

September 2005

DEFENSE SPACE ACTIVITIES

Management Guidance and Performance Measures Needed to Develop Personnel



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Highlights of [GAO-05-833](#), a report to congressional committees

Why GAO Did This Study

The Department of Defense (DOD) employs space to support critical military capabilities and funding for space is about 5.4 percent of DOD's budget. In 2001, the Space Commission noted that DOD needs a force composed of educated, motivated, and competent personnel, but DOD was not yet on course to develop the space cadre the nation needs. DOD has a defensewide space human capital strategy and implementation plan and an Executive Agent for Space responsible for space planning, programming, and acquisitions.

Congress required two GAO reports assessing DOD's strategy and the military services' efforts to develop their space personnel. GAO's first report was issued in August 2004. In its second report, GAO (1) determined DOD's progress in implementing defensewide space cadre actions, (2) assessed if DOD's space cadre management approach is consistent with a results-oriented management approach, and (3) determined the progress the services have made in planning and completing space cadre initiatives.

What GAO Recommends

GAO is making recommendations designed to institutionalize DOD space cadre authorities, responsibilities, and structure and to help DOD measure and evaluate its space cadre actions. In its comments, DOD agreed with these recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-05-833.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Davi D'Agostino at (202) 512-5431 or dagostinod@gao.gov.

DEFENSE SPACE ACTIVITIES

Management Guidance and Performance Measures Needed to Develop Personnel

What GAO Found

Since a January 2001 Space Commission report highlighted the need to develop and maintain a space cadre, DOD has made limited progress on defensewide space cadre actions. DOD has fallen behind its implementation schedule for its February 2004 space human capital strategy. DOD's strategy implementation plan identified tasks on space personnel management, education and training, and critical positions. As of June 2005, DOD had completed three of the nine tasks scheduled for completion by March 2005 and one other task. Space cadre leadership has not always been proactive because the Executive Agent gave the space cadre a low priority due to competing demands and then made it a higher priority in 2004. The Executive Agent's departure in March 2005 also delayed some of the tasks. In addition, delays were caused by the need to build consensus among the services on space cadre actions and to make changes in a large organization.

DOD's management approach for the departmentwide space cadre is inconsistent with a results-oriented management approach in two areas. First, DOD has not issued detailed guidance to provide accountability by institutionalizing space cadre authorities and responsibilities. The strategy provides general space cadre responsibilities for the Executive Agent and the services. DOD has not determined specific defensewide space cadre responsibilities that should continue because DOD has not completed its strategy implementation. Without defensewide guidance, progress may not continue and DOD may not develop enough space-qualified professionals. Second, DOD does not have performance measures and an evaluation plan to assess progress. The services provided space cadre information to DOD, but not performance measures linked to goals, such as education levels and promotion rates. Without performance measures and a plan to evaluate progress, the Executive Agent, the Secretary of Defense, and Congress may not be able to monitor the services' progress in meeting their goals.

In the absence of continuous proactive defensewide space cadre leadership, the military services' progress in planning and completing space cadre initiatives has varied since GAO's August 2004 report. The services are pursuing separate initiatives to address the unique needs of their particular service and these are in various stages of completion. Without proactive DOD leadership, the Secretary of Defense and Congress will not have assurance that the services are obtaining and developing the space cadre the nation needs. The Air Force, which is DOD's largest acquirer and operator of space systems and has the largest space cadre, has continued to implement its space professional strategy and has a permanent organizational focal point. The Navy published its space cadre strategy and established a permanent organizational focal point. The Army is conducting an analysis to determine its future space cadre actions, which could lead to a space cadre strategy and a permanent organizational focal point. The Marine Corps, which has a space cadre strategy and a permanent organizational focal point, continues to implement the initiatives contained in its strategy.

Contents

Letter		1
	Results in Brief	3
	Background	6
	DOD Has Made Limited Progress in Integrating and Developing Its Space Cadre	9
	DOD's Space Cadre Management Approach Is Incomplete	13
	Services' Progress on Space Cadre Development Initiatives Varies	17
	Conclusions	23
	Recommendations for Executive Action	24
	Agency Comments	24

Appendix I	Scope and Methodology	26
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Appendix II	Comments from the Department of Defense	28
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Appendix III	GAO Contact and Staff Acknowledgments	30
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Tables		
	Table 1: DOD Crosscutting Space Budget for Fiscal Year 2006	7
	Table 2: Status of Selected Tasks in DOD Strategy Implementation Plan	11
	Table 3: DOD Space Personnel by Service as of March 2005	18
	Table 4: DOD Space Positions by Service as of March 2005	19

Figures		
	Figure 1: Number of DOD Space Personnel by Military Service	8
	Figure 2: Timeline of Key Management Milestones Related to Defensewide Space Cadre Development	9

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United States Government Accountability Office
Washington, DC 20548

September 21, 2005

The Honorable John W. Warner
Chairman
The Honorable Carl Levin
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Duncan L. Hunter
Chairman
The Honorable Ike Skelton
Ranking Minority Member
Committee on Armed Services
House of Representatives

The Department of Defense (DOD) employs space assets to support many critical military capabilities including intelligence collection; battlefield surveillance and management; global command, control, and communications; and navigation assistance. Sufficient numbers of space-qualified personnel are central to DOD's success in space. Due to concerns about the DOD's organization and management of space activities, Congress chartered the Commission to Assess United States National Security Space Management and Organization (Space Commission) in 1999 to review the organization and management of national security space activities. In its January 2001 report, the Space Commission identified some long-standing management challenges, including developing and maintaining a cadre of space professionals to assume leadership roles in all aspects of space-related activities. The Space Commission noted that DOD needs a total force composed of well-educated, motivated, and competent personnel to assign to military service, joint, and interagency positions to work on space operations, requirements, and acquisition, but that DOD was not yet on course to develop the space cadre the nation needs. The commission stated that DOD must place a high priority on intensifying investments in space career development, education, and training to develop and sustain a highly competent and motivated space cadre. According to the Secretary of Defense's memo implementing the commission's recommendations, the military services are responsible for developing and maintaining sufficient quantities of space-qualified personnel.

DOD issued a directive in June 2003 that established an Executive Agent for Space. The DOD directive stipulates that the Executive Agent shall develop, coordinate, and integrate plans and programs for space systems and the acquisition of space major defense acquisition programs to provide operational space force capabilities to ensure the United States has the space power to achieve its national security objectives. Many DOD components are involved in defense space activities and the budget request for the space program is about \$22.7 billion, or about 5.4 percent of DOD's total budget for fiscal year 2006. The Air Force is DOD's largest developer, procurer, and operator of space systems; has the largest space cadre of all the services; and has about 92.6 percent of the fiscal year 2006 space budget request.

In the National Defense Authorization Act for Fiscal Year 2002, Congress mandated that we provide an assessment of the actions taken by the Secretary of Defense in implementing the Space Commission's recommendations. In April 2003, we recommended that DOD establish a departmentwide space human capital strategy to guide its activities to develop its cadre of space professionals. DOD issued its space human capital strategy in February 2004. This strategy established direction for the future and included goals and objectives for developing and integrating space personnel. The strategy also identified key actions to meet the objectives, which were to be implemented in three phases.

In the National Defense Authorization Act for Fiscal Year 2004, Congress mandated that we submit two reports assessing DOD's space human capital strategy and the efforts by the military departments to develop their space personnel. In our first report of August 2004, we found that DOD lacked a complete management approach for implementing its space human capital strategy and that the military services varied in the extent to which they had identified and implemented initiatives to develop and manage their space cadres. We noted that DOD had not implemented the strategy's actions, and we recommended that DOD develop an implementation plan for its strategy. We also noted that the Air Force and Marine Corps had space cadre strategies and focal points for managing their space personnel, but that the Army and Navy did not, and we recommended that the Army and Navy develop strategies and establish focal points.

Our objectives for this second report in response to the mandate were to (1) determine the progress DOD has made in implementing the defensewide actions contained in its February 2004 space human capital strategy to integrate and develop its space cadre, (2) assess if DOD's

management approach for the departmentwide space cadre is consistent with a results-oriented management approach, and (3) determine the progress the services have made since our August 2004 report in planning and completing initiatives to develop and manage their space cadres. To determine the progress DOD has made in implementing the defensewide actions contained in the strategy, we reviewed and analyzed the DOD space human capital strategy and its implementation plan and discussed and documented the status of implementing actions with DOD and service personnel. To assess DOD's management approach for the departmentwide space cadre, we compared DOD's management approach with a results-oriented management approach and reviewed DOD's space cadre guidance. To determine the progress the services have made in planning and completing space cadre initiatives since our August 2004 report, we obtained and reviewed information on the services' initiatives and we collected and analyzed data on space positions and personnel. We conducted our review from September 2004 through June 2005 in accordance with generally accepted government auditing standards. More detailed information on our scope and methodology is provided in appendix I.

Results in Brief

Since the January 2001 Space Commission report highlighted DOD's need to develop and maintain a space cadre, DOD has made limited progress on departmentwide space cadre actions. DOD has fallen behind its planned schedule for implementing the February 2004 space human capital strategy. In December 2004, DOD issued an implementation plan for its strategy that identified 30 tasks related to space personnel management, education and training, and critical space positions. Most of these tasks were scheduled to be completed by November 2005, and some had completion dates that were not determined. Nine tasks were scheduled for completion by March 2005. As of June 2005, DOD had completed only 3 of these 9 tasks, as well as 1 other task that did not have an estimated completion date. DOD has not completed 6 of the 9 tasks scheduled for completion in March 2005, although it has taken actions on some of them. Progress on defensewide space cadre actions has been delayed for two reasons. First, defensewide space cadre leadership has not always been proactive because the DOD Executive Agent for Space had varying management priorities and departed in March 2005, which contributed to delays in implementing the space human capital strategy. Implementation of defensewide space cadre actions was initially not one of the highest priorities of the Executive Agent, who concentrated on addressing issues related to major space acquisition programs; however, in 2004, the Executive Agent made the space cadre a higher priority. Second, DOD

officials attributed delays to challenges, such as the need to build consensus on defensewide space cadre actions among the services, which have differing space roles and cultures, and the difficulties in making timely changes in large organizations.

Although DOD has developed a space human capital strategy and implementation plan to address space cadre issues, DOD's management approach for the departmentwide space cadre is inconsistent with a results-oriented management approach in two areas. First, DOD has not issued detailed defensewide guidance for providing accountability by institutionalizing space cadre authorities and responsibilities of the Executive Agent and the services and by requiring specific human capital development and management structure and functions. The DOD directive that created the Executive Agent in June 2003 did not define the Executive Agent's specific authority and responsibilities related to the defensewide space cadre. Hence, there is no defensewide accountability for developing the space cadre that was called for by the Space Commission. Although the space human capital strategy assigns general responsibilities to DOD components, DOD has not determined the specific space cadre management responsibilities and structure that should continue over time because DOD has not completed implementing its strategy. Until DOD completes its strategy implementation, it will not be in the best position to determine the optimal management structure and processes. Without detailed DOD guidance to determine space cadre management responsibilities and structure, the progress made on improvements to the defensewide space cadre may not continue, and DOD may not develop enough space professionals with the necessary training, education, and experience to advance the use of space power and transform military operations. Second, DOD does not have performance measures and an evaluation plan to indicate results related to goals that could be used by the Executive Agent to help evaluate DOD's progress in integrating and developing space personnel over time. One objective of DOD's human capital strategy is to collect the data necessary to manage space personnel and the strategy implementation plan called for an evaluation plan to compare the results to goals. The Executive Agent has not provided leadership by developing services' space cadre performance measures in conjunction with the services. Instead, the Executive Agent has deferred to the services because, according to DOD officials, the differences among the services' space activities make uniform performance measures inappropriate. However, we observe that the Executive Agent and the services could work together to develop defensewide performance measures. Although some performance measures could be the same across the services, others may need to be tailored for service-unique

situations. Even though the services have provided information on their space cadres to the Executive Agent, they have not provided performance measures linked to goals. Without such performance measures and a plan to evaluate progress, the Executive Agent does not have indicators that would show if the services' space cadre activities are appropriately synchronized. As a result, the Executive Agent, the Secretary of Defense, and Congress may not be able to monitor the services' progress in meeting their goals.

In the absence of continuous proactive defensewide space cadre leadership, the services' progress in planning and completing their initiatives to develop and manage their own space cadres has varied since our August 2004 report. The Space Commission identified the need for DOD to develop space leaders for the future through focused career development, education, and training because DOD was not yet on course to develop the space cadre the nation needed. The services are pursuing their own separate initiatives to address the unique needs of their particular service and these are in various stages of completion. Without proactive DOD leadership and oversight with regard to the services' initiatives, neither the Secretary of Defense nor Congress will have the assurance that the services are obtaining and developing the space cadre that was called for by the Space Commission. Each service continues to identify the members of its space cadre, but the Air Force is the only one to have formally included enlisted personnel as space cadre members and has begun to identify civilian space cadre members. The Air Force, which has a space human capital strategy and space cadre management focal point, recently issued a space professional career guide providing guidance to space personnel on career development and paths, and established space experience codes for use in assigning personnel to space positions. The Air Force has also been working on personnel certification to indicate the depth of space expertise and is planning to issue a policy document to require continuing management of its space cadre. The Navy issued its space human capital strategy in January 2005 and established an organizational focal point for its space cadre in May 2005. The Navy also budgeted funds for the first time to support space cadre management, contractor support, and training. The Army has had a program for its space operations officers since 1999, but it does not have an approved space cadre strategy or a permanent organizational focal point for space cadre management. However, the Army is conducting an analysis of its space personnel, which it expects to complete in September 2005, that will recommend future courses of action and alternatives for a space cadre management office. The Marine Corps, which has a strategy and focal point, continues to implement its strategy's initiatives, such as

developing education and training requirements for its space cadre and an implementation policy to delineate space roles and responsibilities.

We are making recommendations designed to provide accountability by defining and institutionalizing space cadre management responsibilities and structure and to help DOD better monitor and evaluate the actions it has taken to integrate and develop its space cadre. In commenting on a draft of this report, DOD agreed with these recommendations.

Background

Many DOD components are involved in a variety of space activities. The U.S. Strategic Command, one of DOD's joint combatant commands, is responsible for the space and global strike mission, and it establishes overall operational requirements for space activities. The services provide support to the U.S. Strategic Command to meet these requirements. The Air Force Space Command is the principal service command providing space forces for the U.S. Strategic Command. The Air Force is DOD's primary procurer and operator of space systems that are used by others throughout DOD. The Navy operates space systems that contribute to ultra high frequency communications and is responsible for acquiring the Mobile User Operations System, the next generation of ultra high frequency satellite communication systems. The Army controls a defense satellite communications system and operates ground mobile terminals. The Army Space and Missile Defense Command conducts space operations and provides planning, integration, and control and coordination of Army forces and capabilities. In the case of the Marine Corps, space capabilities provide the warfighter with intelligence, communications, and position navigation. The Office of the Secretary of Defense, the Joint Staff, the National Reconnaissance Office, and various other DOD components also participate in space activities.

Space activities are a significant part of the DOD budget each year. To capture the funding for DOD's space activities, DOD established a virtual (or crosscutting) major force program for space in its Future Years Defense Program. The space program budget request comprises about 5.4 percent of DOD's total funding, or approximately \$22.7 billion for fiscal year 2006. The majority of the space funding program is allocated to acquisition of space systems, including \$11.0 billion for research, development, test, and evaluation and \$7.8 billion for procurement. Funding for space military personnel is about \$1.1 billion, or about 5 percent of the total for the space program. As table 1 shows, the Air Force receives approximately \$20.1 billion, which is about 92.6 percent of the funding in the space program. The rest is divided among the Department

of the Army, the Department of the Navy (Navy and Marine Corps), and other defense components.

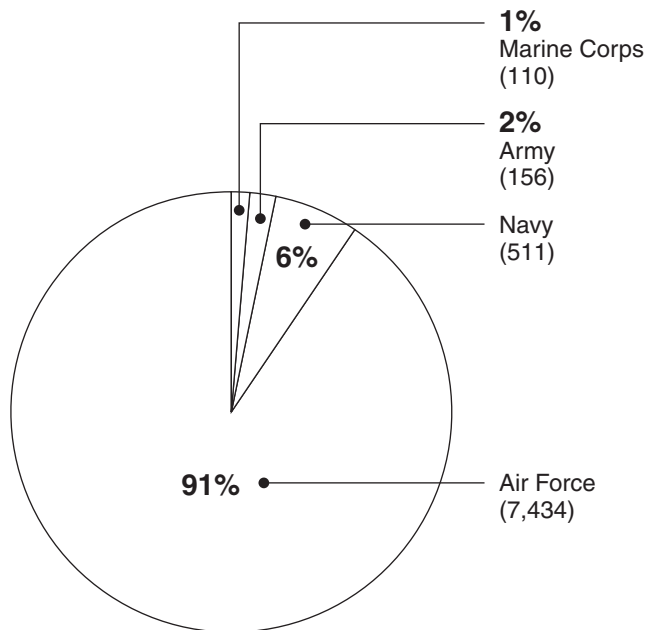
Table 1: DOD Crosscutting Space Budget for Fiscal Year 2006

Dollars in millions	
By DOD component	
Air Force	\$20,992
Navy	\$916
Army	\$413
Other defense	\$342
Total	\$22,663
By budget title	
Military Personnel	\$1,124
Operation & Maintenance	\$2,684
Procurement	\$7,824
Research, Development, Test, Evaluation	\$10,965
Military Construction	\$66
Total	\$22,663

Source: DOD's Fiscal Year 2006 Future Years Defense Program, May 2005.

Due to continuing concerns about DOD's management of space activities, in October 1999 Congress chartered the Commission to Assess United States National Security Space Management and Organization. In its January 2001 report, the commission unanimously concluded that the security and well-being of the United States, its allies, and friends depend on the nation's ability to operate in space. The commission made recommendations to DOD to improve coordination, execution, and oversight of the department's space activities. One issue that the commission identified was the need to create and maintain a highly trained and experienced cadre of space professionals who could master highly complex technology, as well as develop new space operations concepts. Further, the commission concluded that DOD did not have a strong military space culture, which included focused career development, education, and training. In October 2001, the Secretary of Defense directed the military departments to promulgate guidance for developing and maintaining a cadre of sufficient numbers of space-qualified professionals. As shown in figure 1, the services have identified a total of about 8,200 space personnel with space experience, education, and training throughout DOD, with the Air Force having 91 percent of the total or 7,434 space personnel.

Figure 1: Number of DOD Space Personnel by Military Service



Source: GAO analysis of data provided by the military services.

The Space Commission also considered several options for the management and organization of national security space. The commission recommended the establishment of an Under Secretary of Defense for Space, Intelligence, and Information, who would provide policy, guidance, and oversight for space in order to help ensure that space-related issues are addressed in the department at an appropriately influential level. Instead of creating an Under Secretary of Defense, the Secretary of Defense chose to address this organizational and leadership issue with alternative actions. In June 2003, a DOD directive designated the Secretary of the Air Force as the DOD Executive Agent for Space, with the Executive Agent responsibilities delegated to the Under Secretary of the Air Force.

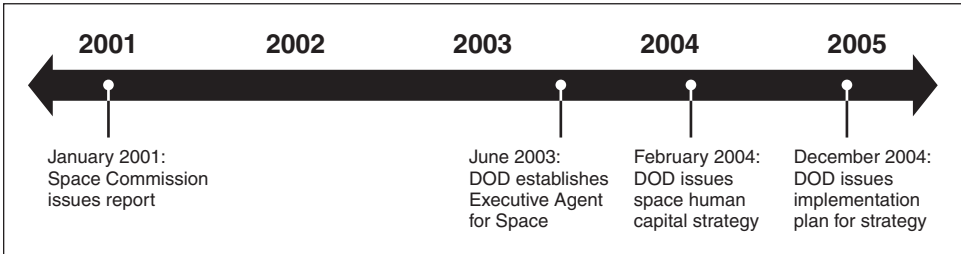
Until recently, the Under Secretary of the Air Force also served as the Director of the National Reconnaissance Office, which is a DOD intelligence agency that designs, builds, and operates the nation's reconnaissance satellites, in addition to serving as the Executive Agent for Space. The Executive Agent exercises DOD-wide responsibilities for planning and programming of space activities and for space major defense acquisitions programs. In performing these responsibilities, the Executive

Agent reports to the Secretary and Deputy Secretary of Defense and is subject to the authority, direction, and control of the Secretary of Defense, according to the DOD directive. However, the directive contains no specific provisions related to the Executive Agent’s role and responsibilities for the defensewide space cadre. Title 10 of the United States Code provides the secretaries of the military departments with functions related to their personnel, including recruiting, organizing, training, and maintaining. As a result, the Executive Agent works with the services on developing their space cadres and addresses DOD-wide issues related to the space cadre, according to an Office of the Secretary of Defense official. DOD has established a structure of groups to oversee and conduct defensewide space cadre development activities, including the Space Professional Oversight Board, which is composed of the Executive Agent and senior leadership from the services and other DOD components.

DOD Has Made Limited Progress in Integrating and Developing Its Space Cadre

Since the January 2001 Space Commission report highlighted DOD’s need to develop and maintain a space cadre, DOD has made limited progress on departmentwide space cadre actions. DOD has fallen behind its planned schedule for implementing the February 2004 space human capital strategy. DOD’s space human capital strategy established direction for the future by including goals and objectives for developing and integrating space personnel. DOD’s plan to implement the strategy included specific tasks related to departmentwide space personnel management, education and training, and critical positions. As of June 2005, DOD had completed three of the nine tasks scheduled for completion by March 2005 and had taken actions on some of the others. The dates of key management milestones related to the development of the defensewide space cadre are shown in figure 2.

Figure 2: Timeline of Key Management Milestones Related to Defensewide Space Cadre Development



Source: GAO analysis.

Although the Space Commission expressed concerns about DOD's space cadre in its January 2001 report, DOD did not have a defensewide strategy to develop and integrate its space cadre. In our April 2003 report, we reported that the services had produced initial guidance on developing and managing their own space professionals as directed by the Secretary of Defense, and recommended that a departmentwide space human capital strategy be established. According to DOD's February 2004 strategy, key actions to address the strategy's objectives were all scheduled to be completed by December 2004, except for a few that were to recur each year. As of our August 2004 report, none of these actions had been completed, although DOD had begun implementing some of them. Actions that were under way at that time included:

- preparing for an education and training summit;
- evaluating space cadre best practices;
- developing policy on human capital development and use;
- determining the scope, nature, and specialties associated with space personnel certification; and
- issuing a call for demonstration projects.

In our August 2004 report, we recommended that DOD develop a detailed implementation plan for the key actions in its strategy. In December 2004, DOD issued its implementation plan for the space human capital strategy. A number of the plan's tasks are the same or similar to the key actions called for in the space human capital strategy. However, the plan's tasks were more specific than the strategy's actions, and each task included the offices responsible, estimated completion date, and whether they were recurring. Many of the tasks were scheduled to be completed by November 2005, and a few did not have estimated completion dates. As a result, the implementation of the strategy was extended by almost 1 year when the implementation plan's tasks replaced the strategy's actions.

The implementation plan contained 30 tasks that were grouped into three broad areas: management, education and training, and space critical positions. Management tasks were intended to develop a DOD-wide assessment and oversight function that would provide feedback to the services on their compliance with the strategy. These tasks included developing an evaluation plan to assess the status of the space cadre and a DOD instruction on management of the space professional development program. The tasks for education and training included recommending actions needed to correct overlaps and gaps in space education and training across the services, improving space-related professional military education, and creating educational opportunities to fulfill requirements.

Most of the tasks in the implementation plan relate to the space critical positions that are outside the military services, such as in joint, defense agency, or multiservice organizations. These tasks are directed toward developing an inventory of space critical positions that would have specific requirements for the personnel assigned to them. These implementation plan tasks were designed to lead to a DOD space critical position program to help manage these positions and the assignment of personnel to them.

DOD has begun to implement the tasks in its implementation plan, but it has not met the scheduled completion dates for all nine tasks scheduled to be completed by March 2005. As of June 2005, three of these nine tasks were completed on schedule and one other task, which did not have an estimated completion date, was also completed. Table 2 below shows the status of these implementation plan tasks.

Table 2: Status of Selected Tasks in DOD Strategy Implementation Plan

Tasks	Status
Management	
Services brief the Space Professional Oversight Board on development efforts and activities	Completed
Develop an evaluation plan for space professional development	Not completed
Education and training	
Hold education and training summit ^a	Completed
Evaluate current space-related professional military education and recommend adjustments as needed	Not completed
Determine which educational and training programs are applicable for communitywide use	Not completed
Identify existing curricula, course materials, and classes	Not completed
Critical positions	
Create a baseline proposal for space critical positions	Completed
Identify where space personnel are at the DOD-wide level	Completed
Identify where space personnel should be at the DOD-wide level	Not completed
Identify space critical positions	Not completed

Source: GAO's analysis of DOD information.

^aIn the DOD strategy implementation plan, this task has a completion date to be determined. DOD held an education and training summit in October 2004.

The six uncompleted tasks were not completed as planned for various reasons. Rather than develop a defensewide evaluation plan, the Executive Agent deferred the responsibility for space cadre evaluation to the

services. The space-related professional military education task has been delayed because the Military Education Coordination Council, which is an advisory body to the Director of the Joint Staff on education issues, did not select space as a special area of emphasis for this year. The Executive Agent is still working on the task of determining which educational and training programs are applicable for communitywide use and identifying existing curricula, course materials, and classes. The Executive Agent has not completed the task of identifying where space personnel should be at the DOD-wide level because it has not yet issued a tasking to DOD components to provide this information. The Executive Agent has not completed the identification of space critical positions because this task depends on DOD components' providing the information called for in the previous task.

Defense-wide space cadre leadership has not always been proactive, which has contributed to delays in implementing the space human capital strategy. Delays were partly caused by the fact that the Executive Agent gave space cadre development a low priority. In December 2002, the Executive Agent stated that he needed to devote more attention to space cadre development because his first priority had been to address issues related to major space acquisition programs. No defense-wide space cadre actions were taken during this time. In June 2004, the Executive Agent stated that the space cadre was a higher priority item for him now due to the importance of space and the growth of the space cadre. He also stated that he thought that good progress had been made in developing the DOD space cadre. In 2004, DOD developed the space human capital strategy and its implementation plan. In addition, the departure of the Executive Agent in March 2005 caused actions related to some of the implementation plan's tasks to be delayed, such as tasking DOD components to provide information on where their space positions should be at the DOD-wide level.

Delays in implementing the human capital strategy on schedule have also been due partly to challenges in achieving consensus on defense-wide space cadre actions, according to DOD officials. Specifically, one challenge is the need for all of the services and other appropriate organizations within DOD to concur with any defense-wide changes related to space cadre development activities. Reaching consensus can be difficult because of the differing space roles and cultures of the services. For example, the Air Force views space as a warfighting medium and thinks in terms of space power. The Air Force has by far the most major space programs and is the only service with extensive space operations, such as space launch, space control, and satellite systems. The other services tend

to view space as a force enhancer because they are primarily users of space to support their missions. Another challenge is the difficulty inherent in making timely changes in a large organization such as DOD.

DOD's Space Cadre Management Approach Is Incomplete

Although DOD has developed a space human capital strategy and implementation plan to address space cadre issues, DOD's management approach for the departmentwide space cadre is inconsistent with a results-oriented management approach in two areas. First, there is no detailed DOD guidance for providing accountability by institutionalizing space cadre responsibilities and establishing a structure for a board and working groups to ensure that space cadre development and management functions continue to be performed. Second, DOD has not developed performance measures and an evaluation plan that DOD and Congress could use to assess space cadre professional development. As a result of the lack of a complete management approach, DOD may not be able to fully address the concern of the Space Commission that it lacked a strong military space culture that includes focused career development and education and training.

DOD Has Not Established Accountability by Issuing Guidance to Institutionalize Space Cadre Authority and Responsibilities

DOD has not issued detailed guidance to institutionalize DOD's space cadre authority and responsibilities to ensure accountability for space cadre development and management functions to be performed on a continuous basis by the Executive Agent, the services, and other appropriate DOD components. Such detailed guidance could include specific authority and responsibilities for the Executive Agent and the services on space cadre management and oversight, education and training, and space critical positions, as well as a structure for multiservice organizational entities to carry out these space cadre responsibilities.

Executive agent is a term used to indicate a delegation of authority by the Secretary of Defense to a subordinate to act on the Secretary's behalf. According to a DOD directive issued in September 2002, the nature and scope of an executive agent's responsibilities, functions, and authorities shall be prescribed at the time of assignment and remain in effect until revoked or superseded.¹ The June 2003 DOD directive stipulates that the Executive Agent for Space shall develop, coordinate, and integrate plans and programs for space systems and the acquisition of space major

¹ Section 3.1, DOD Directive 5101.1, *DOD Executive Agent*, Sept. 3, 2002.

defense acquisition programs to provide operational space force capabilities to ensure the United States has the space power to achieve its national security objectives. However, the specific authority and responsibilities of the Executive Agent for Space related to the defensewide space cadre are not defined in this directive. Therefore, there is no defensewide accountability for developing and integrating the space cadre that was called for by the Space Commission. DOD included in its space human capital strategy general space cadre responsibilities that were derived from the directive, including that the Executive Agent has the responsibility to lead efforts to synchronize the services' space cadre activities and to integrate the services' space personnel career fields to the maximum extent practicable.

The Executive Agent established a structure of three groups to address various activities related to the defensewide space cadre, but there is no defensewide guidance to require this structure. As called for in the strategy, the Executive Agent established the Space Professional Oversight Board, which is the senior officer forum for the discussion and resolution of matters concerning space professional development within DOD. The board is chaired by the Executive Agent, with senior representatives from the services and various other DOD organizations. As of March 2005, the oversight board had held two meetings that included briefings and discussions on the space personnel of each service and of the National Reconnaissance Office, space graduate education, space critical positions, and space acquisition personnel. In addition, the Executive Agent has chartered two working groups below the level of the board. The Human Capital Resources Working Group, which includes personnel from the services and other DOD components, is responsible for implementing the strategy by supporting the oversight board and acting as the primary action working group for the development of space professionals. The Joint Space Academic Group includes representatives from the Naval Postgraduate School and the Air Force Institute of Technology and was chartered to help ensure that the graduate education needs of military space professionals are met, particularly at these two schools.

DOD has not developed specific defensewide space cadre guidance because it has not completed identifying the key space cadre responsibilities and management structure that should continue over time. DOD could be better able to develop specific DOD guidance after it makes progress in completing the tasks to implement its space human capital strategy. Without detailed DOD guidance to require the continuation of defensewide development and management functions, the Executive Agent and the services will not be in the best position to continue to make

improvements to the defensewide space cadre and move toward establishing a sufficient number of space professionals with the required training, education, experience, and vision to advance the use of space power and transform military operations.

DOD Has Not Developed Performance Measures to Assess Space Cadre Development

DOD has not developed performance measures and a plan to evaluate those measures in order to assess space cadre professional development and management, as provided for in a results-oriented management approach. Performance indicators and an evaluation plan would help DOD measure program outcomes and compare results to goals. Sound general management tenets, embraced by the Government Performance and Results Act of 1993, require agencies to pursue results-oriented management, whereby program effectiveness is measured in terms of outcomes or impact, rather than outputs, such as activities and processes.² Such a management approach can provide DOD and the military services with a framework for strategic planning and effectively implementing and managing programs. One principle of results-oriented management is to define the program's overall purpose, mission, and intent, such as DOD has done in its space human capital strategy. Another principle is to describe detailed implementation actions and DOD has issued an implementation plan for its strategy that includes implementing tasks. Critical elements of an implementation plan include performance indicators, which are mechanisms to measure outcomes of the program, and an evaluation plan, which serves as a means to compare and report on program results versus performance goals.

The DOD directive establishing the Executive Agent required the services to provide the Executive Agent with key indicators reflecting the status of, or changes to, their cadre of space professionals to support the Executive Agent's planning, programming, and acquisition activities. In addition, DOD's space human capital strategy and its implementation plan provided for the collection of defensewide data on the services' space cadres and an evaluation plan to assess their performance. The strategy called for the Executive Agent to collect data from the services in the first phase of the strategy's implementation by April 2004. The strategy's implementation plan also contained the following goal: ensure the services, combatant commands, and agencies (as necessary) develop space professionals to fulfill their unique mission needs. According to the implementation plan,

² Pub. L. 103-62 (1993).

this goal is to be accomplished by oversight in the form of an evaluation plan. An evaluation plan could include various performance measures, such as education levels, space positions unfilled, promotion and retention rates, and personnel availability projections.

DOD has not developed performance measures and an evaluation plan, as called for in the implementation plan. Instead, the Executive Agent deferred to the services to develop performance measures because defense officials believe the services' space cadres are so different that it is not appropriate to develop uniform defensewide performance measures. However, we observe that the Executive Agent should not have deferred to the services and that it is appropriate for the Executive Agent and the services to develop defensewide performance measures. Although some performance measures could be uniform across the services, such as education levels and promotion and retention rates, other performance measures could be tailored for service-unique situations. As an example of a service-unique situation, the Air Force brings in its space officers at the entry level and may want a performance measure to assess their progress in bringing in entry-level space personnel. However, the other services do not place officers in the space cadre at the entry level and would not need a similar measure. The Executive Agent is relying on the services' briefings to the oversight board to provide indicators on the status of their space cadres, such as numbers, skills, and competencies of the services' space personnel and numbers and locations of space positions. However, these briefings did not contain detailed performance measures related to goals for the defensewide space cadre. In addition, the Executive Agent has not developed a defensewide evaluation plan because it has deferred to the services to assess the state of their cadres. DOD officials asserted that the services are taking more initiative to develop their own space cadres, thus reducing the need for oversight by the Executive Agent. However, we observe that the services' performance measures alone, without a defensewide evaluation plan, would not provide the Executive Agent with an evaluation of progress in developing the defensewide space cadre.

The services have not reported any performance measures to the Executive Agent and there is no DOD requirement for the services to have such performance measures. Without quantifiable, detailed performance measures and a plan to evaluate progress, each service will continue to develop and manage a service-unique cadre of space professionals at its own pace to support its unique mission requirements. However, the Executive Agent, as well as the Secretary of Defense and Congress, may not be able to assess actions taken by the services by comparing their results to goals. In addition, this may make it more difficult for the

Executive Agent to synchronize the space cadre activities of the DOD, as called for in the space human capital strategy and its implementation plan.

Services' Progress on Space Cadre Development Initiatives Varies

In the absence of continuous proactive defensewide space cadre leadership, the military services have made varying progress in planning and completing initiatives to develop and manage their space cadres since our August 2004 report.³ The services have each taken their own separate actions to consider adding and identifying additional personnel and positions to their space cadres. In addition, each service has planned and pursued its own other initiatives to address the unique needs of its space cadre and these initiatives are in various stages of completion. Some of these initiatives include working on policy guidance related to the space cadre, completing space cadre strategies, developing certification of space professionals, identifying and increasing space education opportunities, and assigning codes to personnel based on the nature of their space expertise. Without proactive DOD leadership and oversight with regard to the services' initiatives, neither the Secretary of Defense nor Congress will have the assurance that the services are obtaining and developing the space cadre that was called for by the Space Commission.

Military Services Continue to Identify Their Space Cadres

The services have each continued to identify their space cadres, which includes obtaining information on their personnel, such as their space education and experience, and on space positions, such as their locations and requirements. The services have obtained this information by surveying space personnel and organizations where space personnel serve and by querying their personnel systems. Each service has military officers as space cadre members and is considering the inclusion of others, such as additional officers, enlisted personnel, and civilian employees. The Air Force is the only service that has formally included enlisted personnel as space cadre members and it is currently identifying civilians, which it expects to complete by January 2006. Furthermore, the Air Force has established and continued to build a database that captures education and experience information on each of its space professionals. The Navy is working to formally identify the enlisted, reserve component, and civilian members of its space cadre, with the goal of identifying reserve officers and civilians by the end of November 2005 and the enlisted members shortly thereafter. The Army is conducting a space personnel force

³ [GAO-04-697](#).

management analysis that is expected to be completed in September 2005, which includes considering expanding its space cadre beyond its current space operations officers. The Marine Corps does not currently have enlisted or civilian personnel in its space cadre, but it is considering including additional active and reserve officers. As shown in table 3, there are a total of 8,211 officer and enlisted space personnel across DOD.

Table 3: DOD Space Personnel by Service as of March 2005

Service	Number of space officers	Number of space enlisted	Total number of space personnel
Air Force	6,051	1,383	7,434
Navy	511	0 ^a	511
Army	156	0 ^b	156
Marine Corps	110	0	110
DOD-wide	6,828	1,383	8,211

Source: GAO's analysis of information provided by the services.

^aThe Navy is working to formally identify the enlisted members of its space cadre.

^bThe Army is conducting an analysis to determine if its space cadre will include enlisted personnel.

In addition to identifying their space personnel, the services have also identified 7,662 positions for their space personnel throughout DOD at the service, joint, and interagency levels. DOD has 1,401 DOD space positions, which is about 18 percent of the total, located in organizations that are not responsible to the military departments. Examples of these organizations outside the services include the Joint Staff, combatant commands, and the National Reconnaissance Office. For example, the U.S. Strategic Command, a joint combatant command responsible to the Secretary of Defense, has 275 officer positions, or 23 percent of its total officer positions, which call for expertise in space. Space positions involve responsibilities that encompass the entire life cycle of space systems, from research, development, and acquisition to space launch and operations. As shown in table 4, the Air Force has by far the largest number of space positions throughout DOD at 7,195, accounting for approximately 94 percent of the total DOD positions.

Table 4: DOD Space Positions by Service as of March 2005

Service	Total number of space positions	Number of space positions outside the service	Percentage of space positions outside the service
Air Force	7,195	1,153	16
Navy	248	160	65
Army	151	56	37
Marine Corps	68	32	47
DOD total	7,662	1,401	18

Source: GAO's analysis of information provided by the military services.

The Navy and Marine Corps have significantly more space personnel than space positions because their space personnel generally rotate between space positions and other positions that are not considered space positions. However, the Air Force and Army have approximately the same number of space personnel and space positions. This is because Air Force and Army space personnel, after they have become part of the space cadre, tend to remain in space positions throughout their careers.

Services Are Implementing Their Own Space Cadre Initiatives

In addition to identifying their space cadres, each service has continued to implement its own initiatives to address the unique needs of their space cadres since our August 2004 report, and they are in various stages of completion. The Air Force has continued to take actions to implement its space cadre strategy. The Navy has published its space cadre strategy and established the space cadre advisor as its permanent organizational focal point. The Army has continued to conduct an analysis to determine future courses of action for its space cadre, which could lead to an approved space cadre strategy and a permanent organizational focal point. The Marine Corps continues to implement the initiatives contained in its space cadre strategy.

Air Force Continues to Take Actions to Develop Its Space Cadre

In our August 2004 report, we noted that the Air Force approved a strategy in July 2003 that provides guidance on developing and sustaining the Air Force's space cadre and has an implementation plan for the execution of the strategy's initiatives. The implementation plan focused on six key initiatives: identification and classification of space personnel, certification of space personnel, professional development of space personnel, space positions and requirements, establishment of a permanent space professional management function, and education and training of space personnel. We also noted in our August 2004 report that

the Air Force designated the Air Force Space Command as the focal point for managing career development, education, and training for the Air Force space cadre.

The Air Force has continued to implement its space human capital strategy's initiatives since our last report. In order to identify and classify its space cadre, referred to as space professionals, the Air Force has identified the unique space expertise that differentiates space professionals from other Air Force career fields and has sorted this space expertise into 11 categories, or space experience codes, such as satellite systems and space control. Space professionals have been assigned these space experience codes based on the nature of their space education and experience. To address the certification of space professionals, the Air Force has established a three-level certification program to measure progress throughout an individual's career. Air Force officials reported that they are placing their space professionals at one of the three certification levels to indicate the depth of their space expertise. Achieving and maintaining the certification levels requires continued space education, training, and experience over the course of a career and is intended to provide the space professional with a career path. In addition, the Air Force has issued career planning guidance for all officer, enlisted, and civilian space professionals to provide general information on career development and career paths, including information on the three certification levels. In order to address another of the strategy's key initiatives, the Air Force is determining the education and experience requirements for all of its space positions. Moreover, the Air Force has completed a career opportunities guide, which contains information on all Air Force space positions, including the locations of and requirements for these positions. According to Air Force officials, the purpose of this information is to better identify and track space professionals and assign them to space positions. To further address management of its space professionals, the Air Force is planning to issue an Air Force policy document and an Air Force Space Command instruction to require continuing management functions for Air Force space professionals. Air Force officials also related that they have undertaken significant efforts to brief personnel on the Air Force space professional development program, briefing a total of 4,950 personnel at 36 DOD locations between August 2004 and April 2005.

In addition, the Air Force Space Command established the National Security Space Institute, formerly known as the Air Force Space Operations School, in October 2004 in order to address the Air Force strategy's initiative to institute stronger, technically oriented space

education and training programs. The vision of the National Security Space Institute is to be a multiservice organization that provides integrated military and civilian space power education and training to senior and intermediate space leaders. The school has grown by 44 percent in recent years, from 629 resident students in fiscal year 2000 to 904 in fiscal year 2004. Although the Air Force made up 79 percent of the National Security Space Institute's military students in fiscal year 2004, military and civilian students from throughout DOD have attended the institute. Among the courses offered by the National Security Space Institute is Space 200, a 4-week course for midcareer space professionals with an emphasis on warfighter integration of space power. The Air Force has made Space 200, which has significant technical, nuclear, and acquisition content, a requirement for the intermediate certification level for its space professionals. Space cadre members from all the services regularly attend this course. For example, the Army is now sending its new space operations officers to part of the Space 200 course at the National Security Space Institute, which has replaced some, but not all, of the Army's own space operations officer qualification training.

Navy Has Issued a Space Cadre Strategy and Established an Organizational Focal Point

In August 2004, we reported that the Navy's actions to develop and manage its space cadre were limited because it had not developed a space human capital strategy to provide direction and guidance for Navy actions or established a permanent management focal point to provide centralized leadership to develop the strategy and oversee implementation. However, the Navy had designated an advisor for space cadre issues.

Since our last report, the Navy approved a space cadre human capital strategy in January 2005, which incorporates the Navy's long-term goals and approaches and is consistent with DOD's space human capital strategy. Among the objectives included in the strategy are the development and implementation of space professional development policies and practices and the creation of a human capital management team to address space professional development issues. In May 2005, the Navy revised its space policy implementation guidance to delineate Navy space roles and responsibilities that included designating the Navy space cadre advisor to act as a manager for the space cadre.⁴ This action established a permanent organizational focal point by formalizing the responsibilities of the Navy space cadre advisor. In addition, in March 2005, the Navy designated the Commander, Naval Network Warfare

⁴ OPNAV Instruction 5400.43, May 20, 2005.

Command, as its space cadre functional authority, which is the senior Navy leader for the development and management oversight of the Navy space cadre. Finally, the Navy provided funding to manage the Navy space cadre community for the first time beginning in fiscal year 2005 and has allocated \$851,000 for this purpose for fiscal year 2006, including funding for space cadre advisors, contractor support, and training.

Army Is Conducting Analysis to Determine Future Space Cadre Actions

In our August 2004 report, we noted that the Army has had a space cadre consisting of space operations officers since 1999. The Army issued career development guidance for its space operations officers and developed a qualification training course to provide space operations officers with the essential skills needed to plan and conduct space operations. We also reported that the Army had been studying if enlisted personnel should be added to its space cadre. Although the Army had taken these actions, we reported that it did not have clear goals and objectives for the future of its space cadre because it had not developed a space human capital strategy or identified a permanent organizational focal point to manage its space cadre.

Since our last report, the Army has incorporated its enlisted study into an overall force management analysis of the Army space cadre, which is considering officers, enlisted, and civilian personnel for inclusion in the cadre. This force management analysis has been under way since June 2004 and consists of four separate phases. The first two phases centered on developing a potential definition of the Army space cadre and identifying space cadre roles, missions, organizations, functions, and skills based on this potential definition. The third phase involved the development of comprehensive courses of action related to Army space cadre policies. The Army is currently engaged in the fourth phase of the force management analysis, which involves a comprehensive analysis of Army doctrine, organization, training, materiel, leadership and education, personnel, and facilities and the development of an Army space cadre strategy. The Army expects to complete its force management analysis by September 2005 and provide the results to the Army Vice Chief of Staff for decision. When approved, the Army plans to use the results of the force management analysis to establish a future course of action by publishing an Army space human capital strategy, and to determine new roles and tasks for an Army space cadre office that would be a permanent organizational focal point.

Marine Corps Continues to Implement Its Space Cadre Strategy

In our August 2004 report, we stated that the Marine Corps identified an organizational focal point to manage its space cadre. We also reported that the Marine Corps has a space cadre strategy to develop and manage its

space cadre and has an implementation plan to track initiatives. Among the initiatives included in the Marine Corps' strategy were: improving space operations professional military education for all officers, focusing the graduate education of space operations students, and leveraging interservice space training.

Since our last report, the Marine Corps has continued to implement initiatives contained in its strategy. For example, in order to improve space professional military education, the Marine Corps has revised its Command and Staff College curricula to address space issues. In addition, the Marine Corps is developing education and training requirements for its space officers and expects to publish these requirements, when finalized, in a training and readiness manual. In order to focus the graduate education of its space operations students to support service needs, the Marine Corps has identified positions requiring graduate degrees and is assigning space operations officers to these positions based on their Naval Postgraduate School coursework. Additionally, the Marine Corps has made progress on leveraging interservice space training by working with the Air Force's National Security Space Institute to ensure Marine Corps' training requirements for its space operations staff officers are met. Finally, the Marine Corps is in the process of drafting an implementation policy to delineate space roles and responsibilities and to describe how the Marine Corps will engage in national security space activities.

Conclusions

Recent military operations have demonstrated that space-based capabilities are critical to mission success. Although DOD has benefited from a cadre of space professionals who are educated, motivated, and skilled in space activities, DOD has taken limited actions to ensure the future success of its space cadre because it has not established a complete results-oriented management approach. Without guidance to require accountability for space cadre development and management functions, DOD's efforts to make improvements to its space cadre may not continue. Further, without quantifiable, detailed performance measures for its space cadre, DOD may not be able to evaluate the progress the services have made by comparing results to goals. Without proactive DOD leadership and oversight with regard to the services' initiatives, neither the Secretary of Defense nor Congress will have the assurance that the services are acquiring and developing the space cadre that was called for by the Space Commission. As a result of the lack of a complete management approach, DOD may not be able to move toward establishing a defensewide cadre of space professionals with the required training, education, experience, and vision to advance the use of space power and transform military

operations. DOD also may not be able to fully address the concern of the Space Commission that it lacked a strong military space culture that includes focused career development and education and training. In addition, the Space Commission stated that DOD must place a high priority on intensifying investments in space career development, education, and training to develop and sustain a highly competent and motivated space cadre.

Recommendations for Executive Action

We recommend that the Secretary of Defense take the following two actions:

- Issue defensewide guidance to provide accountability by defining and institutionalizing space cadre authorities and responsibilities, to include:
 - defining the Executive Agent's specific authority and responsibilities related to the defensewide space cadre and leadership role in synchronizing the services' space cadre activities;
 - specifying space cadre human capital development and management functions for the services and other DOD components; and
 - defining the defensewide structure related to developing and managing the space cadre, such as the Space Professional Oversight Board.
- Direct the DOD Executive Agent for Space, in conjunction with the military services, to develop appropriate performance measures for each service and an evaluation plan to indicate results related to goals in order to help evaluate DOD's progress in integrating and developing its space personnel over time.

Agency Comments

In its written comments on this report, DOD agreed with the recommendations. DOD's comments are reprinted in their entirety in appendix II. DOD also provided technical comments that we have incorporated as appropriate.

We are sending copies of this report to interested congressional committees; the Secretary of Defense; the DOD Executive Agent for Space; the Secretaries of the Army, the Navy, and the Air Force; and the Commandant of the Marine Corps. We will also make copies available to others upon request. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at 202-512-5431 or DAgostinoD@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

A handwritten signature in black ink, reading "Davi M. D'Agostino". The signature is stylized with large, flowing loops and a cursive script.

Davi M. D'Agostino
Director, Defense Capabilities
and Management

Appendix I: Scope and Methodology

To determine the progress the Department of Defense (DOD) has made in implementing the defensewide actions contained in its strategy to integrate and develop its space cadre, we reviewed the status of actions taken on the tasks in DOD's implementation plan for its space human capital strategy. Specifically, we measured DOD's progress in completing the tasks contained in the implementation plan by discussing the implementation with officials in the National Security Space Office and other organizations. We also obtained and analyzed available documentation related to the implementation of the plan's tasks, such as presentations to the Space Professional Oversight Board and minutes of the board's meetings.

To assess DOD's management approach for the departmentwide space cadre, we reviewed and analyzed DOD's approach for implementing its strategy and compared it to a results-oriented management approach. We also analyzed the DOD directive establishing the Executive Agent for Space and DOD's space human capital strategy, both of which provide general responsibilities to DOD components for the space cadre. We discussed the implementation of a management approach for DOD's space cadre development efforts with the Executive Agent's staff and analyzed documentation to assess the actions taken to date to develop performance measures and require continuous space cadre responsibilities. We also discussed DOD's management efforts with officials at the Office of the Secretary of Defense; the Joint Staff; and the U.S. Strategic Command, Offutt Air Force Base, Nebraska. Finally, we discussed defensewide management efforts with representatives of the military services, including the following offices: Air Force Space Command, Peterson Air Force Base, Colorado; the Army Office of the Deputy Chief of Staff for Operations and Plans, Arlington, Virginia; the Army Space Operations Officer Proponency Office, Arlington, Virginia; the Office of the Navy Space Cadre Advisor, Arlington, Virginia; and the Office of Plans, Policies, and Operations, Headquarters, U.S. Marine Corps, Arlington, Virginia.

To determine the progress the services have made since our August 2004 report in planning and completing initiatives to develop and manage their space cadres, we analyzed documentation on strategies, initiatives, and other implementing actions for each service and discussed them with service officials. We also collected and analyzed data on space positions and personnel from all of the services and from the U.S. Strategic Command and on students, staff, and courses from the Air Force's National Security Space Institute. We assessed the reliability of the Air Force's database for its space personnel by (1) reviewing existing information about the data and the system that provided them, and (2)

interviewing Air Force and contractor officials knowledgeable about the data. We determined that the data were sufficiently reliable for the purposes of this report. Offices visited to accomplish this objective were the Air Force Space Command, Peterson Air Force Base, Colorado; the National Security Space Institute, Colorado Springs, Colorado; the Army Office of the Deputy Chief of Staff for Operations and Plans, Arlington, Virginia; the Army Space Operations Officer Proponency Office, Arlington, Virginia; Office of the Navy Space Cadre Advisor, Arlington, Virginia; and the Office of Plans, Policies, and Operations, Headquarters, U.S. Marine Corps, Arlington, Virginia.

We conducted our review from September 2004 through June 2005 in accordance with generally accepted government auditing standards.

Appendix II: Comments from the Department of Defense



Office of the Under Secretary

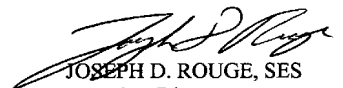
DEPARTMENT OF THE AIR FORCE
WASHINGTON DC 20330

2 September 2005

Ms. Davi M. D'Agostino
Director, Defense Capabilities and Management
United States Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Ms. D'Agostino,

This is the Department of Defense (DoD) response to the GAO draft report, "DEFENSE SPACE ACTIVITIES: Management Guidance and Performance Measures Needed to Develop Personnel," dated August 5, 2005 (GAO Code 350574/GAO-05-833). The Department of Defense generally concurs with the report. Technical comments have been forwarded directly to the GAO staff for consideration.


JOSEPH D. ROUGE, SES
Associate Director
National Security Space Office

Attachment:
DoD Comments to GAO Recommendations

**GAO DRAFT REPORT – DATED AUGUST 5, 2005
GAO CODE 350574/GAO-05-833**

**“DEFENSE SPACE ACTIVITIES: Management Guidance and Performance Measures
Needed to Develop Personnel”**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE RECOMMENDATIONS**

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense issue defense-wide guidance to provide accountability by defining and institutionalizing space cadre authorities and responsibilities to include:

- The Executive Agent’s specific authority and responsibilities related to the defense-wide space cadre and leadership role in synchronizing the services’ space cadre activities;
- Specifying space cadre human capital development and management functions for the services and other DoD components; and
- Defining the defense-wide structure related to developing and managing the space cadre, such as the Space Professional Oversight Board. (pages 31-32/GAO Draft Report)

DOD RESPONSE: Concur

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the DoD Executive Agent for Space, in conjunction with the military services, to develop appropriate performance measures for each service and an evaluation plan to indicate results related to goals in order to help evaluate DoD’s progress in integrating and developing its space personnel over time. (page 32/GAO Draft Report)

DOD RESPONSE: Concur

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Davi M. D'Agostino (202) 512-5431

Acknowledgments

In addition to the contact named above, the following made key contributions to this report: Margaret G. Morgan, Assistant Director; Gabrielle M. Anderson; Alan M. Byroade; Nicole Harms; Renee S. McElveen; and Monica L. Wolford.

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