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Defense, Committee on Appropriations, U.S. Senate

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AUTOMATED INFORMATION SYSTEMS

Defense Should Stop Further Development of Duplicative Recruiting Systems

GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-246006

February 27, 1992

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate

Dear Mr. Chairman:

This report responds to your request that we review the military services'[1] plans to develop or upgrade automated systems that will provide direct support to recruiters and, further, determine if these systems should be placed under the Department of Defense Corporate Information Management (CIM) initiative. Collectively, the services' plan to spend about $218 million for these systems.[2] A detailed explanation of our objectives, scope, and methodology is contained in appendix I. Department of Defense comments are contained in appendix II.

Results in Brief

To date, the individual services have spent over $82 million to design, develop, operate, and maintain their own automated information systems for military recruiting. These systems are duplicative, however, because they perform basically the same tasks. While the CIM initiative is designed, in part, to eliminate such duplication, these systems have not yet been included as part of the CIM effort, primarily because recruiting systems were considered a low priority area.

In developing their separate systems, the services have encountered design and development problems that have resulted in increased cost and time delays. Placing these systems under the CIM umbrella will draw management attention to these problems and contribute to reducing expenditures for these duplicate systems without any measurable reduction in capability.

[1]The Army, Air Force, Navy, and Marine Corps.

[2]This total cost estimate includes design, development, operations, and maintenance costs over each system's life.

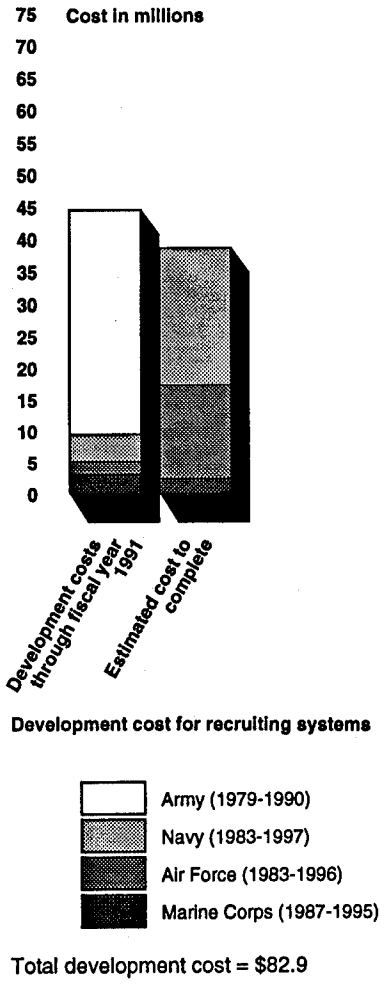
Background

During the late 1970s and throughout the 1980s, each service began automating military recruiting functions that were previously performed manually. These efforts focused on capturing recruit information only once and providing this information to other existing military personnel systems. The Army system was initiated in 1979 and became operational in 1990. The Navy and the Air Force identified their automated system needs in 1983 and are continuing with system development. The Navy system has progressed to the operational prototype stage. After years of not being funded, the Air Force system is currently in the development stage. The Marine Corps system was started in 1987 as a replacement for an existing system but was discontinued in 1990. The Marine Corps plans, during the next three years, to enhance their existing system to provide increased support for recruiters.

The services estimated total costs to develop, operate, maintain, and enhance these systems at $218 million. Over $82 million has already been spent, primarily to develop and operate the Army system. The rest of the money, $136 million, is for continued operations of the Army system and for completing development and operation of the Air Force, Navy, and Marine Corps systems.

The services estimate that systems development alone will cost $82.9 million. At the end of fiscal year 1991 the services had already spent over half of this amount, approximately $44.4 million, on development, with the bulk of this amount, $35 million, used by the Army to develop its system. The Air Force, Navy, and Marine Corps estimate they will need $38.5 million to complete systems development and installation at all sites. Figure 1 shows systems development costs through fiscal year 1991 and the services' estimates of the remaining development costs for each system.

Figure 1: Services' Recruiting Systems Development Costs Expended Through Fiscal Year 1991 and Estimated Costs to Complete



The CIM Initiative Evaluation Process

The CIM initiative, which began in October 1989, is intended to achieve substantial savings, in part, by developing standard, Defense-wide automated information systems for common business or functional areas, instead of the services' developing and maintaining multiple systems for the same functions. CIM initially is addressing eight functional areas within Defense, such as civilian personnel and materiel management. Military recruiting was not included within the eight functional areas.

In November 1990, the Assistant Secretary of Defense for Command, Control, Communications and Intelligence assumed responsibility for CIM

and all other information management and technology policies. The Assistant Secretary established a new office, the Director of Defense Information, and gave it Defense-wide responsibility for implementing and overseeing the development of standard information systems under the CIM initiative.

In analyzing functional areas to determine applicability for CIM, the Director of Defense Information relies upon the appropriate Assistant Secretary of Defense responsible for that area. For example, analysis of military personnel systems—including military recruiting—is the responsibility of the Assistant Secretary of Defense for Force Management and Personnel.

The Director of Defense Information recently devised a two-pronged strategy for reviewing systems within the CIM initiative that are under development or being modernized. First, the services will be required to provide an economic justification for continuing a systems development project. Second, the Defense organization with functional oversight responsibility will be required to perform a business case analysis to streamline business methods and processes for selected operations within the function.

Automated Information Systems Development Process

In addition to CIM, Defense regulations require Defense organizations to follow a structured process, called life-cycle management, for developing or modernizing automated information systems. Life-cycle management is intended to ensure that Defense management is accountable for the success or failure of systems. Defense's guidelines for life-cycle management define development phases and decision points at which system progress is assessed and documented. The decision to proceed from one systems development phase to the next is based, in part, on management's analysis of system documentation in an oversight review. Throughout development, the automated information system's program manager is expected to maintain documentation that demonstrates the level of analysis and planning put into the system. During oversight reviews, Defense management determines whether the system is being developed in accordance with Defense policies, procedures, and regulations.

Military Recruiting Automation Efforts Are Duplicative

The services' separate automated recruiting systems development efforts are producing multiple information systems designed to meet common functional requirements. Although some differences exist in the information they generate, the management reports they produce, and their methods of processing data, the services' separate recruitment activities have nearly identical information needs and use the information to perform similar recruiting functions. Their management and field organizations are also similar.

Services' Recruiting Information Needs Are the Same

Data sources, information needs, recruiting functions, and data outputs within each service are, to a large extent, similar. For example, the services use some common data sources for marketing military service opportunities and for identifying prospective recruits. They also use the same application form for each recruit and provide the jointly operated Defense enlistment processing organization with identical information for each applicant. While each service processes its information differently, the same generic process is followed by each service.

Military recruiting involves four generic functions: (1) goal setting, (2) prospecting, (3) production, and (4) enlisting. Each function also includes management and reporting. Goal setting defines the number of recruits needed to fill the service's needs and allocates goals to each recruiting office. Prospecting identifies potential candidates for recruitment. Production includes scheduling meetings with prospects and documenting contacts. Enlisting includes the process of completing the enlistment application for a new recruit.

At the beginning of the recruiting process, information on prospective recruits is generated from the same or similar sources, including vocational and mental test results and mail-in or toll-free telephone responses to advertising. This information is then transmitted to the services, which use different methods or systems to capture, segregate, and retransmit the prospect's information to the recruiters. However, data sources are virtually the same.

During recruiting interviews, the services collect the same information from their prospects. Additionally, they request the same background, character behavior, employment experience, educational experience, and mental capacity and proficiency checks from appropriate authorities.

At enlistment, information submitted by each service to Defense enlistment centers—also called entrance processing stations—is the same. For example, all services have to submit a standard request for a physical examination, a standard processing list, and a completed application form.[3] The Army now collects and transmits this information electronically. The other services, after preparing the forms manually, provide this information to their liaison offices at the entrance processing stations by other means, usually mail or courier.

CIM Evaluation Criteria Have Not Been Applied to Military Recruiting Systems

Defense organizations responsible for applying CIM evaluation criteria to automated information systems have not addressed automated military recruiting systems. However, the Director of Information Resources Management within the Office of the Assistant Secretary of Defense, Force Management and Personnel agreed that these systems development efforts appear to be candidates for a CIM review. The Director said Defense is taking a cautious approach in military recruiting and has not selected the function for review because of other priorities.

According to the Director, at some point in the future the services' military recruiting systems will be subject to Defense's CIM strategy and process for reviewing systems under development. She said that a strategy for making an economic analysis of ongoing software development projects has been established, and Defense expects to begin applying it to automated military recruiting systems during fiscal year 1992. As of mid-December 1991, the CIM working group for reviewing military recruiting systems had not been formed.

Services' Systems Have Experienced Development Difficulties

The services' recruiting systems, which through fiscal year 1991 have cost over $82 million, have encountered design and development problems. For example, the Army, Navy, and Air Force experienced significant delays in meeting their automation milestones, with the time from project start to estimated completion of systems development averaging over 11 years. The Marine Corps recruiting system development was discontinued after 3 years and has been replaced by an effort to enhance an existing recruiting system in use since 1979. The services estimate that the remaining cost for these systems will be $136 million for completing development and for operations and maintenance over the systems' life

[3] This form is called the DD Form 1966, "Record of Military Processing - Armed Forces of the United States."

cycles. Of this amount, $38.5 million will be needed to complete development of the Air Force, Navy, and Marine Corps systems.

Our review of each of the services' efforts to develop an automated recruiting system identified instances where the services did not completely follow required Defense system life-cycle management policies and processes. Further, our assessment of the services' system documentation for their projects, when compared with Defense guidance, indicates that not all requirements were met. For example, the economic analyses that were completed for these projects did not consider a full range of viable alternatives to the selected system designs. In addition, comprehensive analyses to define functional requirements were not done. Although service-level or command-level oversight reviews were held at milestone points for these projects, the previously mentioned problems were not addressed. The brief descriptions that follow summarize the services' systems development efforts and some of the problems experienced.

Army System

The Army's development of an automated recruiting system, known as Army Recruiting and Accessions Data System (ARADS), began in 1979 and was completed in 1990 at a cost of $35 million. According to program officials, the development encountered significant delays because its requirements and design needed considerable revision. System users were not satisfied with the initial software developed, software deficiencies had to be corrected, and many enhancements were made in an attempt to make the system effective and useful. As a result, prototyping, completed in September 1987, took almost 3 years longer than scheduled. Further, due to hardware upgrades and unplanned system enhancements and interfaces, life-cycle costs are now estimated to exceed the Army's July 1982 estimate by over $36 million. Army program managers estimate the remaining life-cycle costs for maintenance, operation, and future enhancement of the system to be $48.1 million through fiscal year 1995.

Air Force System

The Air Force identified the need for the Procurement Management Information System II (PROMIS II) in 1983. Project documentation, however, shows that no progress was made until early fiscal year 1988 because project sponsors could not obtain the funding support needed to begin system development. In the 8 years since the need for this system was identified, the Air Force had not progressed much beyond the design stage. Design evaluation and approval occurred in June 1991. The project

office has since developed a software application that demonstrates the capabilities of automated preparation of a recruit application. At the time of our field visit in May 1991, the Air Force had installed this application and associated hardware in one recruiting office. Project officials said in December 1991 that they have installed this application in additional offices selected for the prototype test. However, this application is not ready for use in the final system configuration because it has to be converted for use with another brand of operating system.

Air Force documents for PROMIS II also show project cost growth and schedule delays. For example, the latest cost estimate, provided by project officials in August 1991, is $7.1 million higher than a January 1990 project cost estimate. Further, project milestone documents for July 1991 show about a 21-month slip in the Air Force's original estimate for achieving full implementation of the system.

According to the Air Force's plans, PROMIS II automation will not be completed until mid-1996—the end of the 4-year implementation period. Through fiscal year 1991, the Air Force had identified its development investment in PROMIS II as $2 million, and expects to complete the system's software development during 1994. Project officials estimated remaining development costs at $14.9 million through fiscal year 1996.

Navy System

The Navy began the Station Information Management System (SIMS) project in 1983, and, as of this August 1991, a prototype system was undergoing testing. Most of the schedule delays in this system were attributable to software failure in the initially developed system, which led to considerable rewriting of application software. Navy project documents showed that the software problem added over 2 years to the Navy's planned date for completing development. Project officials said they did not perform a requirements analysis of Navy recruiting functions to define system requirements and sort out the manual functions that should be automated, changed, or deleted. The Navy also did not perform a work-load analysis to define hardware requirements. Through fiscal year 1991, the Navy had spent $4.4 million on the development of the SIMS prototype system; it expects to complete the prototype system by mid-1992. Project officials estimated remaining development costs at $21.3 million through fiscal year 1997.

Marine Corps System

In mid-1987 the Marine Corps began developing the Recruiting Service Management Information System (RSMIS) to overcome shortfalls in another system being used to support its recruiting efforts. After spending $2.5 million, however, the effort was terminated in 1990 because software development was lagging, an initial coding effort was largely unsuccessful, and the project was expected to be more costly than planned. Further, Marine Corps officials said that the program lacked required life-cycle management documentation, including an economic analysis. Additionally, program officials questioned the functionality of the system—a strong indication that the Marine Corps failed to perform a good business case analysis to validate user requirements. The Marine Corps has decided to enhance its existing system by adding many of the functions originally planned for RSMIS. The enhancement effort is estimated to cost $5.3 million and continue through fiscal year 1995.

Conclusions

The CIM initiative offers Defense the potential to avoid continuing four costly and duplicative automation initiatives for military recruiters. Further, system development problems experienced by the services could, if left uncorrected, result in spending millions of dollars unnecessarily for systems not adequately justified and designed. Applying the CIM evaluation criteria to these programs will also direct management attention to weaknesses in the services' development of these systems, and identify expenditures that should be curtailed.

Recommendations to the Secretary of Defense

In order to ensure that unjustified, duplicative systems are not developed and millions of dollars wasted, we recommend that the Secretary of Defense direct the Assistant Secretary for Force Management and Personnel and the Assistant Secretary for Command, Control, Communications and Intelligence to include automated military recruiting systems under the CIM initiative. We further recommend that the Secretary of Defense direct the Assistant Secretary for Command, Control, Communications and Intelligence to stop funding for continued development of automated recruiting systems until the CIM evaluations have been completed for each service system.

Agency Comments and Our Evaluation

In commenting on a draft of this report, Defense concurred with our recommendation to include recruiting systems in the CIM effort, and stated that, as part of this process, funding for these systems would be halted pending completion of the CIM review.

Defense partially concurred in our description of the development history of the individual systems, expressing concerns about our depiction of when the projects officially began, the status of development, and the system developers' compliance with Defense life-cycle management documentation and analysis requirements. We have considered all Defense comments and have revised the report to more precisely distinguish system initiation, the start of development, the scope of enhancements and/or development, and system status. With regard to life-cycle management documentation and analysis requirements, we have more precisely identified instances where either our assessment or system officials' statements disclosed the incompleteness or deficiency of their efforts.

Defense partially concurred with our finding that the services' recruiting functions and system developments are duplicative. In commenting on this matter, Defense agreed that many segments of the military recruiting process are similar, including those we identified as examples. It noted, however, that there are differences among the services in their recruiting operations and that the final determination of the extent to which existing processes can or should be standardized is part of the CIM evaluation process. Our report notes differences in recruiting operations, and we agree that CIM's evaluation should form the basis for deciding the extent of standardization.

In commenting on differences among service recruiting operations, Defense said that, unlike the other services, the Marine Corps does not intend to provide its recruiters with personal computers, but rather to have automation at the next higher organizational level. We believe this is not a significant difference in the way the services conduct and manage their recruiting operations. Further, the impact of the Marine Corps' preference on military recruiting system standardization will be considered as part of the CIM evaluation process.

Defense concurred with our presentation of its prior actions in not addressing the military recruiting function within CIM and its current efforts to apply recently devised CIM evaluation processes to military recruiting. It did not concur as to its reason for not selecting and evaluating

military recruiting prior to our review. We have changed the report to include the new reason offered by Defense.

Finally, Defense stated concern with our finding that it did not provide comprehensive oversight for these projects. It said that appropriate management oversight was in place and operates effectively. Given the documented problems these system developments have experienced, we continue to believe that service and command-level oversight was not comprehensive enough to discover and correct the problems.

Our work was performed in accordance with generally accepted government auditing standards, between April and December 1991. As agreed with your office, unless you publicly announce the contents of this report 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 service secretaries, and other interested parties.

This report was prepared under the direction of Samuel W. Bowlin, Director, Defense and Security Information Systems, who can be reached at (202) 336-6240. Other major contributors are listed in appendix III.

Sincerely yours,

Ralph V. Carlone

Ralph V. Carlone
Assistant Comptroller General

Contents

Abbreviations

ARADS	Army Recruiting and Accessions Data System
CIM	Corporate Information Management
GAO	General Accounting Office
IMTEC	Information Management and Technology Division
PROMIS II	Procurement Management Information System II
RSMIS	Recruiting Service Management Information System
SIMS	Station Information Management System

Objectives, Scope, and Methodology

In April 1991 the Chairman, Subcommittee on Defense, Senate Committee on Appropriations, requested that we review the military services' plans to develop separate automated recruiting systems, and Defense's application of CIM principles to these developments. On the basis of discussions with the Chairman's office, we agreed to determine whether the services' autonomous development plans should be reviewed under the CIM initiative. Additionally, we agreed to compare the services' system development activities to Defense's automated information system policies and procedures.

To address our objectives, we interviewed Defense officials responsible for applying CIM to military personnel functions and systems. Included were officials from the offices of the Assistant Secretary of Defense for Command, Control, Communications and Intelligence, and the Assistant Secretary of Defense for Force Management and Personnel. We reviewed Defense memoranda identifying plans to expand CIM's coverage in evaluations of additional functional areas, such as military recruiting. To obtain program status, history, and cost information, and to compare system development activities with required Defense and service policies and processes, we interviewed officials from the military services responsible for the automated information systems' development. Further, we examined program development documentation and other reports summarizing or analyzing development events.

Our work was performed in accordance with generally accepted government auditing standards, between April and December 1991, at Defense offices in Washington, D.C., and at the military services' recruiting system development organizations—U.S. Army Recruiting Command, Ft. Sheridan, Illinois; U.S. Air Force Recruiting Service, Randolph Air Force Base, Texas; U.S. Navy Recruiting Command, Arlington, Virginia; and U.S. Marine Corps Recruiting Service Organization, Arlington, Virginia. We also visited selected military service field recruiting activities in the areas of Harrisburg, Philadelphia, and Pittsburgh, Pennsylvania; and San Antonio, Texas.

Comments From the Department of Defense

FORCE MANAGEMENT
AND PERSONNEL

ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-4000

10 JAN 1992

Mr. Ralph V. Carlone
Assistant Comptroller General
Information Management and
Technology Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Carlone:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "AUTOMATED INFORMATION SYSTEMS: Defense Should Stop Further Development of Duplicate Recruiting Systems," dated November 21, 1991 (GAO Code 510607/OSD Case 8900). Although the Department concurs with the recommendations, we are concerned and disappointed by the many factual inaccuracies in the report. Those inaccuracies are addressed in the detailed DoD comments provided in the enclosure. (In addition, an annotated copy of the report, with factual changes, was provided separately to your staff.) I recommend that the report be revised to correct these inaccuracies prior to publication. At a minimum, I believe that any copies of the report which are distributed should include the attached comments.

The Department of Defense identified the recruiting process some time ago as an area of interest for the Corporate Information Management Initiative. The recruiting function has been targeted for evaluation during FY 1992. Under the Corporate Information Management guidelines, funding will be stopped automatically for individual Service systems, except for funding required to maintain the mission--or that which can be justified as cost-effective in the interim.

The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

Christopher John

Enclosure
As Stated

GAO DRAFT REPORT - DATED NOVEMBER 21, 1991
(GAO CODE 510607) OSD CASE 8900

"AUTOMATED INFORMATION SYSTEMS: DEFENSE SHOULD STOP FURTHER DEVELOPMENT OF DUPLICATE RECRUITING SYSTEMS"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

- **FINDING A: Status of the Military Services Automated Recruiting Systems.** The GAO reported that, during the late 1970s and throughout the 1980s, each Military Service began automating military recruiting functions, which previously were performed manually--such as capturing recruit information only once and providing it to other existing Military personnel systems. The GAO observed that (1) the Army system became operational in 1990, (2) the Navy and the Air Force began developing their systems in 1983, although the Air Force system has languished and is currently still in the design stage, and (3) the Marine Corps system, begun in 1987, was discontinued, but has been replaced by an initiative to add basic recruiter functions to one of its other automated military personnel systems.

  The GAO reported that the Services estimated the total cost to develop, operate, maintain, and enhance the various systems at $218 million. The GAO pointed out, however, that the Army already has spent over $82 million, with the remaining $136 million being for (1) the continued operation of the Army system and (2) the completion of the development and operation of the Air Force, Navy, and Marine Corps systems. The GAO also reported that the Services estimated systems development alone will cost $82.9 million. The GAO found that, by the end of FY 1991, the Services had already spent $44.4 million on development, with the bulk of that amount ($35 million) used by the Army to develop its system. The GAO reported that, according to Air Force, Navy, and Marine Corps estimates, they will need $38.5 million to complete systems development and installation at all sites. (pp. 2-3/GAO Draft Report)

- **DoD POSITION:** Partially concur. It is certainly true that, in the past few years, the Services have developed (or are in the process of developing) Service-specific automated recruiting systems. There are, however, many

inaccuracies in the description of the current status of recruiting systems in the Services.

The report states that the Army system (the Army Recruiting and Accessions Data System) is the only one currently operational--with the Navy and Air Force systems in the testing and design phase and the Marine Corps system having been discontinued in 1990. Those statements are incorrect.

- The Navy did not begin developing the Station Information Management System in 1983, as the report states. The Navy received conceptual approval and commenced prototype development in March 1987. The budget estimates reported reflect the project status as of FY 1991.

- The Air Force began developing the Procurement Management Information System II in 1989--not 1983, as the report states. The concept for the Procurement Management Information System II initially was formulated in 1983. The System was approved and submitted by the Air Force in the FY 1992-FY 1997 Program Objective Memorandum. The Recruiting Service received approval to begin work on the project in FY 1988, and was assigned limited resources to begin work on a functional description. In November 1989, the Program Management Office was established. It was at that point staffing began, and the project began to get underway.

- The Procurement Management Information System II did not languish, as claimed by the GAO. The Procurement Management Information System II has progressed well beyond the design phase, with both equipment and software already deployed to several sites. (The GAO evaluators were given demonstrations of the system at the Air Force Recruiting Office in San Antonio, during their visit to the Air Force Recruiting Service.)

- The statement that the Marine Corps system was begun in 1987, was discontinued, and has been replaced by an initiative to add basic recruiter functions to one of its other automated military personnel systems also is not correct. The Marine Corps automated information management system for recruiting was fielded in 1979, as the Automated Systematic Recruiting Support System. In 1981, the Automated Systematic Recruiting Support System

was transferred from the contractor to the Marine Corps Central Design and Programming Activity in Kansas City, Missouri, enhanced, and renamed the Automated Recruit Management System. In 1988, in response to identified recruiting requirements, the Marine Corps began development of the Recruiting Service Management Information System as a second generation system to the Automated Recruit Management System. Due to projected future budget restrictions that were unknown when the development process commenced, the Recruiting Service Management Information System was terminated in 1990. During that period, the Automated Recruit Management System was fully operational--making it the only operational information management system for Marine Corps recruiting since 1979. The Automated Recruit Management System is a fully operational recruiting and training management system that tracks Marines from the date of enlistment until date of graduation from entry level skill training. It interfaces with the Marine Corps Manpower Management System and gives the Marine Corps a single integrated Manpower Information Management System, entirely run on mainframes at the Marine Corps Central Design and Programming Activity in Kansas City. Most importantly, the various Automated Recruit Management System applications support the (1) recruiting effort, (2) recruit processing at the recruit depots, (3) student processing at the schools of infantry, and (4) the By Name Assignment System, which supports formal school seat assignment--as well as the DoD Unit Cost Training Initiative. The Automated Recruit Management System data is passed from one module to another as a Marine passes through the accession and training pipeline. The Automated Recruit Management System also provides personnel data into the Joint Uniform Military Pay System and Manpower Management System.

- **FINDING B: The Corporate Information Management Initiative Evaluation Process.** The GAO reported that the Corporate Information Management Initiative, which began in October 1989, is intended to achieve substantial savings--in part, by developing standard, Defense-wide automated information systems for common business or functional areas--as opposed to each of the Military Services maintaining multiple systems for the same functions. The GAO observed that, initially, the Initiative is addressing eight functional areas, but military recruiting is not included. The GAO

explained that the Director of Defense Information relies upon the Assistant Secretaries of Defense to identify functional areas applicable for inclusion in the Corporate Information Management Initiative, and that military recruiting is the responsibility of the Assistant Secretary of Defense (Force Management and Personnel).

The GAO also reported that the Director of Defense Information recently devised a two-pronged strategy for reviewing systems under development and those being modernized, as follows:

- the Services will be required to provide an economic justification for continuing a systems development project; and

- the Defense organization with functional oversight responsibility will be required to perform a business case analysis--i.e., a requirements review--to streamline business methods and processes for selected operations within the function.

In addition, the GAO observed that DoD regulations require Defense organizations to follow a structured life-cycle management process for developing or modernizing automated information systems. The GAO further observed that the decision to proceed from one system development phase to the next is based, in part, on a management analysis of system documentation in an oversight review. The GAO pointed out program managers are expected to maintain documentation that demonstrates the level of analysis and planning put into the system--and, during oversight reviews, DoD management determines whether the system is being developed in accordance with Defense policies, procedures, and regulations. (pp. 4-6/GAO Draft Report)

DoD POSITION: Concur. The DoD strongly supports the Corporate Information Management initiatives. It is emphasized, however, that individual Service differences and related functional requirements must be identified and understood.

o **FINDING C: Military Recruiting Automation Efforts Are Duplicative.** The GAO explained that Military recruiting involves four generic functions, which are followed by each of the Military Services--(1) goal setting, (2) prospecting, (3) production, and (4) enlisting. The GAO indicated that each function also includes management and

reporting. The GAO observed that, although some differences exist in the information the systems generate, the management reports they produce, and their methods of processing data, the Services recruitment activities nonetheless have nearly identical information needs and use the information to perform similar recruiting functions. The GAO also observed that their management and field organizations are similar. For example, the GAO reported that the Services use common data sources for marketing Military Service opportunities and for identifying prospective recruits. Further, the GAO indicated that the Services use the same application form for each recruit and provide the jointly operated Defense enlistment processing organization with identical information for each applicant. The GAO concluded that the automated recruiting system development efforts of the Military Services are producing multiple information systems designed to meet common functional requirements. (pp. 6-9/GAO Draft Report)

DoD POSITION: Partially concur. The final determination as to whether the individual Service automated recruiting systems are duplicative or not cannot be made until a full Corporate Information Management evaluation is completed from a functional perspective. There are certainly many segments of the process of recording and processing recruiting activities that are similar. They include (1) the use of the DD1966 form for processing new recruits, (2) the processing and dissemination of high school testing results, and (3) the sharing of certain market research and lead generation information. However, the GAO fails to consider important differences in how the Services deal with the generic recruiting functions. The extent to which existing processes can or should be standardized is part of the Corporate Information Management evaluation process.

The planned Corporate Information Management evaluation effort must define its function carefully and address the many and varied topics covered under the general area of recruiting. Such topics would include, but not be limited to the following:

- different levels of goal setting Officer/ Enlistee recruiting;
- prior/non-prior service;
- interface with the Service personnel systems and interface with the Military Entrance Processing Command;

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- job classifications, selections, waivers; and

- reserve component considerations.

As with other types of recruiting, reserve component recruiting is currently handled differently by each Military Service, requiring different sets of information needs. For example, the Marine Corps recruits for a total, completely integrated force, while the Navy Station Information Management System supports only active Navy needs. The Army Recruiting Command has recruiting responsibility for both active Army and Army Reserve, but not for the Army Guard. The Air Force is considering adding Reserve and possibly Air Guard requirements to mission goals. Unlike active force prospects, reserve component recruits must live within specific areas for training purposes. Specific position vacancy requirements create data needs quite different from active force recruiting. Clearly, during the planned evaluation period later in the fiscal year, the Corporate Information Management process must be cognizant of those differences, as well as other definitional and procedural areas.

It is true that each Service sets goals, prospects, produces, and enlists, and that all the Services conduct management and reporting activities; however, the GAO ignores major reasons why functions are handled differently by the various Services. For instance, prospecting for physicians is substantially different than for enlistees, in general--and even prior and non-prior Service enlistment programs are handled differently.

While it is true that the Services use the same application for each recruit and provide identical information to the Military Entrance Processing Station on each applicant, each Service also has separate data requirements, which are not included in the basic DoD application. Those data requirements include information on (1) spouses and dependents, (2) waivers, (3) secondary school course work, and (4) other information needed for job classification and selection, as well as data required to build the initial personnel record. Again, the most substantive differences occur between programs. For example, the credential data required for medical professionals has no counterpart in the enlistment process.

o **FINDING D: The Corporate Information Management Evaluation Criteria Have Not Been Applied To Military Recruiting Systems.** The GAO reported that, although Defense

organizations applying Corporate Information Management evaluation criteria to automated information systems have not addressed automated military recruiting systems, they agree that recruiting systems appear to be candidates for a review. The GAO reported that, according to DoD officials, they are taking a cautious approach in the Military recruiting area and have not selected the function for review, primarily because of their sensitivity to interservice competition for recruits and the reluctance of the Military Services to share or exchange information. The GAO was advised that the Military recruiting systems will be subject to the DoD Corporate Information Management strategy and process in the future. The GAO reported that a strategy for making an economic analysis of ongoing software development projects has been established, and the DoD expects to begin applying it to automated Military recruiting systems during FY 1992. The GAO observed, however, that as of October 31, 1991, a decision to form a Corporate Information Management working group for Military recruiting systems had not been made. (pp. 9-10/ GAO Draft Report)

DoD POSITION: Partially concur. It is certainly true that Military recruiting systems have not yet been placed under the Corporate Information Management initiative. It is not true, however, that those systems were not selected for review because of a DoD reluctance to become involved in a potentially sensitive arena. The Corporate Information Management efforts in the Military personnel area are just getting under way in the DoD, and recruiting systems have been identified as one of the first major areas of interest. The Military Entrance Processing Command Integrated Resource System recently was identified as a candidate migration system. That was the first step in reviewing the processing of military enlistees and the automated support for that function. It is the DoD intention to place the evaluation and review of individual Service recruiting systems under the Corporate Information Management initiative during FY 1992.

It is also misleading to state that the Military Services are reluctant to share or exchange information. In fact, the Services, themselves, identified a need to share and exchange information pertaining to automated recruiting information systems and, in January 1990, established the Joint Service Recruiting Automation Committee. The Committee has been meeting periodically since then and the DoD Corporate Information Management initiative will consider input from that group.

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- **FINDING E: The Service Systems Have Experienced Development Difficulties.** The GAO found that the various recruiting systems developed by the Military Services (which have cost over $82 million through FY 1991) have encountered design and development problems. The GAO observed that, in all cases, the Services were unable to complete design and development phases within budget and schedule timeframes. For example, the GAO observed that the Army, the Navy, and the Air Force experienced significant delays in meeting their automation milestones, with the estimated development time for the systems averaging over 11 years. The GAO noted that only the Army system is operational, with the Army life cycle costs now expected to exceed the estimate by over $36 million. The GAO also observed that the Marine Corps recruiting system development effort failed altogether and was discontinued after three years; however, it has been replaced by planned enhancements to an existing military personnel system, which are expected to cost $2.3 million through FY 1995. The GAO reported that the Services expect the remaining cost for the systems to be $136 million for completing development life cycles and for operations and maintenance over the systems life cycles.

  The GAO also found (1) that the Services did not follow the required DoD life-cycle management policy and processes, and (2) that the systems did not receive comprehensive management oversight. For example, the GAO reported that none of the Military Services considered the full range of viable alternatives to the system it wanted to develop--nor did program oversight reviews question that shortcoming. The GAO indicated that, although the Services claimed they had met the requirements of life-cycle management principles in developing their recruiting systems assessment of the system documentation--when compared to Defense guidance, indications are that not all of the requirements were met. (pp. 10-14/GAO Draft Report)

  DoD POSITION: Partially concur. Certainly, in the development of large automated systems, some development problems are to be expected, even for programs under the Corporate Information Management Initiative. The Navy, in fact, did experience some difficulties with the development of the Station Information Management System, which caused a 20-month delay. However, many of the statements in this section are incorrect or misleading. Appropriate management oversight (given then-existing DoD guidelines and directives) was in place and continues to operate effectively in the decision process. It is true that development of the designated Marine Corps replacement system, the Recruiting

Science Management Information System, was terminated in 1990, due to budget restrictions. However, the existing Automated Recruit Management System remained in operation during the Recruiting Science Management Information System development and remains in operation today. In addition, development of the Air Force Procurement Management Information System II has been, in most cases, ahead of the published schedule and currently has some equipment and software operational.

In addition, all the Military Services did not encounter design and development problems, and were able to complete the design and development phases within budget and schedule timeframes.

- As indicated, the Navy Station Information Management System encountered development problems in 1989, largely based on the immature technology of 4th Generation Languages and the inability of that technology to perform in an operational environment. Technical corrections were made and an operating prototype was established in July 1991, a delay of 20 months. The user-defined software to support the system is evolutionary, emphasizing the identified needs of the user population, and will continue to evolve throughout deployment of the microcomputer hardware required to support the system. The timeline associated with development of the integrated hardware/software system is dependent on budgetary support for procurement of the microcomputer support platforms.

- From the time the decision was made to pursue the Air Force system (Procurement Management Information System II) actively, development has occurred ahead of schedule. The Air Force is primarily developing software in-house, and is functioning as its own integrating contractor. That has resulted in both reduced costs and an acceleration of the development schedule. The Case File Generator System, the Air Force Reserve Officer Training Corps Tracking System, and the Health Professions Applicant Tracking System have been accomplished on or ahead of schedule. For example, the Case File Generator System installation was planned for June. Installation occurred in May. Subsequent installations and revisions have also been fielded ahead of schedule. The Air Force has had similar success with the other pieces of its automated recruiting system. In no case has any software or hardware been deployed late.

- The Army system is not the only one that is operational. The Air Force Procurement Management Information System II has equipment and software operating in the field. The Marine Corps Automated Recruit Management System has been operational since 1979.

The GAO also indicated that not all DoD life-cycle management policies and processes were followed, and that the systems did not receive comprehensive management oversight. In addition, the GAO stated that, although the Services thought they met the requirements of life-cycle management, they did not. Inasmuch as the GAO report does not include the specifics as to how the Services failed to meet the requirements, the DoD is not able to respond. However, the following information is provided:

- The Navy Station Information Management System successfully completed Life Cycle Management Milestones (oversight reviews) I and II. Milestone III is pending prototype documentation and evaluation, estimated to be completed by the 3rd quarter of FY 1992. The documentation deficiencies identified include a business case analysis which, although currently mandated, is still in the process of being defined formally by the Office of the Secretary of Defense. An economic analysis and justification (i.e., the prior Life Cycle Management requirement) was completed and presented for approval at the Milestone II review.

- The Station Information Management System has met the documentation requirements associated with Life Cycle Management Milestones I and II, as they existed in 1987 and 1989, respectively. Accordingly, the system received oversight approval for continuing prototype development, leading to Milestone III--prototype evaluation/approval to operationally field the system.

- The Air Force Procurement Management Information System II incorporated the policies and processes of life-cycle management into its basic structure and guidance. Requirements of the Air Force and DoD directives and standards were met or tailored, commensurate with the size and scope of the program. Since the Procurement Management Information System II does not qualify as a Major Automated Information System according to DoD directives, the review and approval process developed by the Air Force applies.

Consequently, the majority of the directives used to govern life-cycle management of this system are Air Force directives or Air Force implementations of DoD directives.

- Concerning the assertion the Services did not consider a full range of viable alternatives to the system it wanted to develop, the term "full range" is subject to interpretation. It should be recognized that the current Corporate Information Management approach to alternatives was not Department policy at the time each of the Service systems was initiated. Each Service did perform the then required analyses for system approval. For instance, the Air Force completed an economic analysis that showed the Procurement Management Information System II yields a more cost effective utilization of Recruiting Service resources than the system it was designed to replace.

- The GAO statement that the average development time for the DoD was around 11 years, is incorrect. The Navy Station Information Management System project was under development for 5 years; the Air Force Procurement Management Information System II has been under development for 3 years; the Marine Corps Automated Recruit Management System has been fully operational since 1979.

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RECOMMENDATIONS

o **RECOMMENDATION 1:** The GAO recommended that the Secretary of Defense direct the Assistant Secretary of Defense (Force Management and Personnel) and the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) to include automated military recruiting systems under the Corporate Information Management initiative. (p. 15/GAO Draft Report)

DoD POSITION: Concur. Appropriate documentation will be prepared to place the evaluations of the Services automated recruiting systems under the Corporate Information Management initiative in January 1992. The Corporate Information Management initiative analyses is expected to be completed during FY 1992.

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- **RECOMMENDATION 2:** The GAO recommended that the Secretary of Defense direct the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) to stop funding for continued development of automated recruiting systems, until the Corporate Information Management evaluations have been completed for each Service system. (p. 15/GAO Draft Report)

  DoD POSITION: Concur. Implementation of Recommendation 1 to bring recruiting under the Corporate Information Management initiative automatically brings all modernization and development funding for recruiting systems under the Corporate Information Management rules. That means funding for individual Service systems will be stopped, except such funding as is required to maintain the mission or funding that can be justified under the Corporate Information Management guidelines, as cost effective in the interim period.

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Major Contributors to This Report

Information Management and Technology Division, Washington D.C.	Carl M. Urie, Assistant Director Gary R. Austin, Computer Scientist
Philadelphia Regional Office	Harry E. Benchoff, Jr., Regional Management Representative Joseph A. Margallis, Jr., Evaluator-in-Charge Jay A. Scribner, Staff Evaluator