



Interservice Transfer of Weapon Systems: Examination of the Process with One Case Study

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INTERSERVICE TRANSFER OF WEAPON SYSTEMS

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Abstract

In 2019, Congress added a sixth military branch, the United States Space Force (USSF), to the Department of Defense in the John S. McCain National Defense Authorization Act for Fiscal Year 2019. While not unprecedented, establishing a new military branch has not occurred since the United States Air Force was established in the National Security Act of 1947. As a consequence of establishing a new branch of service, realignment of responsibilities amongst the services and rearranging existing capabilities is necessary. As the USSF builds its capacity to acquire new weapon systems, it is endeavoring to transfer existing capabilities to its portfolio. This qualitative study aims to explore the process by which weapon systems are being transferred and the statutory, regulatory, and policy guidance that defines this process. The process will be illustrated through a comprehensive literature review supported by a case study featuring the Joint Tactical Ground Station, an Army weapon system.

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Introduction

Background

In a century defined by technological advancements and evolving security requirements, the composition of capabilities employed by the United States (U.S.) military needs to adapt to meet the requirements of an increasingly complex understanding of warfare (Department of Defense, 2018). As the U.S. strives to maintain its competitive edge in an environment shaped by rapid innovation, the strategic allocation of military assets and resources has become a critical priority (Pingrey, 2020). The goal of this paper is to explore a key aspect of this transformation: the process of transferring weapon systems from traditional ground forces to the expanding domain of space-based warfare.

The technological advances of the twenty-first century are facilitating a paradigm shift in the way the U.S. projects military power (Weston, 2009). While General Tony McPeak identified Operation Desert Storm as the “First Space War” (Bruger, 1995), Space wasn’t officially identified as a warfare domain until 2017 (Trump, 2017). As a result, the establishment of the United States Space Force (USSF) (National Defense Authorization Act for Fiscal Year 2020. Pub. L. 116-92 133 Stat. 1198, 2019) marked a significant change in how we prepare for war in space. The newest branch of the U.S. military was established to protect American interests beyond Earth's atmosphere, emphasizing the need to consolidate existing capabilities and develop and deploy advanced weapon systems tailored to space warfare (Lambakis, 2021). To date, 23 Air Force missions (Russel, 2020), 11 Army missions, and four Navy missions were identified for transfer to the USSF (Erwin, 2021).

Traditionally a ground-based force, the Army developed numerous systems to support operations with data acquired from space-based sensors and systems. With the rise of space as a

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contested domain, however, there is an emerging imperative to transition some of these systems to the USSF to eliminate redundancy and capitalize on budgetary expenditures (Executive Office of the President, 2019). The transition is not without its challenges, as it necessitates a comprehensive reassessment of weapon system capabilities, logistical considerations, inter-service coordination, and budgetary authority (Saltzman, 2023).

This paper is intended to thoroughly examine the process employed to transfer weapon systems from the Army to the Space Force with emphasis on the case study of the Joint Tactical Ground Station (JTAGS). The paper aims to address the interservice transfer of weapon systems, personnel, intellectual property, materiel, and budgetary authority through the lens of statutes, regulations, and policies at all levels of government. Additionally, this paper will examine best practices developed through prior interservice weapon system transfers as applied to the JTAGS transfer. By doing so, the research endeavors to contribute viable input to the ongoing discourse surrounding the evolution of military capabilities in the era of space warfare.

The subsequent sections of this paper will delve into a statement of the existing problem, a review of pertinent literature, and a discussion of the research methodology. Additionally, the paper will present findings, develop conclusions, and recommend areas for additional research.

Problem Statement

Due to the need to align military capabilities with changing doctrine (Saltzman, 2023), how does the Department of Defense (DoD) propose to transfer weapon systems between services to consolidate space-based capabilities in the United States Space Force? There are many, diverse documents at all levels of government guiding various aspects of interservice transfer. Because the transfer of weapon systems will continue until military capabilities are

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realigned to meet the requirements of changing doctrine (Saltzman, 2023), it is necessary to explore these documents to analyze existing practices.

Statement of Purpose and Research Questions

The purpose of this qualitative study is to examine the current process of transferring a major weapon system from the Army to the Space Force. A case study of the Joint Tactical Ground Station program, which transferred from the Army to the Space Force at the beginning of Fiscal Year (FY) 2024, will be presented.

Research questions:

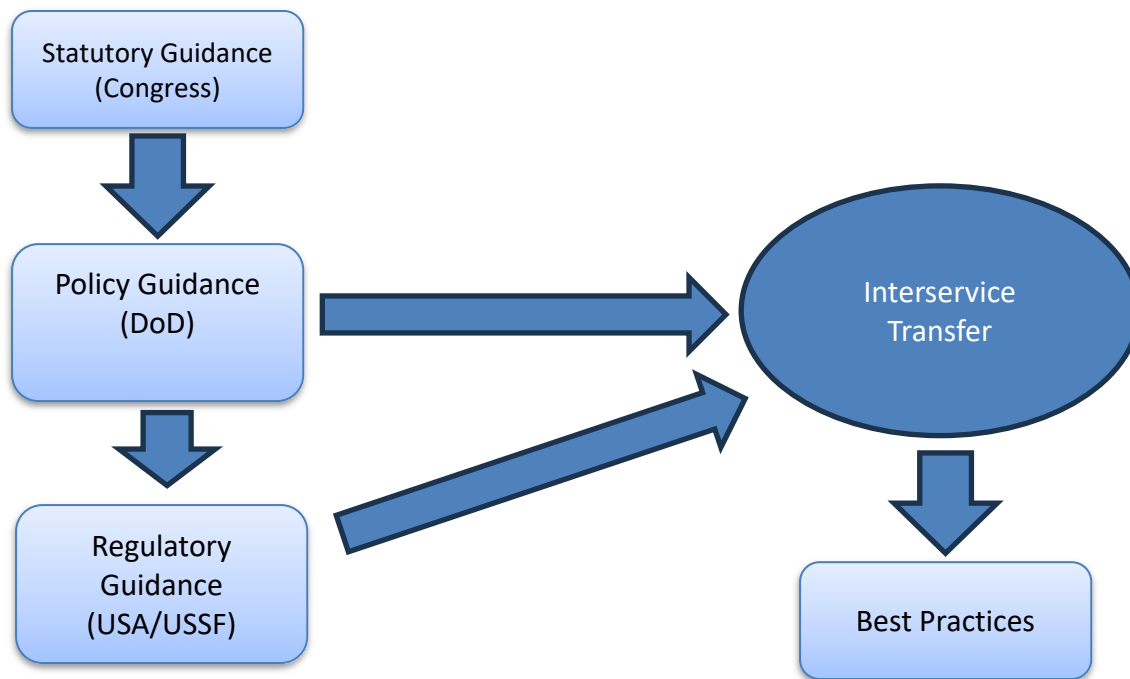
1. What guidance do current statutes provide to address or direct interservice transfer of weapon systems?
2. How do Department of Defense (DoD) level Policies guide interservice transfer?
3. What activities do Army and Space Force regulations implement for the interservice transfer of weapons systems?
4. What are the best practices gleaned from the JTAGS weapon system interservice transfer case?

Conceptual Framework

The conceptual framework of this study describes the objectives of the research process. Through examination of statutory guidance, the extent to which it informs DoD policy and regulations may be revealed. Further, a study of DoD policy and regulations may illuminate how the guidance from Congress was interpreted and disseminated to the services. By comparing

Army and USSF policy and investigating the actual execution of transfer activities for JTAGS, the research may reveal how the services interpreted and exercised guidance from DoD. Figure 1, below, provides a visualization of the conceptual framework.

Figure 1: Conceptual Framework for Interservice Transfer of Weapon Systems



Significance of This Research

The significance of this research lies in its timely response to the United States Space Force's (USSF) anticipated ongoing acquisition of weapon system capabilities via interservice transfers, as highlighted by Saltzman (2023). This paper will collate and examine multi-disciplined guidance and practices employed by the Army and USSF in this context. It will identify and delve into accessible best practices repositories, offering a comprehensive examination of the methodologies of successful weapon system transfers. This analysis not only aims to enhance future transfer processes but also the strategic discourse on military capabilities in space.

Overview of the Research Methodology

This study uses qualitative methodology. This methodology uses a purpose statement and research questions to guide one through the body of the research without reliance on a central thesis (Creswell & Guetterman, 2019). The literature review will outline public law, DoD policy, Army and USSF regulations, articles from periodicals and journals, and select academic papers. Unclassified government-produced briefings, memoranda, spreadsheets, and other temporary documents will be cited in support of the JTAGS case study.

To draw findings from the literature review, the traceability of established guidance from Congress through the DoD to the services will be examined with emphasis on the applicability and timeliness of the guidance. These findings will further inform conclusions and recommendations.

Limitations of the Study

The primary limitation of this study is the available time to conduct research and analysis. Several interservice transfers were already completed or partially completed between the Army and USSF at the time of this writing. However, due to time constraints and limitations on original research, only the JTAGS case will be examined in detail. Additionally, this study will not consider transfers that were completed between the Navy or Air Force and USSF. Interservice transfer of a weapon system is multi-disciplined and requires activity across the entire headquarters staff and subordinate organizations (Matlock, 2023b). This study will focus on those activities involving the transfer of personnel, intellectual property, materiel, and budget authority.

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Summary

This research aims to contribute to the ongoing discourse on the realignment of military capabilities in the era of space warfare by investigating statutes, policies, and regulations at various government levels. JTAGS serves as a case study to examine the interservice weapon system transfer process, addressing activities such as capabilities reassessment, logistical considerations, inter-service coordination, and budgetary authority.

The problem statement and research questions highlight the importance of illuminating the collective guidance from Congress as assessed and implemented by DoD and the services. The study's significance lies in its potential to identify discrepancies in executing guidance and forming recommendations to address those discrepancies.

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Literature Review

Introduction

This literature review provides a thorough examination of the documents that guide the tasks required to successfully complete an interservice transfer of a weapon system, including statutory, policy, and regulatory guidance for the transfer of the weapon system, personnel, intellectual property, materiel, and budget authority. USSF, as a subordinate organization to the Department of the Air Force, follows guidance published by the Department of the Air Force. “As part of the Department of the Air Force, Space Force and Air Force generally follow the same policies, guidance, instructions, and procedures, except where Service-specific implementation is necessary or required” (U.S. Space Force, 2023, Pg. 6). As a result, the literature review will cite Air Force documents. A clear understanding of the process for interservice transfers is required to perform an analysis, develop findings, and draw conclusions regarding the topic.

This literature is organized by primary activities: weapon system transfer, personnel transfer, intellectual property transfer, materiel transfer, and budget authority transfer. Each of these activities is further divided into paragraphs covering statutory guidance, policy guidance, regulatory guidance, and correlating case study documentation.

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Weapon System Transfer

Statutory Guidance:

The National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2020 is the principal document driving the increase in interservice weapons system transfers. In this document, Congress created the United States Space Force and instructed it to consolidate space capabilities under one service. In subsequent NDAA documents, Congressional inquiry further directed DoD to analyze force structures and realign capabilities.

The Senate Armed Service Committee (SASC) Report to the NDAA FY21 directed the Chairman of the Joint Chiefs of Staff (CJCS), in conjunction with the affected service chiefs, to report which missions and personnel should be transferred to USSF and which should remain resident in their respective services (S. Rep. No. 116-236, 2020). In FY 2022 the Army transferred the Satellite Payload, Planning, Management, and Control (SATOPS) function from the Army Space and Missile Defense Command (SMDC) to USSF. This transfer included five

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Wideband Satellite Communications Operations Centers (WSOC), four Regional Satellite Communications Support Centers (RSSC), 300 active-duty personnel, and 200 civilian positions. USSF already operated the space-based assets for WSOC, and this transfer consolidated all the functions of WSOC under one service (Saltzman, 2023).

The House Armed Services Committee (HASC) Report to the NDAA FY23 required the Chief of Space Operations to provide a report to Congress concerning the consolidation of the military's space functions under the Space Force (H.R. Rep. No. 117-397, 2022). This report identifies the transfer of the Theater Missile Warning-Battlespace Characterization (TMW-BC) function, which was performed under the Army by the Joint Tactical Ground Station. In FY24 the Army transferred the TMW-BC function from Program Executive Office for Missiles and Space (PEO MS) to USSF including four JTAGS detachments, one skill qualification training facility, the JTAGS Product Office, 90 active-duty personnel slots, and seven civilian positions. USSF currently operates all the Space-Based Infrared Systems (SBIRS) leveraged by the JTAGS system. This transfer consolidated all the functions of TMW-BC under USSF (Saltzman, 2023).

Case Study Guidance:

In June of 2021, the Vice Chairman of the Joint Chiefs of Staff notified the Deputy Secretary of Defense that the Army and USSF agreed that the Army's missile warning capability, JTAGS, should transfer to USSF. In the memorandum, General Hyten indicated that the transfer should happen no later than the end of FY 2026 (Hyten, 2021).

On 22 July 2022, a General Officer Steering Committee chaired by Major General Shultz convened to review JTAGS and SATOPS transfers. During this session, the official transfer date of JTAGS was set for 1 October 2023 (Shultz, 2022).

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On January 23, 2023, Lieutenant General Patrick Matlock issued a memorandum authorizing Direct Liaison Authority (DIRLAUTH) between Army and USSF counterparts. This was the first time Army personnel directly supporting the JTAGS transfer were permitted to speak directly with their USSF counterparts. The memo specifically excludes the sharing of information that was pre-decisional, proprietary, or non-public resource management information (Matlock, 2023a).

In August 2023, the Department of the Army issued the Headquarters, Department of the Army Executive Order (EXORD) 277-23. This 19-page EXORD codified all the planning activity undertaken before publishing the document and provides broad guidance to the Army staff. It specifically calls for transferring manpower authorizations, equipment, real property usage, supporting training, mission operations, mission sustainment, and modernization functions (Matlock, 2023b). This document was published five weeks before the transfer date.

Personnel Transfer

Statutory Guidance:

The Department of Defense Reorganization Act of 1958 provides statutory guidance for the transfer of commissioned officers from one service to another: “Notwithstanding any other provision of law, the President may, within authorized strengths, transfer any commissioned officer with his consent from the Army, Navy, Air Force, or Marine Corps to, and appoint him in, any other of those armed forces.” (Department of Defense Reorganization Act, 1958, SEC. 11. Chapter 41 (2)). Key points include that the transfer must be ratified by both services, and that the transfer may not exceed authorized end strength for the gaining service.

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Title 10 U.S. Code § 126, enacted into law in 1962, explicitly provides for the transfer of authorized civilian positions between services when deemed necessary by the Secretary of Defense and when approved by the President. This action simultaneously increases the authorization level for the gaining service and decreases it for the losing service.

The Defense Acquisition Workforce Improvement Act (DAWIA) provides statutory guidance for the DoD Acquisition workforce. DAWIA's primary goal is to ensure the availability of skilled professionals to conduct all aspects of acquisition across the DoD Enterprise. This statute provides top-level guidance to DoD for the establishment of training programs across all five service components to ensure that the services comply with minimum standards. The standards applied to training for each service ensure compatibility for transferred acquisition professionals (The Defense Acquisition Workforce Improvement Act, 1990).

Policy Guidance:

DoD Instruction (DoDI) 1300.04, issued in 2017, provides DoD-level guidance for the transfer of enlisted personnel, warrant, officers, and commissioned officers from one branch of service to another. Guidance from DoD specifies that both the gaining and losing services must concur with the transfer and that the gaining service may not exceed the Congressionally mandated end strength. The transfer of warrant officers from the Army to the USSF is not supported, as there is no equivalent rank in the USSF (Department of the Army, 2023). This instruction implements statutory requirements imposed in 1958 by Title 10, U.S. Code Chapter 41 § 716.

DoD Instruction 4000.19, issued in 2020, provides DoD level guidance to the services and establishes the policies necessary to manage agreements between services. While the scope

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of this instruction is broad, it explicitly includes the use of Memoranda of Agreement (MOA) and Memoranda of Understanding (MOU) to facilitate the transfer of funds in exchange for services. This mechanism allows the gaining service to retain Subject Matter Experts (SME) assigned to the transferring weapon system through and beyond the transfer period.

Regulatory Guidance:

Army Regulation 614-120 outlines specific service-level procedures to affect the interservice transfer from the Army to another service (Department of the Army, 2022). This document establishes the procedures necessary to initiate a transfer and specifies that the transfer may be requested by the gaining service, or the officer concerned. This regulation implements the statutory requirements imposed by Title 10, U.S. Code Chapter 41 § 716 and the policy intent of DoD in DoDI 1300.04.

Department of the Air Force Instruction 36-3211 primarily concerns separations from the Air Force and Space Force. Paragraph 2.3.2.1., however, provides specific guidance for separation in the context of transferring to another service. This instruction includes the interservice transfer of officer and enlisted personnel (Department of the Air Force, 2022). Active-duty personnel are separated from the losing service and re-commissioned or re-enlisted in the gaining service.

Military Personnel Message (MILPER) Number: 21-079, issued 5 March 2021, further delineates the process for commissioned officers and enlisted personnel to transfer to USSF. The message outlines the application process and eligibility requirements and provides templates for the transfer request letter and the Inter-Service Transfer (IST) Candidate Data Sheet.

Army Regulation 690-200 implements DoD Instruction 4000.19. This regulation permits the Army to provide personnel services performed by Army civilians to organizations within the

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Army and to other services. Additionally, it stipulates that personnel matrixed to another organization will continue to be managed by the owning organization (Department of the Army, 2020).

Air Force Instruction 25-201 guides the Air Force and USSF in establishing MOUs and MOAs. This document specifically permits USSF to preserve innate program knowledge through and after a weapon system transfer. The work performed by the matrixed organization is reimbursable (Department of the Air Force, 2013).

Case Study Guidance:

In April 2021, the USSF Chief Operating Officer (COO), Brigadier General Saltzman, issued a memorandum to Army G-3/5/7 regarding JTAGS personnel transfer conditions. In it, the USSF COO indicated that the transferring detachment must be fully mission-capable and staffed with trained USSF personnel. Additionally, he desired those personnel assigned to JTAGS be detailed to the USSF for no more than 18 months from mission transfer (Saltzman, 2021).

In a meeting conducted on 18 October 2022, the Army's Inter-Service Planning Board, co-chaired by Major General Shultz, the Director of Strategic Operations for Army G-3/5/7, and Brigadier General Endicott, the Assistant Deputy Chief of Space Operations for Operations, identified 90 military authorizations, three Department of the Army civilians, and funding for four civilian positions for transfer from Army to USSF. The board specified that the Army did not intend to transfer positions with the incumbent personnel, requiring an agreement to train Space Force Guardians to operate the JTAGS system (Inter-Service Planning Board, 2022).

Intellectual Property (IP) Transfer

Statutory Guidance:

The Department of Defense Authorization Act of 1985 included provisions for DoD to acquire unlimited rights to technical data developed for efforts that were fully federally funded (The Department of Defense Authorization Act of 1985. Pub. L. 98-525, 98 Stat. 2492, 1984). Further clarification of Title 10 U.S.C. § 2320 was provided by amending the statute in the Federal Acquisition Streamlining Act of 1994, which further mandated that technical data developed at the expense of the contractor did not convey unlimited rights unless stipulated by the contract. Technical Data that was not funded completely by the government or by the contractor must have rights assigned in the negotiation for the contract (Federal Acquisition Streamlining Act of 1994. Pub. L. 103-355, 107 Stat. 97, 1994).

The NDAA for FY18 guided the acquisition of software. Specifically, it directs negotiations to consider all software and related materials required to reproduce, build, and recompile the software from source code, conduct testing, and fielding of the software on the necessary system hardware (National Defense Authorization Act for Fiscal Year 2018. Pub. L. 115-91., 131 Stat. 1283, 2017). Additionally, the statute directs that delivered software be freestanding and that it be delivered with sufficient documentation to support maintenance.

The NDAA for FY21 establishes a requirement for DoD to launch a cadre of personnel in the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD (A&S)) that are experts on IP. The principal intent for the establishment of this cadre is to advise the services on a consistent approach to acquiring or licensing intellectual property (National Defense Authorization Act for Fiscal Year 2021. Pub. L. 116-238, 134 Stat. 3388, 2021).

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Policy Guidance:

DoD Instruction 5010.44, published in 2019, establishes policy and designates responsibility for the management of IP owned or licensed by the department and its subordinate services. DoDI 5010.44 also implements the guidance provided by Congress in NDAA FY21 to establish a DoD cadre of IP experts. The purpose of paragraph 1.2.a.1 of this policy is to “enable coordination and consistency across DoD Components in developing and implementing strategies for acquiring and licensing IP and communicating with industry” (Department of Defense, 2019, para. 1.2.a.1).

Regulatory Guidance:

Army Directive 2018-26, issued in 2018, directs the Army’s handling of IP. Program Managers are directed to assess the short- and long-term requirements for their programs and to develop an IP strategy consistent with requirements. The IP strategy must consider sustainment and whether the organic industrial base of the Army or the commercial market can maintain the software. Additionally, the strategy must consider which rights are held by the government and by the developer.

Air Force Instruction 51-303, published in 2018, guides negotiating rights and licenses for IP. Rights are generally established through negotiation when the contract is awarded. Restraints on the process include obtaining only necessary rights and specifying the material for which rights are required.

Materiel Transfer

Policy Guidance:

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DoD Manual 4140.01, a document issued in 12 volumes, provides DoD-level guidance for the disposition of all materiel possessed by DoD. Volume 1 calls upon the service chiefs to maximize the use of government-owned inventory before seeking commercial contracts to acquire new materiel. Additionally, it requires the Defense Logistics Agency to establish the relationships necessary to acquire, store, transport, maintain, and finance such materiel (Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD A&S), 2022a).

Volume 6 of DoD Manual 4140.01 provides for the disposition of excess materiel. While not specifically calling out such a disposition of assets in the event of interservice transfer of a weapon system, policy does indicate that assets should be cross-leveled across military departments (OUSD A&S, 2022b).

Regulatory Guidance:

Department of the Army Pamphlet 770-2 provides detailed guidance for the transition of a product from the developing command to the gaining command. In the case of interservice weapon system transfer, the process of transferring materiel is governed by Chapter 3-3, which requires the losing command to catalog, package, and ship displaced materiel to the gaining command. Chapters 3-5 and 3-6 address the use of a Materiel Transfer Plan (MTP), which requires the losing command to catalog and assess the state of equipment to be transferred, change the Modified Table of Distribution and Allowances (TDA) and the Table of Organization and Equipment (MTOE), and package and ship displaced equipment to the gaining command (Department of the Army, 2021b).

Army Regulation 5-9 governs the use of Installation Agreements (IA) to secure access to real property to conduct mission priorities. In the case of interservice transfer of weapon systems

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it provides guidance for the execution of an IA where materiel transfer is accomplished in-place. It allows the gaining command to execute an IA to retain control of the facility until a relocation action can be executed if desired (Department of the Army, 2018).

Department of Air Force Instruction (DAFI) 23-101 implements DoD Manual 4140.01. Paragraph 1.3.1.42 provides specific guidance in the event of weapon system transfers by requiring the implementation of a transfer team to take responsibility for maintenance, budget, supply, and any other necessary functions. Additionally, the instruction requires the transfer team to deliver the transfer plan to both the losing and gaining commands (Department of the Air Force, 2020)

Case Study Guidance:

In a memorandum issued to Army G-3/5/7 regarding JTAGS transfer conditions, Lieutenant General Saltzman directed that all JTAGS-associated equipment be transferred along with mission responsibility. He also specified that interservice and host-nation support agreements be established before transfer. Finally, he indicated that provisions be in place to sustain JTAGS systems (Saltzman, 2021).

The Army's Inter-Service Planning Board presented four critical objectives to the JTAGS transfer identified by the General Officer Steering Council held on 22 July 2022.

1. The JTAGS system transfer would occur on 1 October 2024.
2. USSF desired that the Army complete Block 2, Spiral 3 (B2S3) upgrades before system transfer.
3. USSF desired that B2S3 be fielded by the Army prior to transfer.
4. USSF did not wish to delay the transfer to field B2S3.

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B2S3 upgrades resolved cybersecurity issues necessary to obtain Authority to Operate (ATO) past the transfer date (Inter-Service Planning Board, 2022).

To perform the transfer of SATOPS, the USSF relied on the Space and Missile Systems Center (SMC) Development Corps (DC) to Production Corps (PC) Transfer and Transition Guide published on 15 September 2020. This document developed a tool called the Transfer Assessment Criteria Tool (TAC-T) which was used to facilitate the transfer of key JTAGS documentation to the gaining command. This tool only addresses the materiel transfer portion of a transfer.

Budgetary Authority Transfer

Statutory Guidance:

The NDAA FY90 and FY91 authorizes the Department of Defense to transfer funding along with a weapon system when conducting an interservice transfer. The funding must be used for the purpose for which the appropriation was made available. The Secretary of Defense determines what part of the original appropriation will be transferred with the President's approval (National Defense Appropriation Act for Fiscal Years 1990 and 1991, Pub. L. 101-189, 103 Stat. 1352, 1989).

10 U.S. Code § 126, *Transfer of funds and employees*, reiterates that funding may accompany a “function, power, duty, or activity (Transfer of Funds and Employees, 10 U.S. Code § 126, 1962, a.2.)” when transferred from one service to another with approval of the President.

Policy Guidance:

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The DoD Financial Management Regulation (FMR) applies 10 U.S. Code § 126. In volume 3 chapter 3, section 030202.F. the FMR reiterates the provision that appropriations may also be transferred when there is a transfer of function from one service to another within the Department of Defense, after approval by the President as delegated to the Office of Management and Budget (OMB) (Under Secretary of Defense (Comptroller), 2015).

Case Study Guidance:

In the March 2023 Exhibit R-2, USSF designated JTAGS as a new start. Per section 123 of the OMB Circular No. A-11, the USSF cannot spend appropriated funding on this program until the Appropriations Act for FY24 is signed into law (Office of Management and Budget, 2016). Significant effort was expended by the Army staff, in coordination with the Army Budget Office (ABO) and PEO MS), to ensure that Army was able to execute continuing resolution authority to fund JTAGS through the continuing resolution period (D. Clevenger, personal communication, May 15, 2023).

Summary

The literature review for this study provides an overview of relevant statutes, policies, and regulations pertinent to the transfer regarding four key activities required to transfer a weapon system between military services. This foundation information not only guides the subsequent analysis but also establishes a structured framework for evaluating the JTAGS case study. Additionally, the availability of this information refined the research methodology to follow.

Research Methodology

Introduction

The introduction to the research methodology outlines the approach taken to conduct this study, detailing the processes and services for identifying relevant sources. The structure of this study is based on the qualitative research methodology outlined in Educational Research (Creswell & Guetterman, 2019), guiding the study's design, data collection, and analysis.

Statement of Purpose and Research Questions

The purpose of this qualitative study is to examine the present process of transferring a major weapon system from the Army to the Space Force. A case study of the Joint Tactical Ground Station program, which transferred from the Army to the Space Force at the beginning of Fiscal Year (FY) 2024, will be presented.

Research questions:

1. What guidance do current statutes provide to address or direct interservice transfer of weapon systems?
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Research Methodology

This study focuses on four primary areas of interest: the transfer of personnel, IP, materiel, and budgetary authority. Research on these topics focused on guidance from Congress, DoD, Army, USSF, Air Force, and specific guidance to the JTAGS product office. Where documentation is available, the research will also address specific actions taken by Army G-3/5/7, SMDC, USSF Space Systems Command (SSC), and the Army JTAGS product office.

Initial research was conducted using online tools provided by the Defense Acquisition University (DAU) Virtual Research Library and the Naval Postgraduate School (NPS) Dudley Knox Library. These tools included databases maintained by Harvard Business Publishing eBooks, ProQuest, Dissertation and Theses Global, and the Defense Technical Information Center (DTIC).

Terminal research, given the nature of statutory, policy, and regulatory guidance, required engagement with databases maintained by federal agencies, including the White House, the Library of Congress, Washington Headquarters Services, the Office of the Law Revision Counsel, the United States Government Publishing Office, the Office of the Under Secretary of Defense (Comptroller), and the Army Publishing Directorate.

Case study sources were derived from briefings, memoranda, and other temporary documents specific to the transfer of the JTAGS product office and the operational aspects of the JTAGS system conducted by the 1st Space Brigade, a subordinate organization to SMDC. These materials were gathered from subject matter experts during the JTAGS transfer process.

The analysis will be focused on determining the traceability of guidance from Congress to the actions being performed by the Army and the USSF to affect the transfer of JTAGS to the

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USSF. Additionally, the actual execution of the guidance given to JTAGS will be analyzed and compared to guidance issued by Congress, DoD, and the services.

Summary

Analysis of the literature presented in the preceding review resulted in several findings relevant to the problem statement and research questions. Repositories documenting best practices were not discoverable. Certain activities undertaken by USSF may be classified as best practices, though they were not originally put into effect for the purpose of facilitating interservice weapon system transfers. These findings are presented in the following section.

Findings

Introduction

This section contains the analysis and interpretation of data derived from the literature review. The findings presented in this section will provide a foundation for conclusions and recommendations offered in the final section of this study.

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4. What are the best practices gleaned from the JTAGS weapon system interservice transfer case?

Results of Research

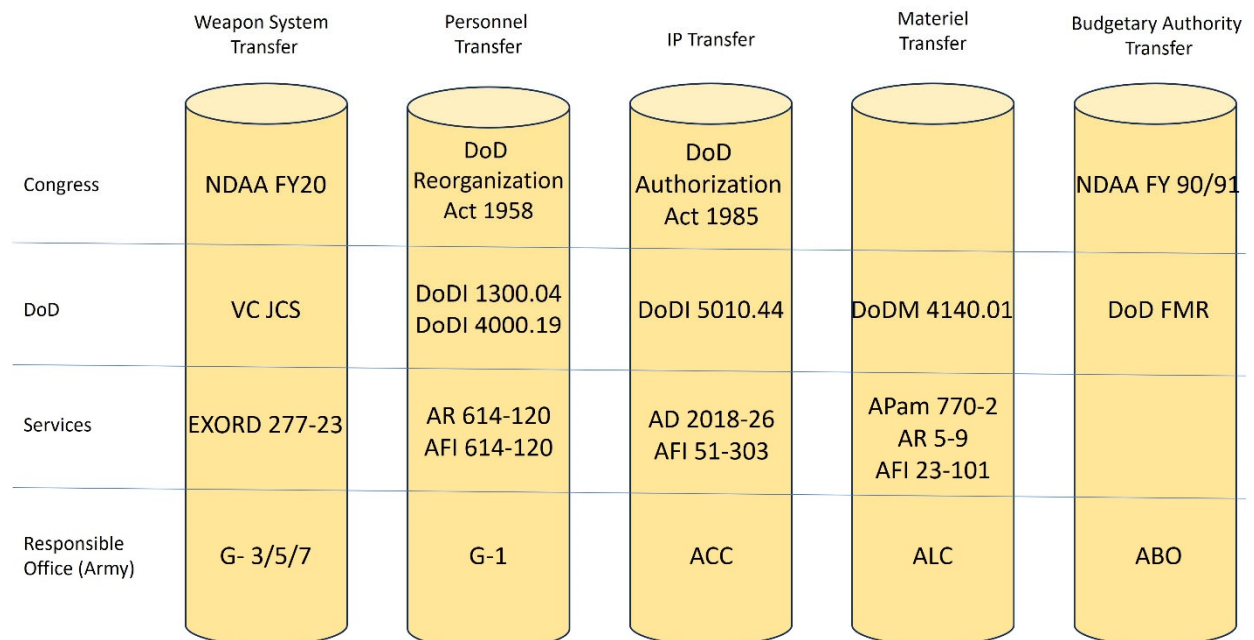
The literature review of Public Law and the Code of Federal Regulations reveals that the top-level guidance required to successfully transfer a weapon system between services is inclusive and adequately addresses the necessary functions.

This review demonstrates that DoD-level policy is disjointed. While each of the four focus areas is adequately addressed, the data must be compiled from many disparate documents. Clearly DoD policy derives from, and is compliant with, public law.

The Army and the USSF have published documents providing detailed guidance for each individual transfer activity. These documents are clearly derived from DoD Policy. Notably, however, no published document provides a comprehensive transfer procedure. Further analysis may illuminate the underlying reasons for the absence of an over-arching document.

Figure 2 delineates the compartmentalized structure of the guidelines governing various aspects of the JTAGS transfer. It highlights the division of responsibilities among different

Figure 2: Guidance Stovepipe



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offices, with the G-3/5/7 serving as the principal office overseeing the transition. However, the process is not unilateral; G-3/5/7 must coordinate closely with other unique offices such as G-1 for personnel, ACC for procurement, ALC for materiel, and ABO for financial aspects. These offices not only provide needed information regarding their respective regulatory requirements but are also key in executing the tasks essential for the successful transfer of the JTAGS.

Findings on Weapon System Transfer:

Congressional guidance is straightforward. With the establishment of the USSF in the 2019 NDAA, the DoD and the services were directed to review their programs and to consolidate space-related capabilities within the new service. This joint Army and USSF review identified two major functional areas within the Army, comprised of multiple parts and missions, that were better suited to the USSF portfolio (Hyten, 2021). The functions are SATOPS and the TMW-BC functions. JTAGS, the focus of the embedded case study, performed the TMW-BC mission for the Army. Air Force and Navy systems identified for transfer are acknowledged but are not addressed in this study.

The services initiated the transfer process for JTAGS by convening an Inter-Service Transfer Board co-chaired by senior representatives from the Army and USSF and consisting of members associated with organizational planning, most notably the Strategic Operations Directorate for Space staff (DAMO-SOS), a subordinate organization to Army G-3/5/7. DAMO-SOS engaged other staff functions within the Army to plan for transferring manpower authorizations, equipment, real property usage, supporting training, mission operations, mission sustainment, and modernization functions.

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DIRLAUTH between Army and USSF counterparts was not authorized until 18 months after the JTAGS system was identified for transfer. Once DIRLAUTH was approved, full disclosure of information was not authorized until four months before the transfer. The inability to share full information impeded planning efforts at the action officer level and resulted in inefficient use of planning time.

The Army issued terminal guidance for the transfer through EXORD 277-23 on 23 August 2023, five weeks before the JTAGS transfer to USSF. While this document appears to be consolidated guidance for the transfer, it was drafted by DAMO-SOS after planning activities were initiated and not signed until planning activities were completed.

Findings on Personnel Transfer:

Congressional guidance on the transfer of personnel between services is unambiguous. Public law allows for the transfer of enlisted, commissioned, and civilian authorizations between services. Limitations are observed because these transfers cannot exceed authorized service end strength and that, in the case of commissioned officers and civilians, must be approved by the President or his designee. Warrant officers are the exception and may not be transferred from the Army to the USSF, as there is no equivalent rank in the USSF (Department of the Army, 2023). The DoD and services, as documented and cited in the literature review, have appropriate policies and regulations derived from Congressional guidance to facilitate such transfers.

In the case of the JTAGS transfer, USSF clearly articulated that there needed to be an agreement between Army and USSF for support through an 18-month transition period. Prior to transfer, USSF Guardians entered the Army's JTAGS training pipeline, though the expectation is that Army personnel will continue to support until USSF fully assumes the training mission. The

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total number of personnel authorizations transferred to the USSF includes 90 uniformed personnel from the 1st Space Brigade, a component of SMDC, two civilian authorizations from the JTAGS Product Office, a component of Program Executive Office Missiles and Space, and one civilian position from SMDC. Of these, approximately half were filled by interservice transfer volunteers. Additionally, funding was provided for four full-time equivalent positions to support acquisition efforts, though no authorizations were transferred for these positions. Using MOAs signed with the Aviation Missile Command (AvMC) and the Army Logistics Command (ALC), the USSF elected to retain the services of 24 SMEs to field JTAGS B2S3 upgrades.

Findings on IP Transfer:

Statute lays a solid foundation for the acquisition and transfer of IP rights. It is important to note, however, that software produced at the contractor's expense does not convey rights unless stipulated in the contract (Federal Acquisition Streamlining Act of 1994. Pub. L. 103-355, 107 Stat. 97, 1994). The NDAA for FY18 directs negotiations to consider all aspects of software reproduction, building, recompiling, testing, and deployment. Service level guidance highlights obtaining only those rights required for the system's operation.

The JTAGS system software contract was negotiated with Government Use rights. As a consequence, the USSF will be unable to leverage proprietary software for any purpose other than the status quo operation of the JTAGS system. If USSF desires to broaden IP rights, additional negotiations with the prime contractor are necessary upon completion of the existing contract.

Findings on Materiel Transfer:

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The DoD Manual 4140.01 Volume 1, published in 2018, emphasizes the importance of maximizing the use of government-owned inventory before resorting to commercial contracts for new materiel acquisition. Volume 6 addresses the disposition of excess materiel, encouraging cross-leveling of assets across military departments. While not explicitly mentioning interservice transfers, the policy implies a consideration for the redistribution of assets.

Army regulation provides detailed guidance for the transition of products, including interservice transfers of weapon systems. It outlines the MTP, which involves cataloging, assessing the state of equipment, modifying organizational tables, and packaging and shipping displaced equipment from the losing to the gaining command. Additionally, Army regulations govern the use of IAs to secure access to real property for mission priorities. In the context of interservice transfers, it allows for material transfer to be accomplished in place, and the gaining command can execute an IA to retain control of the facility until relocation is possible, if desired.

Air Force Instruction provides specific guidance for weapon system transfers, requiring the implementation of a transfer team responsible for maintenance, budget, supply, and other necessary functions. The instruction also mandates delivering the transfer plan to both losing and gaining commands.

In the case of JTAGS, Lieutenant General Saltzman's memorandum regarding JTAGS transfer conditions emphasizes the transfer of all JTAGS-associated equipment along with mission responsibility. It also highlights the importance of establishing interservice and host-nation support agreements before transfer and ensuring provisions for sustaining JTAGS systems. In support of this objective, the Inter-Service Planning Board outlines four critical objectives for the JTAGS transfer, including the transfer date, completion of specific upgrades

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(B2S3), resolving cybersecurity issues before the transfer, and ensuring that meeting the first three objectives did not result in a delay in the transfer.

Findings on Budgetary Authority Transfer:

The National Defense Appropriation Act for Fiscal Years 1990 and 1991 (NDAA FY90 and FY91) authorized the Department of Defense to transfer funding along with a weapon system during interservice transfers. This authority is subject to the restriction that the funds must be used for the task(s) for which the appropriation was initially made available (National Defense Appropriation Act for Fiscal Years 1990 and 1991, Pub. L. 101-189, 103 Stat. 1352., 1989). The approval of the President or his designee is a prerequisite for such transfers.

The policy and regulatory guidance emphasize the importance of aligning transferred funds with the original purpose for which the appropriations were made available. This ensures that the transferred budgetary authority is used consistently with its intended purpose.

The Secretary of Defense plays a key role in determining the portion of the original appropriation to be transferred, and this determination requires approval from the President. This underscores the significance of high-level authorization in the budgetary authority transfer process.

In the case of JTAGS, transfer funding was identified and transferred as part of the Program Objective Memorandum (POM) cycle. The USSF identifies JTAGS as a new start program, preventing them from executing any program funding before the Defense Fiscal Year 2024 Appropriation Act is signed into law. To mitigate this gap in funding, USSF worked with PEO MS and the ABO to ensure that Army would continue to fund JTAGS by exercising

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Continuing Resolution (CR) Authority to fund contract and matrix personnel through the expected CR.

Findings on Best Practices:

The transfer of JTAGS was facilitated by several independent Army organizations, each with a specific role. The Army G-3/5/7 was the office of primary responsibility for the overall transfer. Concurrently, the Army G-1 managed personnel actions, ABO oversaw budget actions, and ALC handled cataloging and transferring materiel. During this process, overarching guidance was drafted based on the actions that were taken by these organizations, rather than these organizations acting based upon previously drafted guidance.

The absence of a centralized repository for lessons learned from past interservice transfers was noted. However, the TAC-T document used by USSF proved effective in facilitating the transmission of historical JTAGS data from the Army, despite its initial intention for internal USSF technology transfers.

Lessons learned from the JTAGS transfer indicate the importance of communication, detailed planning, agreements, and coordination to ensure a smooth transition across all transfer activities. Delaying DIRLAUTH posed a significant challenge to achieving the requisite level of communication for an effective transition.

Summary

Analysis of the literature review reveals that the top-level guidance for interservice weapon system transfers is inclusive but spread across myriad documents generated by numerous, diverse authorities. This results in disjointed guidance that is difficult to research and

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amalgamate. This fragmentation is mirrored at the DoD level, where policies address each aspect of the transfer process in isolation, resulting in a lack of comprehensive transfer procedures.

The Army and the USSF have published documents providing detailed guidance for individual transfer activities. However, no comprehensive transfer procedure exists. From these findings, this section can derive conclusions and recommendations that may guide and improve the decision-making process for future transfers. These actionable insights are detailed in the following section.

Conclusions and Recommendations

Introduction

The research conducted for this investigation of interservice weapon system transfers resulted in several conclusions, recommendations, and areas for continued research. Over time, Congressional action and the decisions made by the DoD and the services may change the relevance of the sources cited and may alter the lens through which conclusions must be viewed.

Conclusions

The first conclusion of this study is that Army and Air Force regulations and the procedures identified therein are well grounded in DoD Instructions and Directives. Furthermore, there are clear links between DoD policy and the public laws from which these are derived.

The second conclusion is that the guidance presented, though comprehensive, is fragmented across many source documents. The study underscores the necessity for more consolidated and comprehensive guidance for interservice transfers, particularly in the absence of a single document providing comprehensive transfer procedures. Successful transfers involve a complex interplay of legal, policy, regulatory, and practical considerations, requiring detailed planning and coordination across multiple organizational levels. Without a unifying document, guidance may not be readily evident to those tasked with conducting the activities required to affect an interservice weapon system transfer. The staff of Army G-3/5/7, SMDC, the JTAGS product office, and USSF SSC completed the transfer of JTAGS. However, ensuring compliance with applicable regulations was accomplished ad hoc through discovery learning.

The third conclusion is that unified guidance has the potential to accelerate the transfer process, which would reduce the overall level of effort of applicable staff functions. The number

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of systems remaining to be transferred is limited. Nonetheless, each transfer requires a multi-year process, which is only exacerbated when the responsible staff must research the process with each transfer.

The final conclusion suggested by the research is that communication between the losing and gaining services is vital. While strategic decisions can be made between service-level staff without involving the personnel executing the mission, the transfer involves many personnel from many offices. In the case of JTAGS, the first official communication between the JTAGS product office and USSF counterparts did not occur until eight months before the transfer date due to a lack of DIRLAUTH. Once DIRLAUTH was granted, the information flow was throttled by specific exclusions in the DIRLAUTH memorandum.

Recommendations

Recommendation #1: Numerous documents govern the overall interservice transfer process. To provide unified guidance, the DoD should draft and implement an overarching policy to govern future interservice weapon system transfers. In this document, the services should be encouraged to establish threshold and objective milestones, in concert with other services, sufficient to meet the minimum requirements of the gaining service.

Recommendation #2: Maintain a collective repository of best practices and lessons learned to provide feedback for iterative improvement of any unified policy or regulatory guidance put into place. Each weapon system is unique, and policy exceptions will be necessary. Maintaining a database of these exceptions will give future systems a glimpse of what is possible within policy.

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Recommendation #3: Authorize DIRLAUTH as soon as possible when a weapon system is identified for interservice transfer. While there are compelling reasons to limit this data flow before the decision to transfer, full and open disclosure between the losing and gaining services benefits the gaining service by allowing for comprehensive planning.

Recommendation #4: Do not designate transferring systems as new start programs in the gaining service unless they are already designated as new start within the losing service. Designating these systems as new start programs hampers the ability to maintain continuous operations through the transition and may adversely affect the health of critical systems.

Areas for Future Research

Future research into the process of executing interservice weapon system transfers should include:

1. Conduct additional research on topics addressed in EXORD 277-23 that are not addressed in this study. These include real property usage, supporting training, mission operations, mission sustainment, and modernization functions.
2. Conduct original research based on interviews with personnel associated with interservice weapon system transfers. In the case of JTAGS, this includes personnel from Army G-3/5/7, Army SMDC, USSF SSC, and the Army JTAGS product office.
3. Conduct supplementary research, including classified and controlled unclassified information source documents of JTAGS.
4. Conduct a quantitative analysis of the schedule and budget impacts of unified guidance versus decentralized guidance for the JTAGS transfer.

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5. Explore the necessity of withholding DIRLAUTH after identifying a weapon system for interservice transfer.

Summary

This qualitative study explores existing documentation to identify a logical flow of guidance from Congress through the DoD to the services. It has identified relevant statutes, policy documents, and regulations to establish that the existing body of knowledge fully supports interservice weapon system transfer.

Deficiencies identified in this research focus on three primary communications issues. The first is the failure to provide top-level guidance to unify the many disparate sources of guidance. The second is the failure to permit unfettered communication between the action officers responsible for ensuring the missions and equipment are transferred efficiently and in working order. Finally, a results-driven repository to catalog best practices from prior transfers is necessary to capitalize on prior successes.

The recommendations presented suggest possible short- and long-term solutions to the deficiencies revealed by the research, while areas for future research identify areas not examined in this study. Further research may alter the conclusions reached by this research, driving alternative recommendations.

USSF expects to continue the acquisition of weapon system capabilities through interservice transfer from other services for the foreseeable future. Identification and description of a unified process that is well supported by guidance from Congress and higher headquarters may assist in streamlining future weapon systems transfers between the USSF and the other

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services. By doing this, the services may reduce or eliminate the need to comprehensively research the transfer process with each successive transfer.

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Appendix A: List of Acronyms

ABO	Army Budget Office
ACC	Army Contracting Command
ALC.....	Army Logistics Command
ATO	Authority to Operate
AvMC	Aviation Missile Command
B2S3.....	Block 2, Spiral 3
CJCS	Chairman of the Joint Chiefs of Staff
COO	Chief Operating Officer
DAFI	Department of the Air Force Instruction
DAMO-SOS.....	Strategic Operations Directorate for Space Staff
DAU	Defense Acquisition University
DAWIA.....	Defense Acquisition Workforce Improvement Act
DC.....	Development Corpse
DIRLAUTH	Direct Liaison Authority
DoD.....	Department of Defense
DoDI	Department of Defense Instruction
DTIC	Defense Technical Information Center
EXORD.....	Executive Order
FMR	Financial Management Regulation
FY	Fiscal Year
HASC	House Armed Services Committee
IA	Installation Agreement

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IP.....	Intellectual Property
IST.....	Inter-service Transfer
JTAGS.....	Joint Tactical Ground Station
MILPER.....	Military Personnel Message
MOA.....	Memorandum of Agreement
MOU.....	Memorandum of Understanding
MTOE.....	Modified Table of Organization and Equipment
MTP.....	Materiel Transfer Plan
NDAA.....	National Defense Authorization Act
NPS.....	Naval Postgraduate School
OMB.....	Office of Management and Budget
OUSD A&S.....	Office of the Secretary of Defense for Acquisition and Sustainment
PC.....	Production Corps
PEO MS.....	Program Executive Office for Missiles and Space
POM.....	Program Objective Memorandum
RSSC.....	Regional Satellite Communications Support Center
SASC.....	Senate Armed Services Committee
SATOPS.....	Satellite Payload, Planning, Management, and Control
SBIRS.....	Space-Based Infrared System
SMC.....	Space and Missile Systems Center
SMDC.....	Space and Missile Defense Command
SME.....	Subject Matter Expert
SSC.....	Space Systems Command

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TAC-T..... Transfer Assesment Criteria Tool
TDA Table of Distribution and Allowances
TMW-BC Theater Missile Warning Battlespace Characterization
U.S. United States
USSF United States Space Force
WSOC Wideband Satellite Communications Operations Center

Appendix B – Author Biography

Tobin G. Butler completed his Bachelor of Science degree at the United States Naval Academy in 1994 and was commissioned as a Second Lieutenant in the United States Air Force. Initially assigned to the 89th Security Police Squadron at Andrews Air Force Base, he served as a Flight Commander and Distinguished Visitor Detail Chief. Between March 1997 and June 1998, Mr. Butler served as the Air Base Defense Officer with the 8th Security Forces Squadron at Kunsan Air Base in Kunsan, Republic of South Korea.

In 2010, he transitioned to civil service as the Program Analyst for the Land-Mobile Radio Product Office at Fort Belvoir, Virginia (PEO EIS). Subsequently, in March 2015, he assumed the business lead role for the Electro-Optical Infra-Red Product Office at Fort Belvoir, Virginia (PEO IEW&S). In November 2015, Mr. Butler joined the Joint Attack Munition Systems Project Office at Redstone Arsenal (PEO MS), holding various financial management positions. At JAMS, he deployed to Kabul, Afghanistan, in March 2017 for six months, supporting the Afghan Personnel and Pay System Product Office as an Assistant Program Manager. From March 2022 to July 2023, Mr. Butler was Deputy Product Manager for the Joint Tactical Ground Station under the Integrated Fires and Mission Command Project Office.

Mr. Butler earned a Master of Systems Program Management from the Naval Postgraduate School and holds an advanced certification in Program Management. His accolades include the Secretary of Defense Medal for the Global War on Terrorism, Non-Article 5 NATO Medal, Achievement Medal for Civilian Service (two awards), Commander's Award for Civilian Service, Army Civilian Service Commendation Medal, and the Superior Civilian Service Award.