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Accounting and Information
Management Division

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The Honorable John Glenn
Chairman, Committee on Governmental Affairs
United States Senate

Dear Mr. Chairman:

As agreed with your office, this letter provides a
preliminary response to your July 27, 1993, request that we
review the Department of the Navy's Tactical Advanced
Computer-4 (TAC-4) procurement. This procurement follows
three earlier Navy contracts for tactical systems;[1] however,
unlike the other contracts, this one also includes
requirements for non-tactical systems[2] and allows other
Defense Department and civilian agencies to purchase
computers. The Navy plans to award an Indefinite Delivery
Indefinite Quantity (IDIQ) contract for TAC-4. The contract
is expected to provide nearly 40,000 diverse systems,
including advanced workstations, servers, and portable
computers. A request for proposals (RFP) was issued in
September 1993 with responses expected in January 1994.

Because of your concern that the diverse equipment
requirements may create a contract in which user agencies can
acquire equipment outside of normal competition and
oversight, you asked us to review this procurement. The
following discussion identifies several issues that we
believe the General Services Administration (GSA) and the
Navy should address. We are providing

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[1] Tactical systems aboard Navy ships identify threats and
monitor the location and movement of forces by collecting,
integrating, and disseminating information for command and
control purposes.

[2] Non-tactical systems provide logistics, maintenance, and
administrative information.

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this preliminary information to you, now, at the request of your office. We plan to continue our review of this procurement.

The Navy is attempting to use the TAC-4 procurement to meet both tactical and non-tactical requirements and fulfill the diverse equipment needs of a vast user community. However, the Navy has not completed the requisite planning and all the necessary analyses to demonstrate that it is taking the best acquisition approach. Specifically, the Navy has (1) not analyzed all feasible alternatives, completed a cost analysis, or justified combining tactical and non-tactical requirements, (2) overstated the maximum number of systems that may be purchased, and (3) incorrectly required binary compatibility,[3] rather than software portability.[4] In addition, management and control of the contract will be difficult because the contract will not be centrally managed and the Navy will not be responsible for monitoring non-Navy purchases--that responsibility will remain with user agencies.

BACKGROUND

The TAC-4 contract is the fourth in a series of contracts to purchase tactical systems for the Navy. The three previous

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[3] Binary compatibility usually means that all hardware platforms must be able to translate software into the same "ones and zeros" for the computers to execute.

[4] Portability is defined as the ability to move software from one computer to another without recompilation.

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contracts--Desktop Tactical Computer (DTC) 1, DTC 2, and TAC-3--which were accomplished under the Warner Amendment to the Brooks Act,[5] were exclusively for tactical systems.

The Navy recently began planning to use the same computer hardware for both tactical and non-tactical systems. Navy officials told us that by merging tactical and non-tactical information, ship commanders will have greater and faster access to vital readiness information and thus will be able to respond more effectively in conflict situations. As such, TAC-4 will be the first contract to include both tactical and non-tactical support programs.

Because TAC-4 includes non-tactical programs, and thus does not fall under the Warner Amendment, the Navy requested a Delegation of Procurement Authority (DPA) from GSA. The Navy submitted its Agency Procurement Request to GSA in January 1993. GSA issued a conditional DPA, valued at over $1 billion, to the Navy in March 1993, and designated TAC-4 as a Trail Boss program.[6]

TAC-4 will also be the first of the Navy tactical contracts to include other military services and outside agencies. The Navy invited the other military services to participate in TAC-4 after an Air Force inquiry about TAC-3 equipment. In addition, GSA, in reviewing contracts to identify those that provide diverse technologies that other agencies could use,

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[5] The Brooks Act (40 U.S.C. 759) gives GSA authority to coordinate and provide for the procurement of Federal Information Processing (FIP) resources. GSA may issue a Delegation of Procurement Authority to the requesting agency after documentation and analysis requirements are met. The Warner Amendment (10 U.S.C. 2315 and 40 U.S.C. 759(a)(3)) exempts a procurement from GSA oversight if it is critical to the direct fulfillment of military or intelligence missions and does not include FIP resources for routine administration processes such as payroll, personnel management, or logistics.

[6] Trail Boss programs streamline paperwork, provide direct and continuing relationships with GSA, and allow DPAs to be processed faster.

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added 10 percent to the TAC-4 DPA for use by civilian agencies.

PLANNING AND ANALYSIS FOR
CONTRACT ARE INCOMPLETE

When submitting an agency procurement request, an agency must perform a requirements analysis, an alternatives analysis, and an economic analysis for each alternative. GSA granted conditional approval for the TAC-4 DPA, contingent upon the Navy's completion of its analyses and submission of the required documentation as specified in the Federal Information Resource Management Regulation. The Navy has not yet provided the required documentation. However, in approving a DPA, GSA does not review the validity of the procurement approach or assess the substance of the supporting analyses. Consequently, the fact that the Navy provides all the required documentation does not mean that the supporting analyses are complete.

The Navy's analysis is incomplete because it did not examine the feasibility of a separate procurement for tactical and non-tactical systems, or a Navy-specific contract. Also, while Navy officials assert that TAC-4 will save on maintenance, logistics, and training, the Navy has not documented how it will achieve these savings. Finally, the Navy's cost analysis is incomplete because it only compares TAC-4 contract costs with cost estimates for similar systems purchased from either the GSA schedule or other Defense IDIQ contracts. The Navy's cost analysis does not compare costs for each feasible alternative.

More importantly, the Navy has not provided a plan that establishes how the tactical and non-tactical systems will be integrated. It has developed a plan and information architecture for the non-tactical systems, but has not provided a similar analysis for its tactical systems. Without this plan, there is a risk that the Navy will not achieve its integration goals even after the equipment is purchased.

QUANTITY REQUIREMENTS ARE OVERSTATED

The Navy has overestimated the maximum number of systems that users will order from the TAC-4 contract. The Federal

Acquisition Regulation requires agencies to provide a realistic maximum quantity for IDIQ contracts, based on the most current information available. It is also important to provide realistic quantity estimates because the maximum estimated quantity is directly related to the DPA limit. Our analysis indicates that the total for military users could be reduced from nearly 36,000 to about 22,000.

The Office of the Chief of Naval Operations is responsible for the TAC-4 procurement. Estimating quantities for TAC-4 was one of the office's tasks. To do this, the Navy first surveyed vendors to determine what enhanced capabilities were likely to be available to meet the Navy's high performance computing needs, and then provided military users with specific information on these capabilities. The users then estimated their quantity requirements based on their projected needs. In some cases, the Navy estimated what the users would need or altered the estimates they submitted. The Navy agreed that some of its estimates are outdated.

While the TAC-4 solicitation states the Army may buy 5,000 systems, the Army, in a June 1993 memorandum to the TAC-4 project office, stated that it was interested in buying only about 25 systems for testing purposes. The Army also noted that TAC-4 processing exceeded many of its requirements and did not meet others. As such, the Army plans to use its own Common Hardware and Software Contract to fulfill most of its needs.

The Navy's estimates for Marine Corps requirements are also exaggerated. The Navy estimated that the Marine Corps required over 5,000 systems. The Marine Corps Systems Command, however, estimated it would need only a maximum of 1,200 systems. In addition, the Marine Corps requirement for a hand-held ruggedized computer is not included in TAC-4.

Finally, while the Navy's current estimate for Air Force tactical system requirements nearly matches the Air Force's estimate, it is not clear whether the Air Force will actually use the TAC-4 contract to fulfill its needs. The Navy estimated that the Air Force will purchase 8,700 systems from the contract. The Air Force estimated it will require 9,200 systems to support the Contingency Theatre Automated Planning System and the Air Force Wing Command and Control System when its Tactical Air Force Workstation Contract expires in early

1995. However, the Air Force is presently analyzing whether TAC-4 systems will be able to meet Air Force requirements.

In addition, GSA added 10 percent of the total for military requirements for civilian agencies. This is consistent with GSA's role to identify contracts that may provide lower prices and make them available governmentwide. However, the percentage GSA selected was not based on any analyses of how this equipment will be used by civilian agencies. Therefore, it is unclear how civilian agencies will use this equipment.

NAVY INCORRECTLY REQUIRES
BINARY COMPATIBILITY

In March 1992, the Office of the Chief of Naval Operations sent a memorandum stating that a common operating environment for non-tactical systems would improve the Navy's capability for interoperability among its logistics and administrative systems and that the director desired a "common engine" (identical hardware) to meet tactical and non-tactical requirements.

To accomplish this, the TAC-4 RFP requires that the systems provide binary compatibility--usually defined as requiring all hardware platforms to translate software into the same binary code (ones and zeros) for the computers to execute. The TAC-4 project manager originally told us that requiring binary compatibility will reduce logistics and maintenance costs. Navy documentation states that the Navy, "plans to use any available computer, in any location, even the laundry room, to perform both tactical and non-tactical functions." The project manager said the Navy included this requirement to ensure that proposed solutions, including different computers, could run application software without needing to compile it again (that is, recompilation).[7]

However, the ability to execute functions on different computers without recompilation is commonly called portability, not binary compatibility. During our discussions, the TAC-4 project manager agreed that the Navy is defining the concept of portability as binary

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[7] Compile means to translate a computer program into ones and zeros for the computer to execute.

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compatibility. The project manager has added the Navy's definition of binary compatibility to the RFP's glossary. However, we believe it is important to clarify this definition in the RFP, as well as add it to the glossary, because binary compatibility is a more stringent requirement than portability and tends to limit competition.

TAC-4 CONTRACT WILL BE DIFFICULT
TO MANAGE AND CONTROL

The TAC-4 contract includes diverse requirements for all military and, potentially, all civilian agencies. As such, it has evolved into a large schedule contract for numerous users with diverse system requirements, thus making it difficult to manage and control.

GSA has stated that tracking contract use on large IDIQ contracts is often difficult, especially when other agencies are included. Failure to track orders adequately can have serious consequences, such as exceeding DPA limits and the contract scope.[8]

Navy officials said that after the TAC-4 contract is awarded, each agency will be responsible for preparing procurement requests and its justification or requirements analysis for the specific user need. These documents are to be forwarded to the TAC-4 program office where the delivery order will be executed. The Navy also said that the TAC-4 program manager will not be responsible for validating the requirements. Instead, TAC-4 contracting personnel will rely on appropriate authorities within the ordering agency and the agency's life-cycle management processes to certify that the requirements are legitimate.

The Navy said it will administer TAC-4 purchases by hiring new staff and implementing new procedures at its Research, Development, Test, and Evaluation Division, where the

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[8] U.S. General Services Administration, Information Resources Management Service, IDIQ Contracts: Guide to Best Practices for Federal Information Processing (FIP) Resources, June 1993, KAP-93-3-P; U.S. General Services Administration, Information Resources Management Service, IDIQ and Requirements Contracts: LESSONS LEARNED, April 1992.

contract will be administered. This is a new role for a research facility that has not formerly been involved in processing orders for users outside of the Navy.
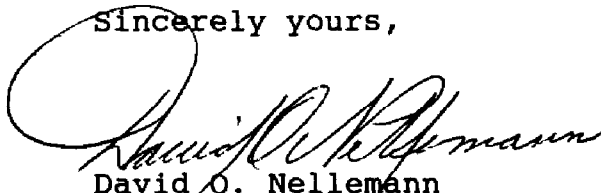
OBSERVATIONS

Without the requisite planning and analysis, we believe the Navy has not convincingly demonstrated that this is the best procurement approach. The Navy has not thoroughly analyzed the benefits of combining tactical and non-tactical programs or other feasible alternatives and their costs. Further, the Navy has not provided the most realistic estimate of quantities users may purchase and not collected the most current quantity information from them. Finally, the Navy's continuing use of the term binary compatibility in the solicitation may lead to confusion and limit competition. We believe the Navy and GSA must address these concerns.

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As agreed with your office, unless you publicly announce the contents of this letter earlier, we plan no further distribution of it until 30 days from the date of this letter. At that time, we will send copies to the appropriate House and Senate committees; the Secretary of Defense; the Secretary of the Navy; the General Services Administration; and other interested parties. Copies will also be made available to others upon request. If you have any questions about this letter, please contact me at (202) 512-6222 or John B. Stephenson, Assistant Director, at (202) 512-6240.

Sincerely yours,

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    International Affairs

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