack of exposure to different types of approaches, especially the streamlined approaches, limits a program managers options when deciding which source selection approach is best suited for a particular program. Program managers need to be familiar with all source selection approaches in order to choose or tailor an approach to meet their specific needs. The results indicate

that this is especially true in product divisions with streamlined approaches. The results indicate a strong bias towards consideration of streamlined approaches during SSP generation when program managers were familiar with them.

Recommendations. The following is a list of recommendations which could improve the training of Air Force source selection personnel:

1. A comprehensive training course should be established to cover all aspects of the source selection process. The course design should include source selection plan preparation, basic source selection forms, and basic Air Force source selection philosophy. The course should provide an understanding of all source selection approaches and give personnel the information needed to be more creative in tailoring the source selection process to a particular program. This course could be an expansion of an already existing Professional Continuing Education course or be a separate new course.

2. A short training course should be established locally at each product division. This course should train new personnel in the overall concepts of source selection and the basic mechanics of the evaluation/review process. The course would familiarize the personnel on the intended purpose of the process and what is expected of them during the course of the evaluation.

Preferred Approaches And Identifying Characteristics

Conclusions. The following is a list of the conclusions drawn from the research data concerning preferred approaches under varying conditions and preferred approach characteristics:

1. Even though a majority of source selection personnel identified the conventional approach as taking the longest time from RFP release to contract award, it is still the preferred approach overall. The conventional approach is preferred for source selections implementing state-of-the-art technology and for contracts costing more than 5 million dollars. For source selections involving smaller dollar figures, the streamlined approaches are preferred. The results indicate that as the complexity and cost of programs increase, personnel have a greater preference for the conventional approach.

2. Experienced source selection personnel do not have a high opinion of the four step approach. Source selection personnel consistently preferred the conventional approach over the four step approach under all conditions. Less than 5 percent of source selection personnel preferred the four step overall.

3. Source selection personnel are generally receptive to attempts to streamline the source selection process. The comments from source selection personnel contained in Appendix D indicate that people are generally

frustrated with the time required to complete a source selection evaluation.

Discussion. The following is a discussion of the conclusions listed above:

1. There are several interesting trends associated with conclusion 1. As the dollar value of the contract rises, a shift occurs from the number of people choosing the streamlined approach to the conventional approach. In the product divisions without a streamlined approach, a much higher percentage of personnel chose the conventional approach as the preferred approach for state-of-the-art technology and high cost programs. Also, ESD and SD personnel chose the conventional approach for proven technology programs as well. ASD and AD personnel follow a different trend. These product divisions prefer a streamlined approach for proven technology and the conventional approach for state-of-the-art technology. Finally, BMO personnel are very strong advocates of their streamlined approach and consider it the most appropriate approach for any program.

2. The four step approach is not considered appropriate by more than 15 percent of the source selection personnel in any of the given categories (cost, number of bidders, or level of technology). The reason is not that the personnel do not know about the approach because more than 70 percent replied they were familiar with it. Most

people (60%) felt that evaluating the technical and cost proposals separately was not an advantage to the evaluation process. The negative comments received from this question ran along two lines: 1) the separate evaluations lengthen the source selection process; or 2) cost/benefit tradeoff analysis can't be performed on the different proposals.

3. Of the six identifying characteristics included in the survey (questions E,F,G,I,J,K - Part II), four were chosen by a majority of the personnel as being advantageous to the source selection process. Eighty-six percent of the survey participants feel that putting a page limit on the contractor's proposals will: 1) speed the evaluation process; 2) cut down on the extraneous material contractors include in the proposals; and 3) force the contractors to think through the proposals prior to preparing them. This characteristic received the greatest support from source selection personnel.

Two other areas also received strong support from source selection personnel. They are: 1) a contractor presentation with question and answer period after the competitive range is established; and 2) combining the SSEB/SSAC functions. Limiting the number of people on the SSEB was also identified as advantageous by a majority of the personnel but many people expressed concern in the comments about the qualifications of the evaluators.

Surprisingly, most people did not favor a time limit on the evaluation process. The general feeling was that there were too many complexities and unexpected problems that could not be accounted for in a time limit.

Recommendations. The comments included in Appendix D should be thoroughly reviewed for additional ideas for improving the source selection process. After this review, another survey should be administered to experienced source selection personnel to gather their opinions on these ideas. Finally, the results of this survey should be evaluated by a panel of highly experienced source selection personnel from all the product divisions and an AFSC-wide streamlined approach should be established.

The Request For Proposal

Conclusions. Only one conclusion can be drawn from the research data concerning the RFP. The conclusion is that Air Force source selection personnel feel the RFP adequately defines the technical aspects of a system for the contractor. Eighty-five percent of source selection personnel agree with this statement.

Discussion. Source selection personnel feel that the RFP adequately defines the technical requirements of a system, but more than half of the personnel (53%) believe these requirements are further defined in the evaluation process. The evaluation process is not designed to further define system requirements. The use of it for this purpose

indicates that even though personnel believe they are doing a good job defining the technical aspects, a great deal of uncertainty still exists.

Recommendations. The following is a list of recommendations for areas of further study concerning the RFP:

1. Conduct a survey of major weapon system and subsystem contractors to assess their opinion of the adequacy of the technical requirement definitions contained in the RFP. A comparison could then be made between contractor opinions and the opinions of Air Force source selection personnel.

2. Conduct a comparison between the technical requirements specified in RFPs and the technical requirements specified on actual contracts. This would allow the assessment of the actual changes made to the technical requirements during the evaluation process.

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Appendix A: Survey Cover Letter

REPLY TO ATTN OF: LS (Capt Hugo/Capt Gray, AV 785-6569)

SUBJECT: Source Selection Survey

TO: Survey Participant

1. Presently, the Air Force is being scrutinized by both Congress and the news media as to how wisely we are spending the taxpayers' money. A main focus of this scrutiny is the Air Force source selection process. You have been identified through coordination with ASD/PMPS as having valuable experience in this area which can contribute significantly to our AFIT source selection research project.

2. The attached survey measures your perceptions and attitudes concerning the source selection process. The data collected will be used to compile a statistical analysis to aid in planning future source selections. The survey has been coordinated through the Military Personnel Center Survey Control Office, the Civilian Personnel Office, Air Force Systems Command Civilian Personnel Office, and the local labor unions at each product division. The survey control number is 85-42.

3. Please take the time to complete the attached questionnaire and return it to us in the enclosed envelope within 7 days of receipt. Your individual response will be combined with other responses and will not be attributed to you personally.

4. Your participation is completely voluntary, but we certainly appreciate your help.

Larry L. Smith

LARRY L. SMITH, Colonel, USAF
Dean
School of Systems and Logistics

2 Atch
1. Questionnaire
2. Return Envelope

Appendix B: Survey Instrument

SURVEY REGARDING SOURCE SELECTIONS IN AIR FORCE SYSTEMS COMMAND

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This survey will take approximately 15 minutes to complete. The survey contains two sections. The first section collects background and experience information which will be used to group your opinions from the second section. Your responses will greatly help in our analysis of the different approaches used in the source selection process. For your convenience a summary of each of the different source selection approaches is attached at the end of the survey. Please feel free to make additional comments as you fill out the survey. THANK YOU FOR YOUR TIME & COOPERATION.

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PART I Background Information:

A. Military Rank or Civilian Grade: _____

B. Office Symbol _____

C. AFSC Product Division

- o ASD
- o AD
- o SD
- o BMO
- o ESD
- o other (specify here _____)

D. Type of Procurement Most Familiar with:

- o Aircraft
- o Armament
- o Electronics
- o Space/Missile
- o other (specify here _____).

E. Number of each type of Source Selection you have participated in:

Conventional _____. ASD Streamlined _____.
4-step _____. BMO Streamlined _____.
o None
Other (Specify type and number_____).

F. Current Functional Area

- o Program/Project Management
- o Contracting/Manufacturing Management
- o Engineering
- o Configuration Management
- o Program Control/Business Management
- o Logistics
- o Test and Evaluation
- o Other (Please specify _____).

G. Education (highest degree awarded)

- o High School Diploma
- o Associate Degree
- o Bachelors Degree
- o Masters Degree
- o Doctorate Degree

H. What formal Air Force training courses have you attended that covered source selections:

- o None
- o Systems 100
- o Systems 200
- o PPM 152 Contract Administration
- o LOG 224 Logistics Management
- o PPM 302 Government Contract Law
- o Other (Please specify _____)

I. Prior to participating in your first source selection, did you receive any formal source selection training?

- o Yes
- o No
- o Have never participated

J. From what source did you get the bulk of your source selection experience:

- o Formal Air Force training courses
- o On-the-job training (OJT)
- o Individual Study
- o Not experienced in the source selection process
- o Other (Please specify _____).

K. Have you ever participated in a Source Selection Plan (SSP) generation?

- o Yes
- o No

If yes, which approaches were considered as alternatives during the SSP generation process?

- o Conventional
- o 4-step
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

L. Please check all the source selection approaches you are familiar with, even if you have never used them.

- o Conventional
- o 4-step
- o None
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

If you are familiar with at least 2 of the source selection approaches, please continue with Question A. OTHERWISE, skip to page 5, question D and continue. THANK YOU !!!

PART II Opinions -- Source Selection Approaches:
NOTE: Please pick only one approach for each question.

A. Which approach do you prefer?

- o Conventional
- o 4-step
- o None
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

B. Which approach would you use:

1. for a system implementing state-of-the-art technology?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

2. for a system using proven technology?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

3. for an anticipated contract award less than $1,000,000?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

4. for an anticipated contract award between $1,000,000 and $5,000,000?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

5. for an anticipated contract award greater than $5,000,000?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

6. when 4 or more bidders are anticipated?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

7. when less than 4 bidders are anticipated?

- o Conventional
- o 4-step
- o No preference
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

C. Given similar programs of equal complexity and equal cost, which source selection approach would require :

1. the longest period of time between receipt of proposal and contract award?

- o Conventional
- o 4-step
- o No opinion
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

2. the shortest period of time between receipt of proposal and contract award?

- o Conventional
- o 4-step
- o No opinion
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

3. the fewest number of people for proposal evaluation?

- o Conventional
- o 4-step
- o No opinion
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

4. the most deviations from the Request for Proposal (RFP) criteria?

- o Conventional
- o 4-step
- o No opinion
- o ASD Streamlined
- o BMO Streamlined
- o Other (Please specify _____).

D. In general, does the Request for Proposal adequately define the technical aspects of the system for the contractor?

- o Yes
- o No

E. Is putting a page limit on a contractor's proposal an advantage in the evaluation process?

- o Yes
- o No

Why?

F. After the competitive range has been established, would a contractor presentation with a question and answer session shorten the evaluation process by helping to resolve proposal deficiencies?

- o Yes
- o No

G. The 4-step approach has the technical and cost proposals submitted and evaluated separately. Is this an advantage?

- o Yes
- o No

Why?

H. Based on your experience, is the evaluation process used to further define the system requirements?

- o Yes
- o No

If yes, under which approach is this practice more prevalent?

- o Don't know
- o Conventional
- o 4-step
- o All approaches are used for this practice.
- o Other (Please specify _____).
- o ASD Streamlined
- o BMO Streamlined

I. Would limiting the number of people on the Source Selection Evaluation Board (SSEB) be an advantage in the evaluation process?

o Yes o No

Why?

J. Would combining the SSEB and Source Selection Advisory Council (SSAC) contribute to a faster contract award?

o Yes o No

K. Would a pre-established time limit between proposal receipt and contract award be an advantage to the proposal evaluation process?

o Yes o No

Why?

PART III Other comments

THANK YOU FOR YOUR COOPERATION

SUMMARY OF SOURCE SELECTION APPROACHES

CONVENTIONAL APPROACH

The Conventional approach establishes a Source Selection Evaluation Board (SSEB) to evaluate all technical and cost aspects of proposals submitted by contractors. The SSEB assures that all proposals meet minimum Government requirements and identifies any proposal deficiency to the appropriate contractor. The SSEB forwards each contractor's "best and final offer" to the Source Selection Advisory Council (SSAC) where the documentation and recommendations of the SSEB are reviewed. After the SSAC review, all recommendations and proposals are given to the Source Selection Authority (SSA) for a final decision on contract award.

ASD STREAMLINED APPROACH

The ASD Streamlined approach is a modified form of the Conventional approach where the Chief of the SSEB assumes the responsibilities and tasks belonging to the SSAC Chief as well as his own. The ASD Streamlined approach, unlike the Conventional approach, does not use committees to do detailed evaluation and analysis on each facet of the program. Instead, the SSEC Chief assigns a single evaluator to each facet of the program who submits a written evaluation to him.

BMO STREAMLINED APPROACH

The BMO Streamlined approach modifies the Conventional approach by restricting the number of pages a contractor can submit in a proposal and does not evaluate any pages over the established maximum. The SSEB is limited to 25 experienced evaluators. These evaluators can perform comparative analysis between bid proposals when the SSEB and SSAC are combined. A nine week standard has been established from proposal receipt to contract award. Contractor presentations are allowed after the competitive range is established and proposal deficiencies are resolved.

FOUR-STEP APPROACH

The Four-Step approach requires contractors to submit technical and cost proposals separately. The technical and cost proposals are evaluated independent of each other by the SSEB and no deficiencies are discussed with the contractor. Based upon these separate evaluations, a single contractor is chosen to enter into final negotiation with the Government. If the Government cannot negotiate an acceptable contract with the contractor in a reasonable

period of time, the Government ceases negotiating and picks another contractor for negotiations.

Appendix C: Analysis of Variance (ANOVA) Tables

NOTE: These ANOVA tables reflect the SPSS ONEWAY results of the indicated questions. All ANOVA tables were generated using Product Division as the independent variable (grouping) and the indicated survey questions as the dependent variable.

TABLE C.1
ANOVA Table - RFP Define System Requirements

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	.418	.084	.656	.6575
WITHIN GROUPS	124	15.805	.127		
TOTAL	129	16.223			

TUKEY-HSD PROCEDURE
-- *NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL*

TABLE C.2

ANOVA Table - Evaluation Process Used to Further Define System Requirements

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	.893	.179	.704	.6214
WITHIN GROUPS	130	32.989	.254		
TOTAL	135	33.882			

TUKEY-HSD PROCEDURE
-- NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

TABLE C.3

ANOVA Table - Page Limit on Proposals

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	.520	.104	.890	.4900
WITHIN GROUPS	129	15.080	.117		
TOTAL	134	15.600			

TUKEY-HSD PROCEDURE
-- NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

TABLE C.4

ANOVA Table - Contractor Presentation

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	2.025	.405	1.784	.1209
WITHIN GROUPS	125	28.387	.227		
TOTAL	130	30.412			

TUKEY-HSD PROCEDURE
-- NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

TABLE C.5

ANOVA Table - Evaluation of Technical and Cost Proposals Separate

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	1.418	.284	1.183	.3222
WITHIN GROUPS	112	26.862	.240		
TOTAL	117	28.280			

TUKEY-HSD PROCEDURE
-- NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

TABLE C.6

ANOVA Table - Limiting the Number of People on the SSEB

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	3.649	.730	3.224	.0091
WITHIN GROUPS	121	27.390	.226		
TOTAL	126	31.039			

TUKEY-HSD PROCEDURE
(*) DENOTES PAIRS OF GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

MEAN	GROUP		GRP 004	GRP 001	GRP 005	GRP 002	GRP 003	GRP 000
0	GRP004	(BMO)						
.2222	GRP001	(SD)						
.2727	GRP005	(OTH)						
.4000	GRP002	(ESD)						
.5385	GRP003	(AD)						
.5833	GRP000	(ASD)	*					

TABLE C.7

ANOVA Table - Combining the SSEB and SSAC

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	1.296	.259	1.426	.2199
WITHIN GROUPS	118	21.446	.182		
TOTAL	123	22.742			

TUKEY-HSD PROCEDURE
-- NO TWO GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

TABLE C.8

ANOVA Table - Time Limit on Evaluation

SOURCE	D.F.	SUM OF SQ.	MEAN SQ.	F RATIO	F PROB
BETWEEN GROUPS	5	3.956	.791	3.502	.0054
WITHIN GROUPS	125	28.242	.226		
TOTAL	130	32.198			

TUKEY-HSD PROCEDURE
(*) DENOTES PAIRS OF GROUPS SIGNIFICANTLY DIFFERENT AT THE .05 LEVEL

MEAN	GROUP		GRP004	GRP005	GRP000	GRP003	GRP001	GRP002
0	GRP004	(BMO)						
.4167	GRP005	(OTH)						
.5106	GRP000	(ASD)						
.5714	GRP003	(AD)						
.7143	GRP001	(SD)	*					
.7333	GRP002	(ESD)	*					

Appendix D: Comments and Responses to Survey Questions

The comments listed in this appendix reflect the views of each survey participant as written and do not necessarily represent the views of the authors or the position of the Air Force Institute of Technology or the United States Air Force.

PART II Survey Questions

E. Is putting a page limit on a contractor's proposal an advantage in the evaluation process?

YES RESPONSES

AERONAUTICAL SYSTEMS DIVISION

LT COL -- Guide for the contractor; i.e. Govt emphasis, limits the time, evaluation must "plow into" the proposals. They (KTRS) gives some latitude to deviate to!!

GS-14 -- It puts pressure on the contractor to emphasize the important aspects of his proposal. "More weight does not mean a better system".

GM-13 -- Forces specifics, eliminates unnecessary info, shortens evaluation time.

GM-14 -- Excess pages are not looked at due to severe time constraints.

CAPT -- Eliminates extraneous material which causes delays due to evaluation time required to evaluate proposals.

GM-15 --Insures he only submits the most relevant information in a distilled form.

LT COL -- Forces essence to the top.

GM-14 -- It focuses the contractors' attention on the important issues and avoids inclusion of sales brochures.

MAJOR -- Places limits on the evaluation efforts during the evaluation process.

GS-12 -- Reduces source selection period.

GM-15 -- Forces discipline on both govt and contractor. Govt in evaluation criteria preparation and contractor in proposal preparation.

MAJOR -- Limits documentation to facts and eliminates repetition.

GS-12 -- Prevents motherhood discussions.

GM-15 -- Forces the contractor to plan. Reduces govt evaluation time.

MAJOR -- Eliminates superfluous info. Tasks respondees to succintly describe their technical, cost, & management approach.

GM-14 -- Usually a page limitation will cut down the filler material some contractors put in the RFP and forces the contractor to address the issue as succinctly as possible. It increases CR and DR activity, but these can be pointed to the issues at hand.

GM-14 -- Focuses on what's important.

GS-12 -- Cuts out marketing. Contractor forced to be clear and concise.

GM-15 -- Limits the BS you have to sift through.

GM-14 -- Contractor is forced to answer the questions/request with a minimum of unnecessary data.

SES -- Encourages relevancy of what is included and conciseness.

MAJOR -- Makes contractor respond to RFP without a lot of BS. A concise and to the point proposal takes less time to evaluate.

LT COL -- Less to reconcile.

2LT -- Forces contractor to be direct and to the point. Reduces time required for evaluation.

MAJOR -- Reduces evaluation time, eliminates elaborate plans, approaches, etc.

GM-14 -- Restricts superfluous data.

GS-13 -- Forces contractor to be concise and reduces extraneous marketing propaganda.

LT COL -- Reduced amount of info to evaluate. Demands better writing by proposer. Risk is certain topics may be addressed, prompting more CIs/DRs.

GM-14 -- Eliminates sales pitch, gets to the bottom line.

SES -- It brings to focus the key parameters of a proposed design. Otherwise, the contractor prepares volumes for each special interest group in an attempt to tell them what they think they want to see.

MAJOR -- Use of limited resources and time constraints.

GM-13 -- Less extraneous material to read if pages are limited.

GM-13 -- Specifies to the offeror where to place emphasis.

GS-12 -- Less time consuming on govt's part. Forces contractor to finalize his proposal quicker, putting his response in fewer words.

GM-13 -- Helps to limit extraneous BS the contractor might submit.

GS-12 -- It forces the offeror to get the most out of his verbage. Also, it shows consideration for the reviewer.

CAPT -- Contractors will write to fill space. Page limits force contractors to be concise and cut back on material that is not responsive to the RFP. Page limits also save time.

GM-14 -- Less material to evaluate; Contractors will screen out useless information.

2LT -- Forces offeror to be concise.

GM-13 -- Makes the contractor give us the concise information without superfluous material. Limiting the number of pages makes an evaluation easier, particularly when there are seven time proposals to read and evaluate.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- Cuts down on amount of material to be reviewed.

1LT -- Limits amount of reading to be done by evaluators.

1LT -- Forces brevity, doesn't swamp evaluators in data.

GS-13 -- If the page limit is reasonable, and the contractor is competent, then pertinent information can be focused and more quickly evaluated.

1LT -- A reasonable page limit greatly reduces proposal evaluation time which costs less for the government and the offerors. This way only important, pertinent information is given. Given the chance, most offerors would write a book telling how great they are and what a great system they will deliver.

CAPT -- Contractor will hand over volumes of material if allowed to.

GS-12 -- Eliminate the "BS" and forces the contractor to limit the proposals to the facts.

GS-12 -- If offeror cannot defend/define the proposed design approach in the specified number of pages, then I have low confidence of the ability of that offeror to do the job. Also, limits the amount of boiler plate and sales pitches evaluators have to wade through to get to the design approach.

GS-12 -- Contractors with better understandings of government requirements will be able to keep their proposals down to essential information without loss of aspects needed for government evaluation.

CAPT -- Keep the work/process to a manageable size.

GS-13 -- Serves to streamline process - less paper to read, less people, etc. Experience is that with no limits, you get a lot of marketing PR.

LT COL -- Limited time allowed for source selection mandates that you can plan your time for evaluation. You can only plan when you know the magnitude of your task.

GS-13 -- Bounds the time required for evaluation. Limits the offeror to information specifically requested.

GM-13 -- Length of time it takes to review proposals times the number of proposals.

GM-15 -- Gives us a chance to succeed vs. being swamped with meaningless data.

GM-14 -- Tends to keep the data relevant.

GM-15 -- Limits evaluation time and potential requests (by govt team) for marginal information.

GS-13 -- Reduces review time. Does not allow contractors to ramble on in an effort to try and provide requested information.

GS-13 -- Reduces the sales pitch.

MAJOR -- Forces the contractor to strictly define his proposal.

GS-13 -- 1. Reduces time to evaluate (avoids massive proposals). 2. Forces succinct, direct proposal responses by contractors. 3. Forces government to request just what it needs.

GS-13 -- It motivates the contractor to concentrate on the most important aspects of a proposal. Additional information can be obtained selectively through clarification notices.

GM-13 -- Controls the display of bidder's knowledge and reduces data requiring review.

GM-15 -- Cuts down the time to evaluate, especially when there are many offerors.

CAPT -- Requires his thinking what to prioritize and enables concise proposals. Saves TET time in evaluating.

2LT -- Makes contractor get to the point. Helps to show he knows what he's talking about if he can make it clear and concise.

MAJOR -- Speeds up the evaluation process.

GM-15 -- If reasonable limit - otherwise (if too few pages allowed) must clean up lots of clarifications thru negotiations.

GM-15 -- Although there are legitimate loopholes around the page limitation, it helps to make the contractor focus on what's important.

SPACE DIVISION

GM-13 -- Proposals are often little more than marketing papers even if technical designs are proposed. Page limits lessen the waste of preparation costs.

GM-13 -- Cuts down on paper. Requires concise description of work.

1LT -- Doesn't allow extraneous boiler plate to confuse the key issues.

GS-13 -- Since technical descriptions and requirements fail to indicate the necessary information needed by offerors, the page limit allows the evaluation panel to prepare CRs and DRs and eventually get the information needed to make a selection.

CAPT -- It forces the contractor to be more precise, cuts down evaluation time, and eliminates the voluminous proposal data that some contractors submit.

GS-14 -- Contractors will write exhaustively if given the opportunity. Result: too much to read.

GS-13 -- Makes the contractor take out unnecessary elaborations.

GM-13 -- Requires concise, to the point responses. Eliminates marketing presentations which have no merit.

LT COL -- Reduces discussions of less essential elements of proposal, increasing evaluation efficiency. This is an advantage where the nature of the procurement allows it. However, in more complex system acquisitions, length may be essential to define the approach.

CAPT -- Forces contractors to minimize "politiking" and only put concise, pertinent information in proposals.

COL -- Limits irrelevant discourse, etc. Speeds evaluation process.

GM-15 -- It forces contractors to focus on relevant info rather than a data dump.

CAPT -- Saves evaluation time.

CAPT -- More specific information provided, less generic information. Forces them to think.

MAJOR -- It makes contractor think through the situation and describe only the salient factors of his proposal.

GM-15 -- Disciplines the contractors to state what is really important and reduces evaluation time.

BALLISTIC MISSILE OFFICE

COL -- Forces Govt to identify decision discriminators. Forces offerors to concentrate their effort on these discriminators.

COL -- Reduces contractor cost. Allows evaluators to read each proposal.

COL -- Focuses attention on important items.

GM-13 -- Limits data to a manageable and usable level. Allow decision making on key information rather than a mass of less important info. Forces both AF and contractors to identify and concentrate on key issues.

MAJOR -- Requires contractors to pay more attention to the PPI identified evaluation criteria and the ranking of the criteria. Also, insures a focus on the key important aspects and normally eliminates the need to evaluate/read less important verbose aspects.

GM-14 -- Forces contractor to give more thought to the critical items.

GM-14 -- Allows evaluators to evaluate entire proposal in time allowed; Forces contractors to zero in on most important aspects of proposed system/program.

COL -- You can tell how well the contractor understands the problem by how he selects areas to emphasize. More people can read and comprehend all of each proposal.

LT COL -- It puts a premise on the contractor thinking out its approach before it writes. It also allows a more detailed analysis by cutting down the volume of material to read.

ARMAMENT DIVISION

LT COL -- Reduces evaluation time - important when expect large numbers of bidders.

GM-13 -- Shortens evaluation time.

GM-15 -- Requires contractors to be more selective and reduces evaluation time.

GM-15 -- Saves time.

GM-13 -- It forces offerors to concentrate on vital information that pertains to the evaluation criteria and not submit large amounts of marketing or unnecessary information.

GM-13 -- Saves time and resources.

GS-14 -- Forces focus on vital factors - requires understanding of the problem and prioritization of relevant material which relieves evaluator of perceiving high points in shot-gun approach.

GM-14 -- Saves evaluation time. Places emphasis on "quality proposal" vice "quantity proposal".

GM-15 -- Proposal must eliminate garbage and go direct to substance.

GM-15 -- Causes him to concentrate on "area of concern".

EASTERN SPACE AND MISSILE CENTER

GM-13 -- Puts a premium on words.

GM-13 -- if a complex buy. Some contractors have the idea that the longer their proposal is - the better chance they have to get the award.

AEROMEDICAL SYSTEMS DIVISION

MAJOR -- Limits extraneous garbage - makes them think.

LT COL -- Cuts down on extraneous material.

MAJOR -- Forces prioritization of information and eliminates useless boiler plate.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- It avoids "hearts and flowers" form the contractor. More direct information is collected.

GS-12 -- Because we never have enough people to adequately evaluate the proposals - more pages=more people and more time.

GS-12 -- Forces them to get more specific rather than ramble on about general guidance.

NO RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GM-13 -- Explanation can become so condensed, CRs are required.

GM-13 -- It generally results in requests for more info clarification.

GM-15 -- Not if we are trying to acquire the best system that is the proposal which best meets the system life cycle requirements. Some argue it forces the bidder to be more concise. I prefer and encourage more use of the IFPP to obtain explicit comprehensive technical management and cost proposals.

GS-12 -- Limits presentation and contractor's creativeness/resourcefulness.

GM-14 -- There are ways around everything.

GM-13 -- My experience is that if the contractor is advised that ambiguous, unqualified information is not wanted and "procurement" data is not required. He provides good information in a reasonable manner.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- I answered no because of the tendency of contractors to put "fluff" in their proposal. However, if it is an extremely complex, state-of-the-art source selection, a page limitation is a hinderence.

GS-12 -- Pockets with additional pages often used.

SPACE DIVISION

GS-13 -- Would you buy a car if you could only look at it for 20 minutes?

ARMAMENT DIVISION

GS-12 -- The contractor has to provide additional data anyway since he never (or rarely) gives us useful data to begin with.

GM-15 -- Large responses to RFP are often generated by contractors perception of what we need rather than what we asked for in the RFP. Easily circumvented with annexes.

EASTERN SPACE AND MISSILE CENTER

GM-13 -- Puts a limit on the detail.

AEROMEDICAL SYSTEMS DIVISION

GS-12 -- They should be free to express themselves fully.

SURVEY QUESTION
G. The 4-step approach has the technical and cost proposals submitted and evaluated separately. Is this an advantage?

YES RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GS-14 -- For the standpoint of the technical evaluator, he can judge what is best to meet systems requirements without having to wander "can we afford" it. But after the tech eval, I think the tech evaluator should review cost proposals and help the cost evaluator.

LT COL -- Postpones insertion of cost bias.

MAJOR -- Evaluators could be swayed or have a skewed evaluation if aware of the costs.

MAJOR -- Honest - should compare against criteria, not each other.

GS-12 -- Allows technical people to stay with what they know best.

GM-14 -- Only good reason to use 4-step - only have prepared and evaluated cost proposals that have bearing on source selection decision.

GS-12 -- You don't want technical evaluators influenced by cost.

GM-15 -- Usually allows a head start on tech eval.

MAJOR -- Prevents leveling.

2LT -- Allows technical evaluators to be uninfluenced by cost.

MAJOR -- Evaluators are not influenced by cost and cost analysts are not confused by the proposal wording.

GM-14 -- Technical evaluators are not influenced by the cost estimates.

GS-13 -- Minimizes tech team bias - some overlap should occur after individual eval complete.

LT COL -- Detailed cost analysis confined to only those in competitive range, thus reducing workload (at expense of timely completion of overall evaluation).

GM-14 -- Prevents bias.

MAJOR -- Elimination of biases early in the SS process.

GM-13 -- Helps insure an impartial technical review and ranking.

GS-12 -- Mgt and Technical team should not have to consider cost vs. the proposal.

GS-12 -- Keeps evaluators from using cost as the only factor. (Cost between contractors may be close - yet the lower seems to influence most).

GM-14 -- No need to receive cost proposals from offerors not in the competitive range.

ELECTRONIC SYSTEMS DIVISION

GS-12 -- For a complex acquisition, this approach allows one contractor to put some thought into his cost proposal and allows the establishment of a baseline prior to submission.

GS-13 -- Decisions and evaluations could be biased if they are evaluated together.

GS-13 -- Reduces chance of bias/prejudice on tech eval.

GS-12 -- Provided the evaluators for cost and technical are different. Reduces potential of technical evaluators being influenced by dollar amounts.

GS-12 -- Evaluators (technical) are not influenced by how much a particular approach costs.

CAPT -- The technical evaluators do not have another selection factor (cost) which could sway their decisions. Strictly technical concerns. Leave cost to the cost folks.

1LT -- The Government always picks the lowest bidder whether or not he can do the job. If they're technically incompetent, stop there - regardless of cost.

1LT -- Technical evaluators are not biased by costs.

GS-12 -- Prevents prejudisms of areas which technical requirements no met.

2LT -- Does not tie up a lot of people.

MAJOR -- Concentrated effort can be expended on each submittal. Cost proposal can't be finalized until tech proposal is accomplished. You'll end up with a more realistic cost proposal.

SPACE DIVISION

COL -- Depends on situation; offers advantage of possibly speeding up the SS process and it instill the potential for greater integrity, particularly in Hi-tech areas.

GS-12 -- Saves time from evaluating cost proposals of unacceptable proposals.

GS-13 -- Limits workload in cases of many bidders.

CAPT -- No association can be made.

MAJOR -- in some cases. It is beneficial when you are pushing state-of-the-art and money is no object.

GM-15 -- Gives contractors more time to prepare cost proposal which is entirely (hopefully) in sink with the technical proposal.

ARMAMENT DIVISION

GM-15 -- Keeps technical and cost issues separated.

GM-15 -- Too many times cost causes undue technical compromise.

GM-15 -- Identify technically acceptable proposals without cost influence.

GM-13 -- More objective evaluation -- its hard to keep cost and tech separated in achieving a "gant" assessed price.

EASTERN SPACE AND MISSILE CENTER

GM-13 -- Prevent combination.

GM-13 -- The technical is not influenced by cost.

AEROMEDICAL SYSTEMS DIVISION

LT COL -- Simultaneous evaluation.

GS-12 -- The technical effort should stand on its on merit and be judged against the requirement.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- Forces us "technical types" to limit ourselves to only the basic technical aspects.

NO RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GM-13 -- Depends on what is being bought. New R&D - no.

LT COL -- The conventional does the same except that in four step (as I understand it) you don't get the cost proposal until determined the technical acceptability. Don't know the statistics, but considering that we do "whole concept" approach don't really see any advantage.

GM-13 -- Normally technical and cost are closely tied together for this to be an advantage - also, can cause longer evaluation period.

GM-15 -- They are always evaluated separately even in a conventional mode. Although the cost panel has access to the technical proposals, no one except the cost panel reviews the cost proposals.

GM-14 -- The cost folks need lots of technical assistance to make sense out of the cost proposal.

GS-12 -- Lengthens SS period. Also, unknown cost impact on outstanding (unreleased) DRs.

GM-13 -- In functional areas where all things are equal, the "expert" in that area should also be effective in pricing.

MAJOR -- The government cannot effectively do cost/benefit tradeoff analyses of differing technical and management approaches.

GM-14 -- All cost proposals are submitted and evaluated separately.

GM-15 -- This is absolutely dumb for the simple reason that the cost team and technical team must work together

with management to assess and determine that the bid cost relates to and supports the technical approach.

GM-14 --Stretches out the process since the same panels do not evaluate both cost and technical proposals.

MAJOR -- In my areas, the two proposals are needed in order to evaluate reasonableness.

GM-13 -- So does conventional and ASD Streamlined.

GM-13 -- This is not peculiar to 4-step.

GS-12 -- Although I have not evaluated cost proposals (need to know) it should be possible to evaluate approach with cost for same. The 4-step approach is time-consuming.

GM-15 -- Cost depends on technical input - separating them creates a myth that they can be treated separately. Too many neophyte managers really don't understand what's going on.

2LT -- I don't think it really matters.

GM-13 -- My experience shows that this is a normal practice anyway. In the 4-step however they are received at different times and could serve to lengthen the evaluation process.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- in general. Benefits seem to be all to the contractor. He has time to determine who submitted tech proposals before submitting his cost. Govt may be evaluating proposals it can't afford.

GS-13 -- The Air Force can expect a better price through a best and final offer versus a sole-source negotiation.

GM-13 -- Cost and technical should be evaluated together near the end of the source selection and can often highlight the excessive cost areas of the specs for further govt review.

CAPT -- Can't get a balance view of proposal without both.

GM-15 -- Can't legally establish competitive range until evaluate both anyway.

1LT -- Technical and cost should be delivered together to avoid contractors knowing number of proposals. Some overlap in evaluators is needed.

GM-14 -- Tech team disappears prior to cost evaluation.

GS-13 -- Conventional is done essentially the same way.

SES -- Serial approach takes too long.

GM-15 -- Cost proposal evaluation can be "long polk in TEWT".

GM-14 -- Loss of technical people needed to answer cost team's questions.

GM-15 -- We technically level and then it's too late to do real cost analysis.

GM-13 -- Lengthens time of source selection.

LT COL -- Separating tech and cost give contractors a chance to play around too much.

GS-12 -- At ESD during a conventional source selection, the cost proposal is evaluated separately; therefore, those evaluating the technical proposal are not influenced.

SPACE DIVISION

GM-13 -- It accomplishes little more than stretching out the process.

CAPT -- Soft no. There needs to be an assurance that the contractor is considering technical risk in costs. Without comparison of proposals, this can't be confirmed.

GM-13 -- This design was to eliminate bias which I feel never really existed.

GS-13 -- The two proposals must play together in determining cost realism.

GS-13 -- Theoretically, they are supposed to be evaluated separately anyway. Comparison of cost to technical requirements must occur eventually.

1LT -- For complex programs, there must be significant interplay between cost/technical/management areas to fully understand the total proposal and insure realism and credibility of the cost information.

GM-13 -- They should be evaluated separately in any case. Technical evaluators should not have cost determining their evaluation of work necessary to do accomplish the tasks.

BALLISTIC MISSILE OFFICE

MAJOR -- Technical weaknesses are sometimes linked with the contractors proposed manning and dollars proposed to certain SOW/WBS tasks. A joint review of cost/technical is critical in establishing the most probable cost to the government.

GM-14 -- Takes too much time.

LT COL -- Since cost is a statutory evaluation factor, it is foolish to segregate an indispensible eval factor - How do you make an integrated assessment when an essential element is reserved?

COL -- They can be done in parallel.

ARMAMENT DIVISION

GM-13 -- They are evaluated separately anyhow.

GM-15 -- The cost is based on the technical approach. Valuable time is lost by the cost panel waiting for the cost proposal.

GS-12 -- Leads to insufficient evaluation of cost data.

GM-14 -- Adds to schedule.

GS-14 -- They aren't separate. Parts of the technical proposal evaluation depend very much on the intelligence of technical-cost tradeoffs consistent with the scheme of the RFP. Segregation can lose vital assessment of a proposal.

GM-13 -- Every 4-step I have participated in required concurrent submission of technical and cost proposals because of DCAA audit leadtime. We could not afford the extra two or three weeks due to separate submittals.

GM-15 -- Clarification normally does not make significant changes in the contractors proposals.

AEROMEDICAL SYSTEMS DIVISION

MAJOR -- Previous experience shows that the two are inseparable if you want to determine who really knows what they are talking about.

MAJOR -- The early filter could invite early protests.

SURVEY QUESTION
I. Would limiting the number of people on the Source Selection Evaluation Board (SSEB) be an advantage in the evaluation process?

YES RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GM-13 -- Currently too many manhours are wasted in an area where ideas are battered around.

LT COL -- Saves time.

MAJOR -- Provided qualified experienced personnel are used the time for proposal evaluation could be significantly reduced.

LT COL -- If right people i.e. experienced , know the SS process. Unfortunately, we are not enjoying this now.

GM-13 -- Inverse relationship between the number of people and the number of timely decisions made.

GM-15 -- Deliberate limiting of personnel would imply acceptance of a reduced quality product. This is BMO's approach.

GM-14 -- It is possible to have too many opinions when trying to reach a decision.

GM-15 -- Numerous evaluators drive evaluation criteria and standards to the "nit" level with commensurate CRs, DRs, etc. which in turn extend the process.

GM-14 -- Definitely. We spend most of our time trying to calculate and understand the evaluators who are normally inexperienced.

GM-15 -- People generate work for each other.

GM-14 -- If experienced personnel assigned. I personally believe that too many unnecessary requirements changes are introduced because too many people are involved.

GS-13 -- If these people are truly experts and only "evaluate". After evaluation who checks to assure we are awarding a good contract?

GM-15 -- I believe whats more important is limiting the number of people by experience and qualifications. We need to develop a strong ASD source selection capability. Many companies establish proposal writing departments and proposal organizations which specialize in this critical activity. ASD needs to build our expertise in this area.

LT COL -- Less learning and confusion.

MAJOR -- Minimum essential, qualified evaluators could expedite evaluation time.

GM-13 -- Shortens time.

GM-13 -- If they are qualified and dedicated to the source selection.

GS-12 -- Concentrate on quality - not quantity. That is why I prefer BMO streamlined approach.

GM-14 -- Cut down on the time in source selection. Generates fewer unnecessary DRs, CIs, and MRs. Force the source selection team to concentrate on really important areas.

2LT -- With more people, you tend to get a more objective view of the proposal. One drawback: it's difficult to track a lot of people to ensure they complete their evaluations - especially when the source selections long (greater than 3 months).

ELECTRONIC SYSTEMS DIVISION

GS-13 -- A few, qualified, competent individuals can avoid much useless debate and argumentation.

GS-13 -- The most advantageous choice for the Air Force can usually be determined quickly and with a minimal number of people.

GM-13 -- Less conflict of individual people's understanding of Govt requirements, especially as relates to software.

CAPT -- Less people involved - saves time and easier to establish concensus (if desirable).

GS-13 -- It would make the evaluation move more quickly.

GS-13 -- There are fewer "editors" and the responsibility for a given area can be established. In addition, the single evaluator tend to be more concise.

GS-13 -- If they are top-notch, qualified, and dedicated solely to the source selection.

1LT -- Avoids redefining or further defining system requirements.

1LT -- Less coordination, more dedication.

GM-14 -- No focus on large panels.

SES -- Fewer people create fewer problems (assumes minimum necessary has been satisfied).

GM-15 -- Fewer opinions to meld into a single product.

GS-12 -- Usually, the square root of the number of persons assigned on SSEB perform almost all the analysis after the initial evaluation.

GS-13 -- Typically, large source selections produce too much unsupportable "evaluations" by folks who don't understand the program in sufficient detail, or are not "expert" in their field. This places extra burden on item/area managers to ensure fairness and accuracy.

CAPT -- It will limit the paperwork and varying opinions.

GS-13 -- Easier coordination, more consistent evaluations, hopefully less turnover of personnel.

SPACE DIVISION

MAJOR -- It eliminates functional interests that are not key to the decision process.

LT COL -- Makes it politically more feasible to eliminate observers from misc commands outside of the product division who have little to contribute.

GM-15 -- If you have the correct disciplines represented.

GM-13 -- Fewer people make decision-making possible. There should be more people in an advisory nature.

COL - To essential minimum number. Speeds process; more inclined to focus on important issues.

GS-13 -- Fewer people would result in greater knowledge of total evaluations by each; Better understanding of the total proposal.

CAPT -- Less people to deal with in reaching conclusions or recommendations concerning proposals.

GM-13 -- Provided experienced, knowledgeable people can be found. 5-10 people can perform a meaningful, un-biased evaluation.

GM-13 -- Ten qualified evaluators are as good as a board with fifty with only ten really qualified. Significant processing time is required to screen excess opinions.

1LT -- Eliminates the number of assessments that must be consolidated, also cuts down on the number of review levels.

GM-15 -- We always limit number. Simplifies management of source selection.

CAPT -- Less data to integrate. Higher probability of concensus. Risk - individual biases can dominate.

BALLISTIC MISSILE OFFICE

MAJOR -- Ensures SSEB chairman plans day to day activity of evaluation and promotes quality of evaluations. When limiting number of evaluators, it is essential that the personnel be chosen well. Gets evaluation accomplished on the best schedule attainable.

GM-14 -- Cuts time and number of meetings.

GM-14 -- Saves time and effort involved in consolidating evaluations and prevents fragmentation of information.

COL -- Result is you get better qualified people who can devote more time to the evaluation.

LT COL -- Too many people produce a consensus report - the smaller the committee, the more likely that divergent opinions will surface.

COL -- Again, focuses attention on the most important aspects.

COL -- Then dialogue can take place. Also, small proposals allow all SSEB members to read the whole proposal - avoids out of context evaluations.

COL -- If proposals are page limited, a small number of evaluators can read each proposal and prepare comments. Consolidation of the comments into strong point/deficiency statements is less time-consuming.

ARMAMENT DIVISION

LT COL -- Consolidating comments of multiple evaluation is time consuming.

GM-13 -- A small number of good evaluators is faster and more meaningful than a large number of "semi-qualified" individuals who due to limited knowledge of requirements slows down the process.

GM-15 -- Fewer differences to reconcile.

GM-14 -- Evaluation results can be more easily and quickly assembled.

EASTERN SPACE AND MISSILE CENTER

GM-13 -- Utilize the best technical people for the SSEB. Look for qualified individuals - quality in lieu of quantity.

GM-13 -- Easier to come to a resolution with a lessor amount.

GM-13 -- Prevents paper mills.

AEROMEDICAL SYSTEMS DIVISION

LT COL -- Better exchange of info.

LT COL -- Shorten time required for evaluation.

MAJOR -- The larger the board, the slower things work!

MAJOR -- Accelerate the process.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- If good people and willing to give evaluators credit for some level of expertise.

NO RESPONSES

AERONAUTICAL SYSTEMS DIVISION

MAJOR -- Relative to size of proposal and how many.

MAJOR -- The numbers should be allowed to vary depending on complexity and number of respondees.

GM-14 -- Other than $ spent on evaluation, the number of people has little effect. The number of functions evaluated has an effect. Many organizations feel that for them to be able to hold the contractor's feet to the fire during contract execution, they must evaluate the contractors proposals. This is not true. Only those areas that are discriminators need reviewed during proposal evaluation. I do not recall a time when configuration management, data mgt, LCC mgt, corrosion control, etc. made a difference on who was awarded a contract. Yet we burn thousands of hours of critical resources (who should be monitoring active contracts) in the source selection process evaluating these areas. Suggest source selections be limited to those discriminators such as technical approach, schedule, manufacturing capability, logistics considerations, reliability be evaluated.

GM-15 -- Most tech eval people are functionally compartmented - need to cover all aspects.

MAJOR -- Neither advantage nor disadvantage.

GM-14 -- The number of people on the SSEB has no bearing on completing the evaluation process - the same effort/time is required.

2LT -- If kept within reason, the more inputs available the more informed the SSA will be.

GM-14 -- The process is complex and arduous. Limiting the number of evaluators would only compound the problems.

GS-12 -- Complex programs can benefit from eval by multiple disciplines or multiple opinions. Limiting might be OK on smaller programs or low complexity programs.

LT COL -- Could hamper needed experience, requiring some individuals to work outside primary specialty.

MAJOR -- Many clarifications to requirements can be resolved during the SS process. If you limit people, major issues can be overlooked.

GS-12 -- Different people's ideas are needed so that an important area is not overlooked.

GS-12 -- Each contract has different requirements- one may need more technical analysis, where other would not.

CAPT -- Ideally, there should be one person to evaluate each factor. Limiting people without limiting factors or imposing page limits would result in missed schedules.

GM-13 -- In general, my experience shows that only a small number of individuals are required full-time. Others, such as advisors, counselors, can be called on as required.

GM-13 -- As long as the people are assigned to an Area Chairman who has control, the "extra" evaluators contribute to a good thorough review by people who are experts in their field.

CAPT -- Each program size and scope determines the size required to accurately conduct the SS.

GS-14 -- It is always hard to get qualified evaluators - so I have never seen too many.

GS-12 -- Generally, not enough personnel available to begin with. The SSs I'm familiar with have never requested personnel that were to essential for success.

ELECTRONIC SYSTEMS DIVISION

GM-15 -- Number of people assigned has to be consistent with the complexity of the procurement.

2LT -- It takes a lot of work and would pull the fewer people off their jobs longer.

GM-15 -- Don't have enough people to do the job now. With fewer evaluators, will take more time, overwork staff, get sloppy results. Most SSEB members are totally inexperienced.

MAJOR -- Depends upon the program.

GS-12 -- It depends on the complexity of the anticipated acquisition. A standard limit may be seriously

harm the effort if insufficient resources are available to evaluate the proposals.

GS-12 -- Need all the technical expertise you can get.

CAPT -- It is hard to assemble an experienced group of evaluators. Usually, the experienced individual is designated as area chief. In this situation, the flexibility to assemble your team on knowledge instead of number of people benefits the government.

GM-14 -- Depends on the program and most SSEBs aren't overstaffed.

GM-13 -- A complete/thorough review/evaluation cannot be performed.

SPACE DIVISION

COL -- Use as many people as are necessary to get the job done.

CAPT -- Dependent on expected response/detail.

GS-13 -- More brains should result in a better product.

GS-13 -- The limits would be overcome by the use of advisors.

GS-14 -- Artificial limits are impractical. All necessary people should be used.

ARMAMENT DIVISION

GM-15 -- Fails to consider unique aspects of each program.

GM-13 -- Should have adequate depth to thoroughly evaluate proposals.

GM-15 -- We only use what we need.

GS-12 -- The problem is not the number of people but the quality of people.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- Because evaluators are not typically seasoned veterans with at least 10 years experience; nor are item captains or area chairmen!

SURVEY QUESTION
K. Would a pre-established time limit between proposal receipt and contract award be an advantage to the proposal evaluation process?

YES RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GM-14 -- We normally take the time we are allowed but longer time doesn't improve the evaluation quality.

LT COL -- Help keep matrixed functional support on schedule.

GM-13 -- Work wouldn't be generated to fit the time available - shorten turnaround to get workers back on job.

MAJOR -- A defined amount of time for the evaluation would allow individuals (PMs) more flexibility in assigning/completing work.

GM-13 -- Work seems to expand to fill allotted time. Lack of a time limit causes the process to slip out further and further.

GM-15 -- Confine effort to a prescribed time again would imply acceptance of a reduced quality product.

GM-14 -- It keeps evaluators focuses on the task at hand.

MAJOR -- I thought we do this anyway. Establish schedules in planning phase consistent with requirements and resources available.

GS-13 -- But not a good idea because "contract award issues" could cause delay. Contract awards should be driven by "need".

GM-15 -- As a goal - yes. However, certain unplanned circumstances arise which must be dealt with such as buy-ins, all costs beyond program budget, and no adequate technical approach proposal.

LT COL -- Get it done!

2LT -- Reduces the chance of a SS languishing and bogging down in the evaluation.

GS-13 -- Establishes working goals - useful for any task.

MAJOR -- To some extent. Flexibility would be appropriate in this area.

GS-12 -- Limit the nit-picking CRs and DRs.

GS-12 -- Procrastination can always delay contract award.

CAPT -- Because either people would work 24 hours day/ 7 days a week or they would tailor factors and items, impose page limits, and take other steps to shorten the selection process. The quality of a selection is uneffected whether it takes 2 months or 6 months. The amount of paperwork generated is the only difference.

GM-14 -- Would force all aspects of the evaluation to truly complete the evaluation in a specified time period. Currently, unless there is a truly strong manager in charge of the process, the evaluation is permitted to continue almost unconstrained by schedule.

GM-13 -- Set a closure date to end the questions and get on with the job of awarding a contract. Also, the set time should be a part of the overall program schedule to have an efficient utilization of funds and resources.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- only if tailored for each source selection. Only if the procedures used can be accomplished in that time limit. Program complexity, number of proposals, and size of evaluation team strongly influence the amount of time required.

GS-13 -- If the time limit is reasonable, it would identify specific milestones to measure progress.

1LT -- Avoids technical leveling. The longer the source selection process goes on, the greater the chance that the Government will inadvertantly give "clues" to the deficient offerors to bring them up to par with the others.

1LT -- Defines schedule apriori.

SES -- Work tends to expand to fill the time available.

CAPT -- Schedules during source selection are hard to keep. We had situations where the evaluation results were

briefed to ESD/CC and then he assembled another team to verify the results. Even after we had results approved by SSAC.

GS-13 -- If the time limit was obtainable, it would result in quicker contract award. Some source selections seem to be dragged out with several slow periods.

GM-14 -- Too many source selections are extended and tie up personnel unproductively. Making a decision does not always require full detail of circumstances and is seldom provided to the SSA.

GS-12 -- Goals are set to be met.

CAPT -- If reasonable, forces decisions (not more and more questions). Speeds an already very long, laborious process.

2LT -- It would probably cause the RFP to require more concise proposals and thus reduce the time between proposal receipt and contract award.

SPACE DIVISION

LT COL -- Prevents other priorities from interfering with the process.

1LT -- Help speed staff review and coordination.

CAPT -- Forces a structure on source selection.

GM-13 -- We do this to confine the time of the evaluation process.

GS-12 -- Time might be spent more efficiently if there existed a time limit, although, attention must be given to the realism of the time limit.

BALLISTIC MISSILE OFFICE

MAJOR -- Forces good planning, best utilization of personnel, and focuses the evaluation on key discriminators that should be considered by the SSA in arriving at a decision.

COL -- It enforces a discipline on a bureaucratic process.

COL -- It allows for advance planning by govt. and contractors to make resources available at the right time.

GM-14 -- Structures the evaluation.

GM-14 -- Only if commander enforces limit - people take as much time to evaluate as they are given.

COL -- It helps establish priorities with other projects competing for time of all people involved in evaluation and contract production.

LT COL -- It encourages decisions rather than delay.

GM-13 -- Source selection will expand to fill the time available. A pre-established limit (with some SSA flexibility for exceptions) is useful in forcing participants to plan efficiently.

ARMAMENT DIVISION

GM-13 -- People take advantage of procrastinating when no schedule is set.

GM-14 -- Would require process to be completed on a schedule.

GM-13 -- Depends on the complexity of program under evaluation.

GS-12 -- There already is a time limit established, at least here at AD there is. Schedules slip, of course, but we try to meet the schedules.

EASTERN SPACE AND MISSILE CENTER

GM-13 -- It would define the time available.

AEROMEDICAL SYSTEMS DIVISION

LT COL -- Force contracting to keep moving.

LT COL -- Forces the system to be responsive.

MAJOR -- Murphy's Law - What ever the time allowed, the work will expand to fill it.

MAJOR -- Eliminate bureaucratic "CYA" delays.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- It would force managers to weed out unnecessary actions; also contract types must streamline their processes. A formal, mid-term review seems superfluous since the data upon which it is based (the as-received proposals) always gets modified by CIs and DRs and sometimes MRs.

NO RESPONSES

AERONAUTICAL SYSTEMS DIVISION

GM-13 -- These limits would end up driving the system when each source selection is different.

LT COL -- Enough pressure on the schedule/people now. Artificial constraints would only add to an already "nervous tummy".

CAPT -- Many problems/issues are elevated due to the SS process.

GS-14 -- Too much pressure on the SSEB. Quality is better than quantity. Also, most evaluators have other jobs and must devote some time to them.

GS-12 -- Each source selection usually has it unique problems which don't permit award on schedule. The SSP already has a schedule which is the same as suggested above.

GM-15 -- We have schedules now which we seldom meet.

GS-12 -- Every source selection that I have been a part of has had a tight proposal evaluation schedule. After the decision gets past the SSEB is when the slow down happens.

GM-14 -- It would just be broken. It takes what it takes due to the problems at hand. The tracking would just be another source of SSEC problems. Nobody likes to remain in SS very long, so incentive is always to get out.

GM-14 -- However, I believe a good tight schedule tailored to each program is needed. Time can be reduced. Some tasks can be done in parallel.

GM-15 -- Major decisions will always be made by people too important to place rigid deadlines on. Might be OK for small programs.

MAJOR -- Evaluation of proposal not the problem - tend to further define criteria and the decision process eats up the time - proposal evaluation is not the big time eater.

GM-14 -- You already have a schedule that you are working to - the problem is in the number of CRs and DRs that evolve and must be resolved.

MAJOR -- Each solicitation is unique, to impose a time limit would be detrimental to all source selections.

LT COL -- Govt deadlines tend to result in rushed, and less than complete effort. (However, schedules are important; job must be completed ASAP).

GM-13 -- People tend to take as long as they have to complete evaluation.

GM-13 -- It's already done now, but if a problem develops, the extra time will always be taken to resolve it.

GS-12 -- Complexities within the requirements - a small business contractor would require less time to evaluate.

2LT -- It would just force schedule slips.

GM-13 -- When a time schedule is established, it is usually too short to do a good evaluation effort. If a reasonable schedule was established, I would agree. The problem arises because the schedule is established prior to receipt of proposals, and hence the complexity of the evaluation is not known i.e. number of offerors, etc.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- The source selection process requires flexibility. A time limit is not an adequate substitute for good management.

GS-13 -- Time limits tend to be unrealistic. A source selection tends to have a "time sense" of it own factors tend to lengthen source selections, irrespective of established schedules.

GS-13 -- Arbitrary deadlines result only in rushed, incomplete tech evals, which makes it more difficult to develop legitimate discriminators upon which to base a source selection decision. Also, the biggest variable in time is the number of proposals received in response to RFP, which you don't know with certainty until receipt date.

GM-14 -- Artificial constraint.

GM-15 -- Impractical - cant foresee all circumstances.

GS-12 -- Of the five source selections I have participated in, no two were alike except for format, each encountered different issues that needed varying periods of time to resolve.

CAPT -- Because of the funds, this may change and you will have to hold up source selection.

GS-13 -- The time required is strongly dependent on the number of proposals received.

MAJOR -- Some proposals may not lend itself to a definite time limit.

GS-12 -- The added pressure of mandated time constraints would only increase the stress levels of this "dreaded" activity. People are already attempting to do their best under difficult circumstances - and depending on the technology, etc., the mission of the program could be seriously impacted.

GS-12 -- Forcing evaluators to rush could only jeopardize a source selection.

GM-14 -- Schedule is by-product, not an end. Technical understanding, fair and reasonable cost determination are the real needs, and the time necessary to achieve them will vary with each program.

LT COL -- The time limit should already be in the source selection plan anyway. Arbitrary limits never work. Limits must be set based on size of effort.

GS-13 -- Time for the source selection is greatly dependent on the number of proposals received. If the time limit was too restrictive, it could cause erroneous decisions.

GM-15 -- It's hard to establish firm time limits as there are so many exceptions to the rule.

GM-15 -- Absurb! Don't tie Govt's hands - whats different here than just having an internal schedule for management purposes?

SPACE DIVISION

MAJOR -- A source selection decision can not be an end unto itself. Time limits could force decision before all factors are known and price negotiated.

GM-15 -- Too restrictive.

GM-13 -- Would only create more reporting practices. Less flexibility and a possible disservice to the Air Force. Sometimes it is better to take a little longer and be sure the best approach has been selected.

COL -- Are too many factors to be considered to be too arbitrary on govt side of the equation. Time goals are OK so long as they are not absolutes.

GS-13 -- Little benefit and possibly of catastrophic consequences.

GM-13 -- There are currently guidelines and there already exists too many government "pre-established" limits which make good management nearly impossible.

GM-13 -- Every procurement is unique. Guidelines - yes; Limits - no.

GM-15 -- Too many unknowns, we have found it better to slip schedule and do a good evaluation.

COL -- Use whatever time is necessary to get the job done correctly and thoroughly.

CAPT -- Soft no. A time limit would constrain evaluation quality given limited SSEB resources often found in source selections. However, without a time limit, a fair and reasonable response cannot be assured.

GS-13 -- It would put undue pressure on the evaluators. A quality job might not be produced.

GS-13 -- Force time limits would increase the probability of poor procurements.

LT COL -- It is impossible to insure compliance with a mandatory schedule, and almost all source selections will have a schedule of some kind, including a desired award date. So, time limit is already pre-established.

CAPT -- It is more important to have a thorough and fair evaluation than a very quick one.

GS-14 -- Artificial limits are impractical.

ARMAMENT DIVISION

LT COL -- Would be too many exceptions where it was to the government's advantage to extend the source selection.

GM-15 -- If time is a problem, it's caused by poor organization or direction.

GM-15 -- Because time limits are based on what is wanted rather than what is needed!

GM-13 -- People in a hurry make mistakes - you'll pay later.

GS-14 -- You don't know what it should be to assure source selection objectives are achieved. It could even unnecessarily induce prolongation. GAO would not be impressed by a time limit in assessing the propriety of source selection conduct.

EASTERN SPACE AND MISSILE CENTER

GM-13 -- Depending upon the complexity of the acquisition and number of offerors dictate time required to evaluate and award.

GM-13 -- Complexities may overweigh time considerations.

AEROMEDICAL SYSTEMS DIVISION

GS-12 -- I don't believe hasty decisions would be to our advantage. In my experience, the evaluation team is usually short on manpower and has very limited experience. A lot of money and resources is riding on their decision and it should not be rushed.

PART III Other Comments

AERONAUTICAL SYSTEMS DIVISION

GM-13 -- The single biggest factor to BAD source selections is because of a rush job to put the program on contract quickly and later we suffer the penalty of correcting the deficiencies which take more time than early planning would require and spending money we can ill afford to waste.

GS-12 -- The ASD source selection facility is in dire need of expansion. It lacks anywhere near the spare media to conduct our SSs. The facility should not be limited to AFR 70-15 SSs. Suggest more formal SS training.

GS-14 -- I think for small $ contracts, we do need a quicker way to award contracts. Too many regulations impede timely awards. Even competing small $ contracts (i.e. < $100,000) is very expensive and dilutes government resources for the larger ones that really count.

GM-15 -- The requirement for a flawless product, (No ASD source selection protest has ever been sustained) demands large numbers of people and long periods of time but we do get the best deal for the US government and treat each bidder fairly.

GM-13 -- The current source selection process is:
1. A waste of the tax payers dollars-
   a. tooo many employees involved.
   b. too many briefings to go through
   c. personalities enter into decisions.

An alternative approach to the current system:
   1. Time limit based on some pre-established criteria (dollars, type of requirement)
   2. DO NOT IDENTIFY CONTRACTOR BY OTHER THAN ALPHA OR NUMERICAL INDICATOR TILL SELECTION (ELIMINATES PRE-ESTABLISHED CHOICE).
   3. Base decision on proposal, no limit on pages and no CR or DRs.
   4. Use recommendation by the CAS or PRO's on pre-award surveys. Don't send out a full blown ASD to perform.

GM-15 -- The key to improving/simplifying the source selection process is maximum delegation of authority and responsibility (which we don't do well within the govt). We do a good job of selection on large acquisitions which use the conventional approach. Its slow, consumes many manhours, etc., but its generally accurate and "controversy" proof.

It's with the large number that would be more appropriately selected under less stringent procedures, that we have the problem; i.e. we overkill the small stuff. We also need to do a better job on scrubbing data that we ask for - appears to be a lot of "just in case" stuff that we don't need.

GM-14 -- If you are attempting to get a standard for all source selections, that is a mistake. Each evaluation should be judged on its own goal. All SS processes have a proper time for application. Factors to be considered is 1) risk to government; 2) time; 3) cost; 4) technical or management challenge.

MAJOR -- Although I have only helped in a SS, I have reaped the problems of several SSs. The low bidder won - but was unable to manage the program. I would stress past performance and encourage ASD managers and PCOs to initiate contractor performance files for both positive and negative actions.

GM-14 -- Need a good training session in a classroom atmosphere.

GM-15 -- The source selection process is a painful one, but on large programs it probably should be.

SES -- Part II misses an important ingredient in the selection of the approach. The type of program is usually the driving factor in selecting an approach. Source selections are conducted on laboratory technology programs. Additionally, conceptual, demonstration/validation, and full-scale development phases are competed by the acquisition offices in ASD.

Acquisition strategy also plays a part in the selection of an approach. Many times, multiple contractors are selected to continue work in a parallel effort until a follow-on source selection is made.

ASD often times uses the conventional approach but limits the proposal page count.

The complexity of the proposal evaluation standards influences the number of people needed and the time duration to evaluate a proposal.

GS-12 -- My opinion is that most source selections are too long. In 1970 on the SCAD program, we evaluated 18 proposals and awarded 6 contracts within a 12-13 week period. I also evaluated 5 or 6 revisions of the Carrier (Boeing) Aircraft contractors proposal during the same time frame. Our SPO prepared the performance specifications. I would like to consider this as a goal for source selections of a comparable weapon systems contractors. Simulators can be done in a similar time frame if we don't try to level

each offeror. Limit the source selection process to experienced evaluators (trainees would be observers until proficiency is demonstrated).

GS-12 -- A training requirement is a must. Every person used as an evaluator should be required to attend a comprehensive course on source selection.

GM-15 -- The questionnaire nibbles at the crux issues of source selection without getting to the meat. Questionnaires have been used before without much success -- see PM for recent more detailed questionnaire and their answers. One good man who understands the process is better than all questionnaires.

CAPT -- I reiterate, source selections are a waste of government resources. The source selection acts a a justification for what ever choice the SSA makes independent of the results of the SSEB evaluation. Any steps which mandate a simpler shorter process are steps well taken. AFR 70-15 is the place to start.

ELECTRONIC SYSTEMS DIVISION

GS-13 -- I believe much can be done to simplify and reduce the time to select a "winning" contractor. I have many ideas and suggestions to do so. The current climate at ESD, however, is not receptive to any "unconventional" approaches. Some of the most productive areas that could be improved are listed as follows:

1. Improved standard evaluation/rating forms.
2. Reduced role of SSAC (even eliminated).
3. Better training of SSEB members.
4. Dedicated resources; i.e. secretaries, computers, facilities, SSEOs, etc to support source selections.
5. Allowing known experts (non-govt) to evaluate, rate, and rank.
6. Recognition that selecting the optimum offer is relatively simple but definitizing a fair, comprehensive, contract (often fixed price) is the most difficult, time consuming part of source selection.
7. Reverse current trend for ESD commander to be SSA on even small dollar acquisitions.
8. Have a computerized file containing detailed past performance information on the most common defense contractors eliminating the need for each SSEB to create their own.

GS-13 -- For conventional, cost team should have technical advisor. Funding profiles for programs in source selection should be frozen to prevent funding cuts which

could delay the source selection process. A source selection fund which programs with small funding shortfalls could draw on could help in the costs where proposals are higher than funds available. the number of areas, and factors should be minimized to limit the amount of paper work. The number of cost formats should be reduced. A lot of time and effort is taken up by the offerors responding to our ridiculous requests for cost data. Computerized tools would be helpful to allow the cost team to manipulate the cost data.

GM-14 -- 4-step is not suitable for development programs.

GS-12 -- Courses should be offered on how to fill in CR's, DR's, PFN's, Area and Item summaries, etc. Some S.S. elections require people to fill in and refill-in these forms over and over again wasting valuable time. Also it needs to be taught what constitutes a CR vs. a DR; when should a PFN be written; what types of questions and how should you ask them, in face-to-face negotiations? Although the SSAC is supposed to write the PAR report the SSEB does the job- how do you write one of those?

How do you prepare a GEMPC? How do you estimate how long it will take a contractor to do a job, how many people will be involved, what is the level of effort? These things need to be taught. Many evaluators have only worked for the government and have no idea how long it takes to build a plane or a radar or how many people/or months it takes to get ready for PDR; or how many secretaries it takes to prepare data items. The GEMPC is the most guessed at and most important factor in a source selection.

GS-12 -- Participation in the source selection experience provides valuable insight into the program and the acquisition system itself. It is a synergistic environment. However, source selection is traditionally viewed as "something wicked this way comes". (I'm sure Ray Bradbury will forgive me using this quote.) People, without experience in the process, suddenly no idea as to how to go about doing what they've been told they had to do.

There are no formal training courses available to my knowledge - at most they may get a one hour briefing on the shalls and shall nots. The courses, at least the ones I have attended, have spent a great deal of time on how to put together a requirements package. What you learn is how to state the tasking and requirements - what language to use and when to use it. No course provides any insight as to how you are to evaluate an offeror's response to your package. An inexperienced evaluator might have ideas as to how they expect the offerors to respond and if their ideas are not reflected in the proposal its time to hit the panic button.

The purpose of source selection has been mislaid along the way (at least the way I see it). Evaluators get bogged down on evaluating the actual design - something that must be reserved for the formal reviews after contract award - and forget they are there to determine whether or not the proposals reflect an adequate approach to solve the problem. (I realize there are situations where the source selection purpose is to chose a design.)

As far as establishing mandated time constraints - if realistic target dates are scheduled and sufficient resources provided this would not be necessary. Too often, the schedule is set up when the RFP is released and is not revised to reflect changes (for example, if an offeror requests and is granted an extension to the proposal delivery date). The other problem is the annual end-of-fiscal-year crunch. The emphasis shifts from getting a good contract awarded to just getting the flipping contract awarded so the money isn't lost.

Mandating the approach to use for the source selection process is another sore spot. It becomes a struggle between doing what's best for the mission and staying within the regulations. I realize that there are laws that must be adhered to but there is a definite gap between staying "legal" and staying within the regulations.

Another problem that I have noted recently is a tendency of higher headquarters to interfere (making suggestions that result in a change to the requirements and bouncing the funding profiles around, etc). They've given the evaluators a job to do - let them do it. Yes, headquarters has a vested interest but the role should be limited. Their role is usually as members of they SSAC. I suggest making them active members of the board - that way they would know and not have to question the whys of the ratings. It would also save time during the process. Convening the SSAC would not have to wait for the "convenience" of all the members. An evaluator's time is just as valuable as the time of the SSAC Chairperson. (It might only save one week or it could save a month but it would still be time saved.)

Had enough of the problems? How about some suggestions?

Implement a formal training course on how to go about evaluating a proposal and make it available to all the people involved in source selection. Perhaps a generic course at AFIT followed by a Product Division unique.

Establish a course on pricing. It's a nightmare for an experienced data manager to evaluate quotes for data costs. Imagine the terror an inexperienced person feels when confronted with that task.

Include in the pricing course a how-to segment on developing the Government's Estimate of Most Probable Cost (GEMPC). From my experience regarding the GEMPC its our

interpretation of the resources required for each offeror to do the job they think we want done in terms of labor hours. How can you reasonably expect an inexperienced person to do this? And if you have more than one offeror.....

Establish a core group (cadre) of experienced personnel (volunteers would be best) to provide expertise to source selections. Make it their only job. Provide a back up for them at their regular assignment. And don't have the same people doing all the selections - a rotational assignment list may work.

Assign inexperienced personnel as "trainee" SSEB members. Let them go through the whole process at least once under supervision before they get assigned as item captains or area chiefs.

Let the evaluation approach be flexible. A combination of ASD, BMO, and conventional may be best in one case whereas 4 step might be the only way in another. Having to justify the approach takes time and creates frustration.

Leave the money alone and don't change requirements (unless it makes sense to do so).

Eliminate some of the cost formats that serve no real, useful purpose and make the remaining formats easier to understand.

Have experienced people write the IFPPs with the stringent parameters as if it were a specification or statement of work. Confusion reigns supreme if the IEPP contains conflicts or areas subject to individual interpretation.

GS-13 -- The major problems I have seen in source selection:

Lack of people with source selection experience, particularly when the source selection is designed and the evaluation standards are written.

Trying to evaluate too much. There is a tendency to include in the evaluation things that cannot affect the outcome.

Turnover in personnel during source selection.

Morale. The overtime, schedule pressures, nickpicks, and poor facilities all contribute to poor morale and a very strong desire never to do another source selection.

GS-13 -- I am only marginly familiar with the BMO and ASD approaches. From my understanding of the approaches, in order for them to function properly, a major commitment must be made by the commander and others in the source selection stream to keep "hands off" during the process. Since ESD has an active commander and other "active" staffs this my be difficult to achieve.

One additional observation; Time in a source selection, if made too short, tends to cause poor decisions and much remedial work after contract award.

1LT -- I think it would be most efficient to have a permanent Source Selection Team. To help this team in evaluating the proposals the personnel from the program office would brief this team and also help evaluate the proposals. This would be especially effective in the cost area as most evaluators really do not know how much is too much or too little for given tasks.

Stop selecting the lowest bidder. There are usually very good reasons why one technical approach may cost a little more (less ECPs, under cost in the long run and either on or ahead of schedule).

4 step approach avoids technical leveling.

GS-13 -- My experience is limited to the conventional source selection approach. Therefore, I have not responded to Part II, Sections A-C. However, based on my experience, I believe the ASD streamlined approach, as outlined in this questionnaire, is definitely the best approach. Properly implemented, this approach should work well for all competitive acquisitions.

GM-13 -- The ASD approach appears most feasible for small system buys. The BMO approach should work well on all buys so long as advisors are permitted to support the SSEB. Both conventional and four step are manpower intensive and manpower ineffectively and in some cases, defeat the planned scheduling for the programs which, in turn, impacts cost.

GM-15 -- There is definitely room for improvement in the source selection process. Ideas should be solicited and evaluated.

SPACE DIVISION

GS-14 -- Too many program managers rush the evaluation to meet artificial deadlines - these evaluations should be thorough and un-rushed.

LT COL -- The inefficiency in "conventional" source selection is, I believe, caused by excessive areas, items, and factors, not the fact that we have an SSEB/SSAC etc. Also, excessive proposal material is required because of "cultist" requirements for this or that kind of plan to satisfy "ility" requirements that rarely effect the actual choice of a source. Streamlined approaches improve things because they cut out a lot of the excess information. However, even greater improvement would be possible if a lot of the surplus plans, etc. and the bureaucratic need for them in a proposal were eliminated as well.

Streamlined approaches are particularly valid for study or requirements definition contracts. However, for development of expensive hardware, I believe detailed proposals and a more comprehensive evaluation is appropriate. For that, I believe the SSEB/SSAC organization is best even if cumbersome. A streamlined proposal and source selection group almost mandates that minimal information is provided and minimally evaluated. That seems undesirable in selecting the best source.

GS-13 -- The way to increasing the quality of source selection as well as reducing the time to select a source lies with the requirements personnel. We put a great deal of time into evaluating information that is not going to decide whether or not an offeror can do the job. We need training "BY EXPERTS" on what are the critical factors for making an award? How are they developed? A great deal of the information we evaluate now should be relegated to a go, no-go decision.

CAPT -- The Air Force seems to continually drive for the "standard" source selection. This questionnaire appears to follow that logic. Consideration should be high for allowances by the program manager to modify (within legal limits) the proceedings to take into account situational concerns, i.e., number of contractors, program phase, availability of SSEB resources, types of contractors, et al.

GM-13 -- Utilization of past performance as a criteria for award should be mote thoroughly evaluated for appropriate application.

The organizers of streamlined boards must be very careful in selection of qualified evaluators. Rank is insignificant in this endeavor; knowledge and experience is paramount.

GM-13 -- Typical conventional source selections pull together 50-80 government people to evaluate 300-500 pages of contractor marketing material. Such large numbers of people and pages, I believe, are used to give the appearance of fairness. Significant time savings can be had with no loss of impartiality and little risk of technical or cost "loss" by using smaller proposals and smaller evaluation groups. 200-300 page technical proposals can often result in contractor outlays of 2-10 million dollars partly offset by B&P, IR&D, and indirect costs. In addition contractor people are often pulled off other contracts to write proposals.

GS-13 -- Most needed changes in Source Selection process:

Improvement in proposal preparation instructions.

Rethinking of the role of field pricing support re: lunacy of DOD Directive 7640.2 in source selections.

COL -- Exploration should be made into combining the advantages of the Conventional, 4-Step and Streamlined methods. Competition should be made as "painless" as possible in order to exact its benefits form both a contractor perspective and a government perspective.

GM-13 -- At SD, I have been exposed to all kinds of source selections small and large ranging from missile as the SSA to having AF part of the SSAC selection board. At all times, page limits have been applied on proposals automatically. Allowed contractor presentations have limited the number of evaluators and used computerized systems. I buy complex R&D acquisitions which require a considerable amount of expertise. If we were limited to one evaluator per discipline (1) how could you assure expertise, and (2) how do you eliminate bias. I work with less and less experienced officers who need considerable guidance. If you pre-established a time-frame and make it mandatory, it does not allow for intelligent planning, protest resolution, or fair evaluations. What we need is better management. That is, people trained in the source selection process to speed things up and make intelligent decisions.

BALLISTIC MISSILE OFFICE

GM-14 -- BMO Streamlined procedures for efforts less than AFR 70-15 thresholds also combine the SSEB and SSAC functions as does the ASD procedure.

COL -- Streamline process should be used by all AF procurements.

ARMAMENT DIVISION

GM-15 -- I believe we are more concerned with procedures than we are with content. In the interest of fairness, we say "only evaluate what is on the written page in the RFP". Other knowledge is not to be used. I think this limits us in arriving at our selections. If I know what is written is wrong/out of context/an untruth from personnel knowledge, I ought to be able to use this information, i.e. in a recent source selection, the contractor stated they would rent a specific facility. Even though I knew that they didn't intend to, I could only evaluate what they proposed.

GS-12 -- The biggest problem I run into is trying to write the RFP instructions in such a way as to get the

documentation needed for evaluation without telling the contractor what to propose.

GM-13 -- DCAA audits take entirely too much time. When competition is present, full scale audits are questionable. A streamlined audit process should be established that is less time-consuming. One thing that can be done is for the processing office to request audits from the DCAA instead of going through the ACO. The ACO often takes a week to request DCAA audits. A copy of the PCO request could be sent to the ACO. The ACO could provide their input to the DCAA for incorporation into the DCAA report instead of the present process where the ACO requests the audit and then incorporates his findings into the final pricing report. Two weeks could be saved because the ACO waits for the audit before he prepares the field pricing report.

GM-15 -- I believe the questionnaire is of limited benefit in the analysis of the different source selection processes. Many people do not like to participate in source selections, therefore, experience factors do not play the appropriate role.

AEROMEDICAL SYSTEMS DIVISION

GS-12 -- If source selection team training were available and a dedicated team were established, then a time limit might be appropriate.

LT COL -- It currently takes ASD/PM 14-16 months from receipt of our PR packages to contract award. They are trying to force us into AFR 80-15 source selections for FSD programs. Inappropriate! It is interesting that your survey assumes AFR 70-15 source selection. I would make that assumption for FSD and Production, too.

AIR FORCE AIR LOGISTICS CENTER

GS-12 -- My experience in SS has been to evaluate against certain standards set forth by the government. These standards are poorly written. Major concerns in the logistics fields are totally avoided. After I completed my last evaluation, and one contractor definitely had a better proposal, I was directed to change my evaluation until the contractors were equal. Why waste my time?

GS-12 -- 1. Source selection has evolved into a long, tedious process- much to be avoided. The evaluations are fragmented and almost avoided. We tend to use source selection to bring competing contractors up to an equal

technical level thru the contractor inquiry and reports; and price then becomes the only discriminator. Our source selections are expensive to us and to the contractors. Therefore, if a contractor doesn't understand the requirement we should go ahead and cut him out. We don't - we carry him and pump him up. Hurts our credibility. Then we sometimes end up with a contractor that never did understand the requirement.

2. The person who is writing the SOW should also write the instructions for the proposal and the factors and standards. More information on this is in the AFALC lessons learned library as a consistent and continuing problem.

3. It is tremendously demoralizing when the SSA selects because of politics,not the source selection results. A lot of time and money and energy is wasted because someone didn't have the guts to direct sole source.

GS-12 -- I am not sure that the SSEB appointing authority has the proper clout to get the commitment by supervisors to provide SSEB people. It does not appear that they (SSEB) are formally appointed and committed to the process.

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This investigation examined the different approaches used in the Air Force source selection process. Specifically, this research surveyed the opinions of source selection personnel towards different aspects of each approach in an attempt to identify the approach best suited for varying acquisition situations. The study also accessed the adequacy of the Request for Proposal technical requirements definitions and determined the amount of source selection training personnel receive before participating in a source selection.

The analysis was accomplished by sending a survey questionnaire to source selection personnel in six Air Force Systems Command product divisions. The results show that the conventional approach is the overall preferred approach. The results also show that the technical aspects of a weapon systems are adequately defined for the contractor in the Request for Proposal. Finally, the results show that 89 percent of source selection personnel do not receive training prior to participating in their first source selection.

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