This technical report is an annotated bibliography of the most relevant literature listed in the Analytics' Technical Report 1808-TR-02, 30 November 1982.

The literature search included screening the assets of the Defense Technical Information Center (DTIC), the Defense Logistics Studies Information Exchange (DLSIE), and the Library of the Defense Systems Management College. From the large volume of literature reviewed, we have developed this Annotated Bibliography, summarizing the content of each reference cited.
INCREASING COMPETITION FOR SPARES WITHIN AFLC

FINAL ANNOTATED BIBLIOGRAPHY

30 November 1982

Revised: 5 January 1984

Submitted to:
Major James P. Weber, USAF
United States Air Force
Business Research Management Center
Wright-Patterson AFB, OH 45433

Contract No. F33615-82-C-5095

ANALYTICS
4124 LINDEN AVE., SUITE 208, DAYTON, OHIO 45432
SUMMARY

This Technical Report is an Annotated Bibliography of the most relevant literature listed in the Analytics' Technical Report 1808-TR-02, 30 November 1982.

The literature search included screening the assets of the Defense Technical Information Center (DTIC), the Defense Logistics Studies Information Exchange (DLSIE), and the Library of the Defense Systems Management College. From the large volume of literature reviewed, we have developed this Annotated Bibliography, summarizing the content of each reference cited.
# INDEX

STUDIES, AUDITS, AND REPORTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Engineering Data</td>
<td>1</td>
</tr>
<tr>
<td>Factors Affecting the Use of Competition</td>
<td>2</td>
</tr>
<tr>
<td>Results of the Joint DoD/OFPP Competition Workshop Held 12-13 May 1981, Washington, D.C.</td>
<td>3</td>
</tr>
<tr>
<td>Spares Acquisition Integrated with Production and Its Influence on the Obsolescence of Spare Parts</td>
<td>4</td>
</tr>
<tr>
<td>Forecasting Savings from Repetitive Competition with Multiple Awards</td>
<td>5</td>
</tr>
<tr>
<td>An Analysis of the Impact of Multiyear Procurement on Weapon System Acquisition</td>
<td>6</td>
</tr>
<tr>
<td>Directed Licensing: An Evaluation of a Proposed Technique for Reducing the Procurement Cost of Aircraft</td>
<td>7</td>
</tr>
<tr>
<td>DoD Loses Many Competitive Procurement Opportunities</td>
<td>8</td>
</tr>
<tr>
<td>Less Costly Ways to Budget and Provision Spares for New Weapon Systems Should be Used</td>
<td>9</td>
</tr>
<tr>
<td>SBA's Breakout Efforts Increase Competitive Procurements at Air Logistics Centers</td>
<td>10</td>
</tr>
<tr>
<td>An Analysis of the Aircraft Replenishment Spares Acquisition Process</td>
<td>11</td>
</tr>
<tr>
<td>The Effect of Price Competition on Weapon System Acquisition Cost</td>
<td>12</td>
</tr>
<tr>
<td>Cost Effectiveness of Sole Source Contracting for Non-Personal Engineering Support of Flight Simulators</td>
<td>13</td>
</tr>
<tr>
<td>Acquisition and Pricing of Spare Parts</td>
<td>14</td>
</tr>
<tr>
<td>Component Breakout in Weapon Systems Acquisitions</td>
<td>15</td>
</tr>
<tr>
<td>Guidelines for the Application of Competition</td>
<td>16</td>
</tr>
<tr>
<td>Contractor Technical Information Coding of Replenishment Parts</td>
<td>17</td>
</tr>
<tr>
<td>ESD Data Review Action Task</td>
<td>18</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Assessing the Effect of Competition in Weapons System Acquisition</td>
<td>19</td>
</tr>
<tr>
<td>Air Force Breakout Efforts are Ineffective</td>
<td>20</td>
</tr>
<tr>
<td>An Analysis of Factors Which Should be Considered in Developing Reprocurement Data Requirements</td>
<td>21</td>
</tr>
<tr>
<td>Transmission of Procurement Technical Requirements in the Competitive Reprocurement of Military Design Equipment</td>
<td>22</td>
</tr>
<tr>
<td>A-10 Procurement Data Acquisition Plan: A Case Analysis</td>
<td>23</td>
</tr>
<tr>
<td>Competition in the Procurement of Military and Hard Goods</td>
<td>24</td>
</tr>
<tr>
<td>A Quantitative Examination of Cost-Quantity Relationships, Competition During Reprocurement, and Military Versus Commercial Prices for Three Types of Vehicles, Vol II</td>
<td>26</td>
</tr>
<tr>
<td>Technology Licensing in Defense Procurement: A Proposal</td>
<td>27</td>
</tr>
<tr>
<td>Competition in the Reprocurement Process</td>
<td>28</td>
</tr>
<tr>
<td>An Assessment of Relevant Decision-Making Factors Used in the Purchase of Reprocurement Data</td>
<td>29</td>
</tr>
<tr>
<td>What Should Reprocurement Data Cost?</td>
<td>30</td>
</tr>
<tr>
<td>Acquisition Management of Initial Provisioned Spares for New Weapon Systems: Is It Effective?</td>
<td>31</td>
</tr>
<tr>
<td>Analysis of Extent of Competitive Procurement by DoD Prime Contractors</td>
<td>32</td>
</tr>
<tr>
<td>Determining and Forecasting Savings from Competing Previously Sole Source/Noncompetitive Contracts</td>
<td>33</td>
</tr>
<tr>
<td>Competition in Department of Defense Acquisition</td>
<td>34</td>
</tr>
<tr>
<td>Procurement Method Coding (PMC): A Descriptive Analysis</td>
<td>35</td>
</tr>
<tr>
<td>The Department of Air Force Statement on Spare Parts Breakout Program</td>
<td>36</td>
</tr>
<tr>
<td>Price Competition in the DoD</td>
<td>37</td>
</tr>
<tr>
<td>Document Suppression on Technical Data Package Lists</td>
<td>38</td>
</tr>
<tr>
<td>Second Sourcing in the Acquisition of Major Weapon Systems</td>
<td>39</td>
</tr>
<tr>
<td>Sole Source Procurement</td>
<td>40</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Congress and Competition</td>
<td>41</td>
</tr>
<tr>
<td>The Impact of OMB Circular A-109 on Competition</td>
<td>42</td>
</tr>
<tr>
<td>Reprocurement Data Costs Can Be Reduced</td>
<td>43</td>
</tr>
<tr>
<td>Competition in the Acquisition of Major Weapon Systems</td>
<td>44</td>
</tr>
<tr>
<td>Establishing a Second Source in Production: A guide for Acquisition Managers</td>
<td>45</td>
</tr>
<tr>
<td>On Competing the Production of Weapon Systems</td>
<td>46</td>
</tr>
<tr>
<td>Sole Source and Competitive Price Trends in Spare Parts Acquisition</td>
<td>47</td>
</tr>
<tr>
<td>Controlled Competition for Optimal Acquisition</td>
<td>48</td>
</tr>
<tr>
<td>Should the Air Force Buy Reprocurement Data?</td>
<td>49</td>
</tr>
<tr>
<td>Enhancement of Competition in the Department of Defense: A Study for the Office of Under Secretary of Defense, Research and Engineering</td>
<td>50</td>
</tr>
<tr>
<td>The Leader/Follower Concept in Acquisition</td>
<td>51</td>
</tr>
<tr>
<td>Problems in Acquisition of Technical Data</td>
<td>52</td>
</tr>
<tr>
<td>Competitive Reprocurement of DoD Mobile Electric Power Generating Sources</td>
<td>53</td>
</tr>
<tr>
<td>Subcontract Policy, Competition, and the Industrial Base</td>
<td>54</td>
</tr>
<tr>
<td>The Department of Defense Statement on Spare Parts Breakout Program</td>
<td>55</td>
</tr>
<tr>
<td>Competition in DoD Acquisition</td>
<td>56</td>
</tr>
</tbody>
</table>

**DOD DIRECTIVES AND INSTRUCTIONS**

- DoD directive 4120.21, Application of Specifications, Standards, and Related Documents in the Acquisition Process  1
- DoD Directive 5000.1, Major Systems Acquisition                          2
- Dod Instruction 5000.2, Major System Acquisition Procedures            3
- DoD Instruction 5010.12, Management of Technical Data                  4
- DoD Instruction 5010.19, Configuration Management                        5
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
</table>

**DOD AND MILITARY STANDARDS AND SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoD-STD-100C, Engineering Drawing Practices</td>
<td>1</td>
</tr>
<tr>
<td>MIL-STD-143B, Order of Precedence for the Selection of Military Standards and Specifications</td>
<td>2</td>
</tr>
<tr>
<td>MIL-STD-789B, Procurement Method Coding of Replenishment Spare Parts</td>
<td>4</td>
</tr>
<tr>
<td>MIL-STD-885B, Procurement Data Packages</td>
<td>5</td>
</tr>
<tr>
<td>MIL-STD-1388-1, Logistic Support Analysis</td>
<td>6</td>
</tr>
<tr>
<td>MIL-STD-1388-2, Logistic Support Analysis</td>
<td>7</td>
</tr>
<tr>
<td>DoD-D-1000B, Drawings, Engineering and Associated Lists</td>
<td>8</td>
</tr>
</tbody>
</table>

**AIR FORCE REGULATIONS, MANUALS, AND PAMPHLETS**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force Regulation 57-6, High Dollar Spare Parts Breakout Program</td>
<td>1</td>
</tr>
<tr>
<td>Air Force Regulation 310-1, Management of Contractor Data</td>
<td>2</td>
</tr>
<tr>
<td>AFSC Regulation 310-1, Management of Contractor Data</td>
<td>3</td>
</tr>
<tr>
<td>ASD Manual 310-1, Acquisition and Management of Data for Procurement</td>
<td>4</td>
</tr>
<tr>
<td>AFLC/AFSC Pamphlet 800-34, Acquisition Logistics Management</td>
<td>5</td>
</tr>
</tbody>
</table>
STUDIES, AUDITS, AND REPORTS
SUMMARY:

This report summarizes the results of the evaluation of the Air Force management, storage and use of engineering data. The report disclosed that the management of the engineering data acquired by the Air Force is inadequate. Some of the problems noted are:

- Procurement of duplicate sets of data from contractors.
- Maintenance of obsolete data files.
- Loss of control over data.
- Low utilization of data banks.
- Establishment of unnecessary data banks.
- Failure to use available data to foster procurement competitively.

Opportunities exist to streamline engineering data service center operations (EDSC) and reduce operating costs. Recommendations are made to close the central EDSC at WPAFB; improve internal controls; reduce the number of base level EDSCs and the scope of their requirements; consolidate the management responsibility and to perform additional data analysis before contracting for the Engineering Data Computer-Assisted Retrieval (EDCAR) computer system.
This report examines methods for improving the effectiveness of competition in the acquisition of major weapon systems. Use of competition at the concept design stage is known to be inexpensive relative to benefits. However, competition is rare during procurement when the expense is immediate and any savings are delayed. Existing analysis provides no means for evaluating competitive reprocurement. Savings on competitively reprocured electronic items have been substantial but the factors explaining this are unknown. The best point in production at which to introduce a second source cannot now be determined. Also unclear is whether competitive reprocurement pays off for complex systems. Because price-competitive reprocurement strategies are one of the simplest and most quantifiable uses of competition, this study recommends improved data collection on current competitive acquisition, and further theoretical study of the function of competition in such acquisition.
Attendees of the workshop were operational managers, policymakers, and researchers from various federal agencies and outside organizations who have done significant research in the area. The main purposes were to focus on recent experience in competitive procurements and to review recent research on competition in major systems acquisition. The workshop was also to promote discussion between operation managers and researchers seeking to advance effective competition. The specific objectives were to: gain mutual understanding of competition; discuss and interpret recent research results; exchange ideas on competition research and policy; and consider future directions in research and policy.
SUMMARY:

This thesis effort was directed toward the evaluation of the impact on cost and obsolescence ordering utilizing a program entitled, "Spares Acquisition Integrated with Production (SAIP)." From the universe of all spares ordered in support of the A-10 aircraft program two populations were selected. The two populations consisted of spares ordered utilizing SAIP procedures and spares ordered utilizing non-SAIP procedures. From these populations two samples consisting of thirty-five part numbers each were randomly selected. A check was then made to determine how many approved Engineering Change Proposals (ECPs) each part number reflected. ECPs were determined to be a valid measure of obsolescence. A Mann-Whitney U test was then performed to determine if there was a significant difference between the number of approved ECPs processed against spares ordered utilizing SAIP procedures when compared to approved ECPs processed against spares ordered utilizing non-SAIP procedures. No significant difference was found.
Previous research has shown that competition usually results in lower unit prices. The literature, however, only addresses the case in which a single winner receives one contract for the total quantity required. The present study generalizes the above work by allowing for the possibility of multiple winners and also the case in which a sequence of competitive awards be made for the same item over a period of several years. A sample of 22 acquisitions was selected and contact cost data were collected. Data was adjusted to separate the effects of inflation, nonrecurring costs, and contractor learning. The savings attributable to competition were estimated. A sensitivity analysis was performed using learning curve slopes of 90, 95 and 100 percent. The sample showed an average competitive savings of 7.1 percent, based on a slope of 95 percent. The effect of competition varied widely, and in some situations competition may not be advisable. The advantages of competition could be lost if the production base were reduced to a single contractor.
SUMMARY:

This report addresses the instabilities in government procurement programs which have contributed to the rising costs of weapon systems. It focuses on the expanded use of multiyear procurement as a means of reducing costs and restoring the defense industry’s health. This study reviews many of the recent initiatives toward expanded use of multiyear procurement and analyzes the theoretical impact that multiyear commitments may have on weapon system acquisition.
This study presents an evaluation of the feasibility of introducing price competition into military aircraft procurement by the technique of "directed licensing," whereby the government obtains from a weapon system developer, at the time of issuance of the development contract, a commitment for rights to production data and an agreement to license whomever the government designates to produce the system during any or all production runs, following initial production by the developer. Case studies of related types of aircraft procurement are presented, showing that competitive bidding has resulted in substantial savings as compared to sole-source procurement. Techniques for moving aircraft production from one manufacturer to another are described to indicate the technical feasibility of the directed licensing concept, and a minimum-risk way in which directed licensing could be tried is outlined. In view of the potential significant cost savings that could result from the introduction of directed licensing, the report urges that the concept be tested in practice. Although this study focuses on aircraft procurement, the results should be equally applicable to procurement of other complex weapon systems.
SUMMARY:

DoD awarded an estimated $289 million in fiscal year 1979 contracts without obtaining available competition. Contracting officers often acquiesced to inappropriate noncompetitive procurement requests from headquarters or accepted, without adequate support, assertions made by technical and end user personnel. In all cases where competition should have been obtained, contracting officers failed to follow proper contracting procedures to make sure that only one company could satisfy the procurement request. GAO recommends that the Secretary of Defense clearly specify the factual support needed to justify noncompetitive procurements, develop service plans establishing objectives for improving competition, and implement a system for monitoring procurement office progress in achieving these goals.
This report discusses the Department of Defense's budgeting and provisioning procedures for spare parts for new weapon systems. It recommends a number of changes in the procedures to make them more cost effective and to provide better visibility for the Congress. The report also recommends a different procurement practice for spare parts which could significantly reduce the overall cost of each weapon system fielded.
This report reviewed the SBA's breakout Procurement Center Representative (PCR) specialists' efforts in seeking new competitive contracting opportunities at Air Force ALCs for fiscal years 1980 and 1981. While the SBA offices at the four ALCs reported breakout savings of about $7.3 million, the report questions, methodology and rationale SBA used to estimate the savings on some of these parts. Current guidelines for economic analysis were not always followed and, in some cases, did not provide clear and complete guidance on how to compute the savings. Some problem areas include:

1) Using standard price instead of actual bid price.

2) Using last purchase price without considering effects of inflation during intervening period.

3) Not making adjustments for variances in quantities ordered.

4) Claiming savings for each purchase versus claiming only for the first purchase.

5) Overestimating breakout savings when contracts were awarded to new sources, pending qualification.

The report concludes that the breakout program is most effective when needed technical data is obtained as part of the initial procurement package.
SUMMARY:

It is a fact that an accurate statement of aircraft replenishment spares funding requirements is not available when needed to effectively allocate resources among competing budget programs. This report cites some of the causes of this problem as:

- Overwhelming complexity of the system
- Difficulty in assigning responsibility
- The computer system (D041) is inflexible
- Management/organization is item oriented -- not weapon system oriented

Accurate and timely requirements forecasts are attainable and this task will need the support of top level management. Optimum use of replenishment spares can only be achieved when the proper quantity of bit and piece repair parts (stock fund) are available and when the proper level of depot repair (DPEM) is funded.
This paper examines the impact of price competition on weapon systems acquisition. The multidimensional impact of competition on price and nonprice aspects of weapon system production and acquisition is discussed. The importance of cost quantity relationships for measuring the effect of competition on price and the theoretical basis of those relationships are reviewed. The problems of and the techniques for accomplishing the transfer of technology associated with competition for production contracts are briefly outlined. Previous estimates of savings due to competition are reviewed, and their underlying methodology criticized. It is proposed that the introduction of competition be analyzed as an investment. The eventual reductions in procurement costs must be balanced against the initial costs of introducing competition and establishing a second source. The opportunity cost of government funds should be incorporated by calculating the net discounted present value or the rate of return of introducing competition for the procurement of a particular system. Finally, conclusions and policy recommendations are presented, based upon both empirical analyses and qualitative findings from interviews.
This report examines the cost effectiveness of single source versus competitive contracting for non-personal engineering support of flight simulators. The main objective of this effort was to forecast possible savings resulting from competitive procurement of those services. The author developed a framework which applies cost improvement curve theory to service contracting. The framework was based on a competitively induced shift and rotation of the cost improvement curve. The subsequent analysis provided estimates of the potential savings that would result from competing service contracts.
SUMMARY:

The overall objective of this audit was to evaluate Air Force management policies, procedures, practices, and controls over the acquisition and pricing of spare parts. Specific objectives included an evaluation of the: 1) methods for obtaining follow-on spare parts to determine whether direct purchases and competitive solicitations were adequately considered; 2) cause and justification for urgent purchases; 3) extent to which quantity discount procedures were implemented; and 4) system for pricing provisioned spare parts and the timing of deliveries related to need dates.
SUMMARY:

The audit was accomplished at the Aeronautical and Electronic Systems Divisions. The overall objective was to evaluate the implementation of the Air Force component breakout program. Emphasis was placed on program office planning, component breakout committee annual reviews, and cost analyses and supporting documentation used in determining breakout decisions. Overall, the component breakout program within the Air Force could be more effective. There was a wide range in the extent of breakout program implementation among the system program offices. The following conditions were identified:

a) Concern over the disadvantages of component breakout has led to fewer breakout actions than possible.

b) Lack of standard guidelines for preparing cost analyses to support decisions for or against breakout have resulted in inconsistent or undocumented analyses.

Management concurred with the findings contained in this report and has stated that corrective action will be initiated.
TOPIC: Acquisition

TYPE: APRO Report (APRO 905)

TITLE: Guidelines for the Application of Competition

AUTHOR: Department of the Army, U.S. Army Procurement Research Office, Ft. Lee, VA, June 1982

AVAILABLE FROM: OLSIE, LD50078AX

SUMMARY:

Competition in procurement remains a high priority objective with Congress and the Executive Branch. Yet the statistics show that non-competitive contracting still consumes the majority of DoD procurement dollars. Acquisition personnel need assistance in developing competition strategies. The objective of this study was to develop a handbook which describes competition methods currently used on DoD acquisitions and to furnish guidance on the application of the methods.
TOPIC: Coding of Replenishment Parts   TYPE: MIL-STD-789C

TITLE: Contractor Technical Information Coding of Replenishment Parts

AUTHOR: DOD

AVAILABLE FROM:

SUMMARY:

This Military Standard provides a procedure for obtaining, contractor technical information regarding selected parts for contractor-furnished equipment. Also, provided is identification data, needed to enable the Government to acquire such parts.
This study assesses the perceived problem that the government requires too much data of all types on acquisition contracts. The study recommends appropriate actions to correct the problem and establishes controls for continued management surveillance of future data acquisitions. This study also addresses pre and post data requirements for ESD acquisition programs, excluding "software" data.
Analytical and empirical efforts to evaluate the effect of competition on the weapon system acquisition process have become highly sophisticated. This article reviews recent advances in methodology for evaluating the effectiveness of competition. It also outlines why precise isolation of the impact of competition on the acquisition process remains beyond reach.
TOPIC: ALC's Breakout Program

TYPE: US General Accounting Office Study

TITLE: Air Force Breakout Efforts are Ineffective

AUTHOR: GAO

AVAILABLE FROM: GAO

SUMMARY:

This study points out that the Air Force is not breaking out, to the maximum practicable extent for competition or direct purchase of high dollar value aircraft engine replenishment spare parts, supplied by a large prime contractor. Breakout efforts have been limited because of lack of information on the actual manufacturers of parts and uncertainty about the Government's rights to use technical data prepared by the prime contractor. The Air Force needs to develop better ways of identifying actual manufacturers of high dollar value parts so that purchases can be made directly from them. By avoiding prime contractor's mark-up and reducing production lead times by direct purchasing, ALCs can maximize savings.
TOPIC: Data

TITLE: An Analysis of Factors Which Should Be Considered in Developing Reprocurement Data Requirements

AUTHOR: Falconer, Thomas E., and David S. Murphy, June 1980

AVAILABLE FROM: DLSIE, LD47685A

SUMMARY:

The objectives of this research were to analyze whether the need for reprocurement data in weapon systems under development can be determined by the annual usage rate (AUR) of items in existing weapon systems, and if the item category (defined as the first two digits of the federal stock number), item price, and/or actual method of procurement can be used to indicate AUR. Relationships between AUR and each variable were established. Tests were performed to determine if item categories experienced the same AUR on all weapon systems.
SUMMARY:

The success of fixed price competitive reprocurements of military design equipment is affected by the manner in which procurement technical requirements are transmitted between government and industry. The technical data package is the communication vehicle. But inherently it is complex and unique; both government and industry specialists are often not able to completely understand the content and the objectives defined therein. This study seeks to identify the characteristics of this problem, its salient causes, and potential solution areas. Its arguments center around the issues of the acquisition of adequate technical data and its effective utilization in a procurement. Its approach deals with the development of management concepts for individuals making decisions involving procurement.
It is the policy of the Department of Defense to procure on a competitive basis to the maximum extent practicable. The Air Force acquires procurement data to comply with this Department of Defense policy. This thesis examined policies and procedures related to procurement data acquired by the A-10 system program office. It studied data problems previously encountered by Air Force Logistics Command so that they can be avoided by the A-10 program. It then evaluated how various agencies involved in the acquisition of A-10 procurement data intended to implement directives and identify additional problems.
SUMMARY:

A major issue in defense procurement is how to obtain price competition for specialized military goods and services. A corollary issue is how to protect the public interest in procurements where competition cannot be relied upon for protection. This paper briefly considered both issues as they emerge in the procurement of specialized hard goods. In considering competition in military "hard goods" it is useful to distinguish procurements of complete systems from the reprocurement process that deals with replacement or resupply of weapon system components, accessories, support equipment, and other specialized hard goods. This paper first discussed the reprocurement problem and then turned to the weapon system acquisition problem. A brief discussion of the problems encountered when price competition cannot be obtained is provided at the end of the paper.
This final report discusses the research and analysis of current policies and practices regarding data and data rights in competitive weapon system acquisitions. Data and data rights problems are discussed, based on in-depth interviews with Program Office personnel and analysis of historical data of the following competitive weapon system acquisitions: ASPJ, C-5A Mod, DIVAD, E-2(C), E-4, F-18, Flight Simulator, HARM, KC-135, NGT, SES, XM-1 Tank, and XM-1 120mm Gun. Based on the research, observations and suggested corrective actions to policies and practices are presented. A taxonomy of data and data rights and a dictionary of related terms were also developed as a result of the research. In addition, an appendix of relevant Defense Acquisition Regulation (DAR)/ Armed Services Procurement Regulation (ASFR) clauses is included in the report, as is a listing of references and a bibliography.
TOPIC: Price Competition

TYPE: IDS Study

TITLE: A Quantitative Examination of Cost-Quantity Relationships, Competition During Reprocurement, and Military Versus Commercial Prices for Three Types of Vehicles, Vol II

AUTHOR: Institute for Defense Analysis, 400 Army-Navy Drive, Arlington, VA 22202, March 1974

AVAILABLE FROM: OLSIE, LD31891B

SUMMARY:

The study is in two volumes. Volume I is the Executive Summary. Volume II presents the results of the study which was divided into the following three interrelated subtasks: 1) an analytical and empirical examination of cost-quantity relationships with the objective of laying the framework for other parts of the study and attempting to identify factors other than cumulative units that might be incorporated in the progress curve; 2) an examination of competitive procurement with the objective of examining quantitatively the effect of competition on selling price; and 3) a comparison of prices paid for similar military and commercial equipment, with the objective of testing quantitatively the hypothesis that commercial procurement practices are superior to military procurement practices and that, as a result, commercial equipment costs less than similar military equipment. The appendices contain supporting data and analyses.
SUMMARY:

This document considers a form of directed or compulsory licensing which could materially lower the entry barriers that prevent new prospective suppliers from competing for follow-on production contracts.
TOPIC: Data
TYPE: RAND Report

TITLE: Competition in the Reprocurement Process

AUTHOR: Johnson, Robert E. and James W. McKie, May 1968

AVAILABLE FROM: DLSIE, LD18345

SUMMARY:
This memorandum deals with the problem of obtaining competition in the reprocurement of weapon system components, accessories, support equipment, and other technical hard goods. Under present policies, packages of technical data are often disseminated among firms that were not engaged in earlier R&D and production efforts. The study first examines these reprocurement data policies and their impact on competition. It also explores interfirm commercial transfers of production technology and contrasts the transfer techniques used by the government with those employed by the Aerospace Industry. As a method of providing improved access to production technology, and thereby increasing competition, it considers the use of directed licensing and the application of commercial transfer techniques to supplement present procurement policies.
The objectives of this study were to identify the factors considered in determining whether reprocurement data are purchased and to provide general guidance to assist Air Force managers in deciding whether to buy reprocurement data. A survey questionnaire was administered to Air Logistics Center engineering data section personnel. Using factor analysis, three factors were identified as affecting the decision, in general, to purchase reprocurement data: The usefulness of reprocurement data, government policies and procedures, and the applicability of reprocurement data to mechanical items.
SUMMARY:

The purpose of this thesis is to examine the factors that may increase or decrease the cost that the government (specifically the Air Force) pays for reprocurement data and to determine how much the Air Force should pay for this reprocurement data. This is the data that enables the Air Force to competitively buy spare parts after a major system becomes operational. A conceptual model is presented to assist procuring contracting officers to determine those actions that should be taken to minimize the amount the government pays for reprocurement data throughout the life of the contract. The authors contend that the cost of data, in addition to development and production costs, is affected by rights to the data, government format requirements, and techniques of ordering data from the contractor. Six major system contracts were examined in an attempt to verify these contentions.
SUMMARY:

This study addresses the acquisition management effectiveness of the initial provisioning process. The requirement to have spares available when new systems become operational demands effective interaction between the involved Air Force and contractor activities. Management control in directing the logistics and contract management efforts is essential to assuring necessary support is provided, when required, at a reasonable price. This paper describes organization and management responsibilities and relationships germane to the provisioning process. Areas where improvements and cost savings can be realized are identified and discussed.
This project concentrates on examining the extent of competitive procurement accomplished by prime contractors in placing their subsystem and equipment contracts. The report presents findings on prime contractor subcontract policies, concepts, and procedures regarding competitive procurement, and recommends a Department of Defense guide on advance procurement planning, competitive forecasting, and summary progress reporting.
The objectives of this study were to: 1) develop a methodology to estimate the net savings achieved due to competition; 2) further develop the methodology to forecast the net savings expected from introducing competition into the procurement of future major weapon systems; and 3) furnish an organized data base to support the net savings methodologies.
In recent years, questions have been asked by the Congress, the General Accounting Office, and others relative to the large number of government contracts which are awarded on a sole-source basis. The purpose of this paper was to examine the circumstances which structure this situation.

A point of departure is the economic concept of the market and market structures. From a placement methodology standpoint, the government places contracts either through advertising or negotiation. In general, the advertised methodology occurs in the pure competition, monopolistic competition, and oligopoly market structures. As the market and the product become more specialized, negotiation as a placement methodology is used. Several government practices are examined in the paper. Research has been conducted that examines several of these government practices.
SUMMARY:

Procurement method coding decides how to purchase required spare parts. A systems approach to examine the Procurement Method Coding (PMC) process is used. The environment, goals, technical, psychosocial and structural systems of the PMC decision process are examined. The uniting managerial system is also examined. After this examination directed at the basic who, what, when, where and why of the PMC process, an analysis is made.
SUMMARY:
This testimony examines the steps that are being taken by the Air Force to ensure competition in spare parts acquisition through the Spare Parts Breakout Program.

The testimony points out the lack of current data, and inadequate in-house resources. It also explains what the Air Force is doing in matters that are related to the identification of more than one qualified source for high value items. Within the testimonial there was the mentioning of other programs being instituted by the Air Force which are designed to restrain further cost increases.
Adequacy of description and availability of capable, independent suppliers are two conditions this paper found to be essential for price competition in DOD acquisitions. Absence of either condition typically requires costly action, which may offset the benefits of competition. Opportunities for more beneficial price competition depend principally upon the adequacy of description.
SUMMARY:

The objective of the programming effort was to add the capability, within the Technical Data/Configuration Management System (TD/CMS), to optionally suppress subordinate Quality Assurance requirements or other data elements not required to appear on a Technical Data Package Listing (TDPL) for procurement of a major item or assembly.
SUMMARY:

This study was undertaken for two basic reasons. It was recognized that no generally accepted definition for second sourcing existed either in the literature or in general use within the acquisition community. The formulation of a working definition of second sourcing was thus the first objective of this research. The main thrust of the study, on the other hand, was an attempt to formulate an evaluative model that could be used by the decision maker in determining: 1) whether or not second sourcing should be attempted in the acquisition of a major system and; 2) which second sourcing methodology would be most suitable for the acquisition in question. In formulating the model presented (the second sourcing method selection model), actual cases wherein second sourcing has been or is being attempted were studied in depth; and, the lessons learned in these efforts were consolidated into a workable model. Both the advantages and disadvantages of second sourcing have been outlined so that the decision maker will not be misled.
This legal study provides an overview of the steps involved in the pre-award phase of negotiated contracts, details of Congress' concern over competition between the years 1959 and 1977 and the statutes, regulations and Comptroller General decisions regarding competition; sole source authorizations and unsolicited proposals.

Based on his detailed analysis of the subject, the author concludes that the government criteria for competition are, "keyed to the opportunity for competition, rather than to the actual existence of competition." Hence, the influence is that the government's criteria are more stringent than the market place definition. In addition, the government is understating the degree of competition obtained.

On the other hand, the government also limits and restricts competition. For example, "Where an agency is required to buy a prequalified item, only those sources who have previously sought qualification of their terms can compete." The author's overall conclusion is that:

"It sometimes is 'impractical' to allow competition because of the cost to conduct the competition, and it sometimes is 'impossible' to allow competition because to do so would be an exercise in futility. The necessary conclusion is that, ultimately, government procurement officials must be given flexibility to conduct their procurements in the way which is best for them and for the vendors who sell to them ..."
SUMMARY:

Congressional support for the use of competition derives from its promise of both direct and indirect benefits. This paper discusses Congressional attitudes toward contractor competition for acquisition of major weapon system and contract awards.
SUMMARY:
This report documents the results of a study to determine whether the implementation of OMB Circular A-109 has been effective in creating and sustaining competition in the early conceptual stages of the weapons system acquisition process. The study presents background information, past experience and performance, and current involvement of industries and government agencies in the acquisition process.
This paper examines the process through which the Air Force acquires reprocurement data. It begins by pointing out the lack of standardized terminology, then points out some inherent dilemmas, and examines the legal and regulatory foundations upon which the present procedures are based. It then examines how the process is supposed to work, and identifies some key problems. After a brief look into the future, it closes with several recommendations for improving the present reprocurement data acquisition process with an eye towards reducing data acquisition costs.
The objectives of this research are: 1) to examine the desirability of competition as expressed by current leaders in the field of major systems acquisition in DoD, in Congress, and in private industry; 2) to evaluate the adequacy of the guidance provided by the current acquisition instructions concerning the need, and the methods available, for generating competition in the acquisition of major weapon systems; and 3) to provide recommendations for improving the guidance contained in the instructions, including the development of a model to aid in making decisions regarding production competition.
SUMMARY:

This guide addresses all aspects of the second sourcing decision process. A methodology is presented to aid in evaluating program objectives, various characteristics of the item, acquisition process and contractors that influence one's chances, and their relationship to several methods for obtaining a second source. The paper provides an inventory and discussion of 18 factors which influence the second sourcing decision plus an inventory and discussion of 11 techniques for obtaining a second source in production.
TOPIC: Production Competition

TYPE: Presented Paper

TITLE: On Competing the Production of Weapon Systems

AUTHOR: Charles H. Smith

AVAILABLE FROM: Army Procurement Research Office
Fort Lee, VA 23801

SUMMARY:

In this paper the state-of-the-art in modeling problems of acquisition strategy choice are reported. Progress in dealing with such related problems as the effect of production rate on system cost are also described. Attention is given to noncost issues in strategy selection, such as the reliability and schedule effects of second sources. The structure of the problem and the limited number and type of cases comprising the data base, lead to the importance of a systematic application in judgment.
While the benefits of competition are widely recognized, most U.S. Department of Defense procurement is accomplished in a sole source mode. For major systems, special studies may be required to investigate the potential risks, costs, and benefits of introducing competition into the system's production phase. Such studies require the estimation of several parameters affecting the acquisition method tradeoff. One of the key parameters required is a forecast of the recurring savings to be realized from competition. The purpose of this paper is to present empirical data for analysis to consider in making savings realized from competition.
When limited sources exist for critical military equipment, acquisition managers must balance the need for achieving competition to keep costs low against the need to maintain multiple sources for future competition and mobilization base considerations. Mr. Solinsky describes a procurement technique used by the U.S. Army Electronics Command which effectively split a procurement award between two producers, thereby meeting both competition and mobilization base requirements.
This paper examines the question of whether or not the United States Air Force is obtaining any economic value from the purchase of reprocurement data for the procurement of spare parts. This paper briefly discusses: the definition of reprocurement data, the pressure to buy data, some philosophies behind the purchasing of such data, and the quality of data presently being received by the Department of Defense. Following the discussion of these major points some suggestions and recommendations are presented.
This report is structured as a compendium of minireports that are individually separable to facilitate further functional investigation of each issue addressed. The areas discussed in the report provide significant potential for increasing effective competition; however, some have more immediate need for correction. They are:

1) The policies and procedures for purchase of spare parts.
2) Consideration of employment of performance specifications in lieu of design specifications.
3) A means for simplification of the contracting process.
4) Increased emphasis in the use of multiyear contracting.
5) Effective use and management in the application of unsolicited proposals.

The study also points out that there are significant coding inaccuracies in the Procurement Action Reporting system (PAR) which have had an adverse impact on total DoD competition statistics. At present, the reporting system is inadequate for proper representation of the competitive picture. This structure coupled with a widespread misunderstanding of, and to some degree apathy in application of rules, does not provide for effective visibility, proper management and control of competitive actions. A number of actions are recommended that will give a more accurate picture of the DoD price competition track record, and provide for better management.
SUMMARY:

The objectives of this study were to: assess the experience in DoD with use of the leader/follower concept, evaluate views of acquisition and contracting managers in both industry and government about the concept, and develop guidance for the acquisition manager's use of the concept for complex products and systems. To meet the objective of this study, the researchers conducted an extensive review of policies, regulations and legal documentation both directly and indirectly related to the leader/follower concept and "leader company procurement." The researcher also interviewed government and industry managers about their experience with the concept and their views toward its use for complex systems requiring high investment in front-end research and development. While leader/follower has been used at least since World War II, current use appears to center on two related decisions. The first is a decision to develop a second source usually to reduce and control cost or assure supply. Cost objectives are usually achieved when production lasts for an extensive time. Assurance of supply arises as an objective due to known or anticipated characteristics of the developer/producer. The second decision is significant where it is feasible and necessary for the original (leader) source to provide extraordinary manufacturing assistance and "know-how" to a second source.
SUMMARY:

Air Force program offices have experienced engineering data acquisition problems in recent years. As a result of these problems, the Air Force is establishing overall regulatory policy and guidance for engineering data acquisition. The Air Force has also undertaken to determine engineering drawing requirements omitted from currently used source documents. These will be identified. Air Force initiatives to deal with these problems are summarized and ways to improve documents used in contracts are recommended.
TOPIC: Data

TYPE: DSMC Research Study Report

TITLE: Competitive Reprocurement of DoD Mobile Electric Power Generating Sources

AUTHOR: Vaillant, Normand A., November 1975

AVAILABLE FROM: DTIC, AD-A027286

SUMMARY:

This study was undertaken for the purpose of analyzing all factors that have a bearing on the formulation of a reprocurement data package such as guidance in the preparation of drawings, source control and commercial components, configuration management, design rights, standardization, kits/accessories and sole source procurement. The study was based on the experience accumulated by the office of the project manager for mobile electric power over the past eight years. The results of the investigation have highlighted many problem areas that can create significant difficulties in maintaining an optimum balance of all key factors and disciplines. The recommendations summarize some of the key areas that should be avoided or carefully monitored to insure the adequacy of a reprocurement data package for obtaining identical components each and every time a competitive procurement is made.
SUMMARY:

Forty to sixty percent of DoD procurement dollars flow to defense subcontractors, mostly without the benefit of price competition after the design phase. This paper identifies the barriers to production competition at the subcontract level and their implications for the defense industrial base. It calls for a market-oriented acquisition strategy by both prime contractors and government procurement decision makers.
The DOD, in the testimonial, discussed some of the problems that could be associated with the Spare Parts Breakout Program. It proposed some of the actions that are taking place to make the Spare Parts Breakout Program function as it should. There has been program revisions to add emphasis to the defense acquisition regulations. The DOD states that there will be circumstances where procurement should be made from limited sources.
TOPIC: Price Competition               TYPE: LMI Study

TITLE: Competition in DoD Acquisition

AUTHOR: White, Richard P. and Myron G. Myers, May 1979

AVAILABLE FROM: DLSIE, LD 45320A

SUMMARY:
This study was undertaken to identify causes of the trends in price competition in DoD acquisition. The findings reported herein relate to the reduction in the overall percentage of dollar obligations awarded through the use of price competition. The findings come from analysis of the DD-350 individual procurement action report and discussions with personnel representing various purchasing activities.
DOD DIRECTIVES AND INSTRUCTIONS

This Directive reflects the policies of DoD Directives 5000.1 and 5000.2 (described separately) and updates the policies that govern the application and tailoring of specifications, standards and related documents as defined below, cited in defense contracts. The purposes of these policies are to optimize performance goals and life cycle cost of defense materiel.

Specifications, Standards, and Related Documents. Documents that establish and define requirements for purchased materiel, processes, procedures, practices, methods, and data. Such documents encompass all military, federal, and nongovernment specifications and standards, Data Item Descriptions (DD Form 1664), and other DoD issuances that have the same effect as specifications and standards when cited in solicitations and contracts. ("System specifications," "program specifications," or other contract-unique documents are excluded.)

This Directive updates the DoD statement of acquisition policy for major systems Acquisition Improvement Program or major modifications to existing systems, and implements the concepts and provisions of the Office of Management and Budget Circular A-109, "Major System Acquisitions," 5 April 1976.

This Directive and DoD Instruction 5000.2 are first and second in order of precedence for major system acquisitions except when statutory requirements override. While primarily directed to major system acquisitions, the management principles and objectives also are to be applied to the acquisition of systems not designated as major.

The Directive emphasizes effective design and price competition, improved readiness and sustainability, affordability and cost-effective balance among acquisition costs, ownership costs, and system effectiveness in terms of the mission to be performed.

It also outlines the phases of the acquisition process, Secretary of Defense Decision Milestones, and establishes the Defense Systems Acquisition Review Council (DSARC). This latest version of the Directive reflects Deputy Secretary of Defense Carlucci's thirty-two initiatives of the Acquisition Improvement Program.

This Instruction provides revised supplementary procedures for Department of Defense use in implementing DoD Directive 5000.1, *Major System Acquisitions*. As such, it must reflect the current statement of acquisition policy as reflected in the revised DoD Directive 5000.1, including Deputy Secretary of Defense Carlucci's Acquisition Improvement Program.

This Directive amplifies the structure and functions of the Defense Systems Acquisition and Review Council (DSARC), which is the top level DoD corporate body for system acquisition. It outlines the functions of the Defense Acquisition Executive (DAE) and sets forth organizational and procedural elements of the DSARC process as a system progresses from mission need determination through production and deployment.
DoD Instruction 5010.12, Management of Technical Data, 5 December 1968.

This Instruction implements DoD Directive 5100.36, "DoD Technical Information," 31 December 1962, by establishing the DoD Technical Data Management Program, defining its scope and objectives, assigning responsibilities and establishing uniform policies and procedures for the management and administration of (a) the technical data contractually acquired in support of contract end items in accordance with reference (b); (b) the technical data developed within the Department of Defense; and (c) a DoD Data Management Improvement Program concerned with the life of technical data (i.e., requirements determination, generation, acquisition, use, handling, storage, retrieval, maintenance, distribution, and disposal).

The Instruction defines policies for configuration management of materiel including systems, equipment, computer programs, facilities and other designated items.

This Directive establishes policy and responsibilities for Integrated Logistic Support (ILS), including manpower planning, as an inherent part of major system acquisitions, including single-component, multi-component, and international acquisitions to meet system readiness goals within established cost, schedule, performance, manpower, and other logistic constraints.
This Manual has been developed for use by Army, Navy, Air Force, Defense Logistics Agency, and other Department of Defense personnel, who are responsible for preparing, coding, editing or machine processing the Individual Procurement Action Report, DD Form 350, prescribed by Section XXI of the Defense Acquisition Regulatory System. The DD Form 350 is the basis for the Spare Parts Procurement Reporting System (DD-I&L(Q)714). This system presents statistics on competitive versus non-competitive procurements by Commodity Category.
DOD AND MILITARY STANDARDS

AND SPECIFICATIONS

This Military Standard provides:

Drawing practices for preparation of engineering drawings and drawing format materials.

Definitions and examples of types of engineering drawings to be prepared for the Department of Defense. These are cataloged for appropriate selection and use in support of Levels of engineering drawings being prepared under the requirements of DoD-D-1000.

Procedures for the creation of titles for engineering drawings.

Numbering, coding and identification procedures for engineering drawings, associated lists and documents references on these engineering drawings and associated lists.

Methods for revision of engineering drawings and methods for recording of such revisions.

Requirements for preparation of associated lists.

The policy of the DoD is to utilize to the maximum degree possible those non-government standards which fully satisfy the needs of the military with respect to their technical sufficiency. Accordingly, this standard will be revised periodically to take advantage of those non-government standards which meet the DoD criterion for technical sufficiency.

This Standard sets forth the order of precedence for the selection of standards and specifications to identify and describe items, materials, and processes used by design activities in the design and construction of military materiel for the Department of Defense. Requirements for approval of standards and specifications by the Government command or agency concerned prior to use are excluded from the coverage of this standard. Requirements for approval or release, if any, or the use of documents stating applicability of standards and specifications for special applications are subject to contract provisions.
This standard establishes the format and contents of specifications for program peculiar items, processes and materials. The purpose of this standard is to establish uniform practices for specification preparation, to ensure the inclusion of essential requirements, and to aid in the use and analysis of specification content. Specifications covered by this standard may be prepared as military, Federal, procuring activity, or contractor specifications. The types of specifications are as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>System Specification</td>
</tr>
<tr>
<td>B</td>
<td>Development Specifications</td>
</tr>
<tr>
<td>B1</td>
<td>Prime Item</td>
</tr>
<tr>
<td>B2</td>
<td>Critical Item</td>
</tr>
<tr>
<td>B3</td>
<td>Non-Complex Item</td>
</tr>
<tr>
<td>B4</td>
<td>Facility or Ship</td>
</tr>
<tr>
<td>B5</td>
<td>Computer Program</td>
</tr>
<tr>
<td>C</td>
<td>Product Specifications</td>
</tr>
<tr>
<td>C1a</td>
<td>Prime Item Function</td>
</tr>
<tr>
<td>C1b</td>
<td>Prime Item Fabrication</td>
</tr>
<tr>
<td>C2a</td>
<td>Critical Item Function</td>
</tr>
<tr>
<td>C3</td>
<td>Non-Complex Item Fabrication</td>
</tr>
<tr>
<td>C4</td>
<td>Inventory Item</td>
</tr>
<tr>
<td>C5</td>
<td>Computer Program</td>
</tr>
<tr>
<td>D</td>
<td>Process Specification</td>
</tr>
<tr>
<td>E</td>
<td>Material Specification</td>
</tr>
</tbody>
</table>
MIL-STD-789B, *Procurement Method Coding of Replenishment Spare Parts*,

This Standard provides a procedure for acquiring contractors' analyses and recommendations regarding methods of procuring selected spare parts. The procedures in this Standard are not applicable to Government Furnished Equipment incorporated by the prime contractor in the end item(s) required by the contract to be delivered.

This Standard sets forth requirements for identification, selection, and preparation of procurement data packages to be purchased by the Government pursuant to designated procurement methods which will permit the maximum degree of competition.

This Standard establishes criteria governing performance of a Logistic Support Analysis (LSA), integral to the engineering process, to define support system requirements and inject support criteria into system/equipment design and acquisition.

This document identifies and describes Logistic Support Analysis (LSA) Data Elements which shall be used in the standardization of LSA data systems.
DoD-D-1000B, Drawings, Engineering and Associated Lists, 30 October 1980.

This Specification prescribes general requirements for the preparation of engineering drawings and associated lists, and for application of Intended Use levels for their acquisition. This specification reflects Department of Defense policy to buy only those engineering drawings that are needed and to encourage procurement of commercial drawings when they are adequate for the purpose. Engineering drawings, as used in this specification, include engineering drawings and associated lists.
AIR FORCE REGULATIONS, MANUALS,

AND PAMPHLETS
Air Force Regulation 57-6, High Dollar Spare Parts Breakout Program, March 1969.

This Regulation, issued by the Assistant Secretary of Defense (Installations and Logistics) in coordination with the Secretaries of the Army, Navy and Air Force and the Director of the Defense Supply Agency, establishes for the Department of Defense, uniform policies and procedures relating specifically to procurement of spares and repair parts for use in the maintenance, overhaul and repair of equipments and systems. It describes the process of assigning Procurement Method Codes to spare parts, reporting procedures and a method to conduct an economic analysis of expected savings from competitive breakout.
Air Force Regulation 310-1, Management of Contractor Data, 30 June 1969.

This Regulation establishes the Air Force program for managing data acquired from industry under the terms of Air Force contracts. It states Air Force policies and Procedures and defines management responsibility for the generation and control of data requirements, their acquisition, distribution, and use. It applies to the acquisition of data for Air Force programs (for example, research, development, production, training, modification, overhaul, and operation and maintenance programs). It provides implementing procedures for DoD Instruction 5010.12, Management of Technical Data, December 1968.

This regulation outlines Air Force Systems Command policies and responsibilities for the management of data procured from defense contractors.
ASD Manual 310-1, Acquisition and Management of Data for Procurement,

This Manual deals with selecting, acquiring, and using data to support
follow-on procurements of hardware items. It outlines the complete ASD
Procurement Data Management Program to include DoD/AF policy and
procedures.
AFLC/AFSC Pamphlet 800-34, Acquisition Logistics Management, 12 August 1981.

This pamphlet is a basic reference book for acquisition logistics matters within AFLC and AFSC. It may also be useful to other commands involved in the acquisition logistics process. It primarily helps the program manager (PM) and the Integrated Logistics Support Office (ILSO) in identifying, scheduling, and accomplishing or causing to be accomplished the key logistics tasks needed for the logistics support of acquisition programs. It also has guidance which will aid the other organizations within the program office and AFLC/AFSC field units in understanding the role of the ILSO as well as their roles and interfaces relative to the ILSO's functions and responsibilities.

International logistics (IL) is integrated into this pamphlet to ensure consideration of those factors which could significantly affect the USAF's ability to support IL for systems the USAF develops and acquires, and to minimize the potential impact of IL on the USAF's ability to meet its own operational and logistics support requirements.