BY ORDER OF THE COMMANDER
AIR FORCE SPACE COMMAND

AIR FORCE SPACE COMMAND
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Special Management

AFSPC ORGANIZATIONAL ROLES, AUTHORITIES, AND RELATIONSHIPS

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This AFSPCI supersedes *Air Force Space Command (AFSPC) Implementation Directive 08-01 (ID 08-01), Management Headquarters Reorganization*, and *AFSPC Implementation Directive 0802 Change 1 (ID 08-02 C1), Organizational Relationships and Responsibilities: Space and Cyberspace Missions and Operations*. This instruction applies to Headquarters, Air Force Space Command (HQ AFSPC), subordinate units, and agencies acquiring AFSPC products and services used during testing or operating AFSPC systems or programs. It applies to Air National Guard (ANG) and Air Force Reserve Command (AFRC) units testing, operating, or supporting AFSPC programs or missions. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the *AF Form 847, Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional's chain of command. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with *AFMAN 33-363, Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**. For references and supporting information, see Attachment 1.

This instruction provides guidance regarding organizational and cultural measures necessary to ensure space and cyberspace capabilities meet warfighting needs by addressing three key areas: 1) management headquarters (MHQ) activities; 2) external relationships; and 3) requirements, acquisition, development, and sustainment activities.

Chapter 1

INTRODUCTION

1.1. General Operational Concept and Supported Mission Areas:

1.1.1. Space and cyberspace are joint operational domains (like air, sea, and land), not missions. The Unified Command Plan (UCP) assigns responsibility to the CDRUSSTRATCOM for planning and conducting space and cyberspace operations.

1.1.2. AFSPC performs a critical mission to organize, train and equip space and cyberspace forces in support of Combatant Commander (CCDR) warfighting needs and on behalf of the nation. The Command performs this mission within a diverse and wide-ranging enterprise involving multiple organizations and agencies. The decisive advantage space and cyberspace bring to the fight demand an organization that is resilient, focused and highly capable. As adversarial capabilities increase and national security budgets tighten, AFSPC must eliminate fragmented approaches, improve internal and external partnerships, and ensure all elements of the weapon system life cycle are effectively developed and supported.

1.1.3. AFSPC is responsible for identifying space and cyberspace requirements and for presenting those capabilities and forces to Unified commands with the UCP authority and responsibility to execute space and cyberspace missions. 14 AF (AFSTRAT) and 24 AF (AFCYBER) are designated as Component Numbered Air Forces (C-NAFs) through which space and cyberspace forces are presented to Joint Force Commanders (JFCs).

1.1.4. The integration of air, space and cyberspace capabilities is a key enabler to effective operations. This integration requires an effective C2 system of systems that spans air, space and cyberspace mission needs. AFSPC will define the operational construct for the space and cyberspace domains (via concepts documents), from which the requirements for integration can be framed. This will allow operational requirements to be promulgated to the acquiring entities in the Air Force (AF) to field needed capabilities.

1.2. Commander's Intent.

1.2.1. AFSPC will create a responsive MHQ with processes and relationships to ensure effective execution of its organize, train, and equip functions. This MHQ will: orient to efficiently support field commanders; interact with and leverage partners in and outside the space and cyberspace enterprise; and focus on producing mission success. AFSPC will look, feel, and act as a single, integrated organization that rapidly and effectively delivers combat capability to CCDRs and other mission partners. AFSPC will be a valued member of the space and cyberspace enterprise and will be sought as a principal source of advice on space and cyberspace issues.

1.2.2. AFSPC will establish command relationships with Combatant Commands, Headquarters Air Force (HAF), other MAJCOMs, Numbered Air Forces (NAFs), Centers, national agencies and mission partners to ensure space and cyberspace capabilities are effectively developed, integrated, tested, evaluated, operated, sustained, and presented to CCDRs. AFSPC personnel will do this by aligning education, training, test, and component

activities with existing and new organizations, leveraging those organizations and mission partners, and ensuring all remaining Command activities are properly structured for efficiency and effectiveness in accordance with AF policies and directives.

Chapter 2

HIGHER HEADQUARTERS

2.1. Organizations and Responsibilities: There are multiple organizations responsible for developing and delivering this Nation's warfighting capability. The organizations primarily responsible for planning, acquiring, and sustaining military space and cyberspace capabilities are described in this section and shown in Figure 2.1.

Figure 2.1. Organizations and Responsibilities

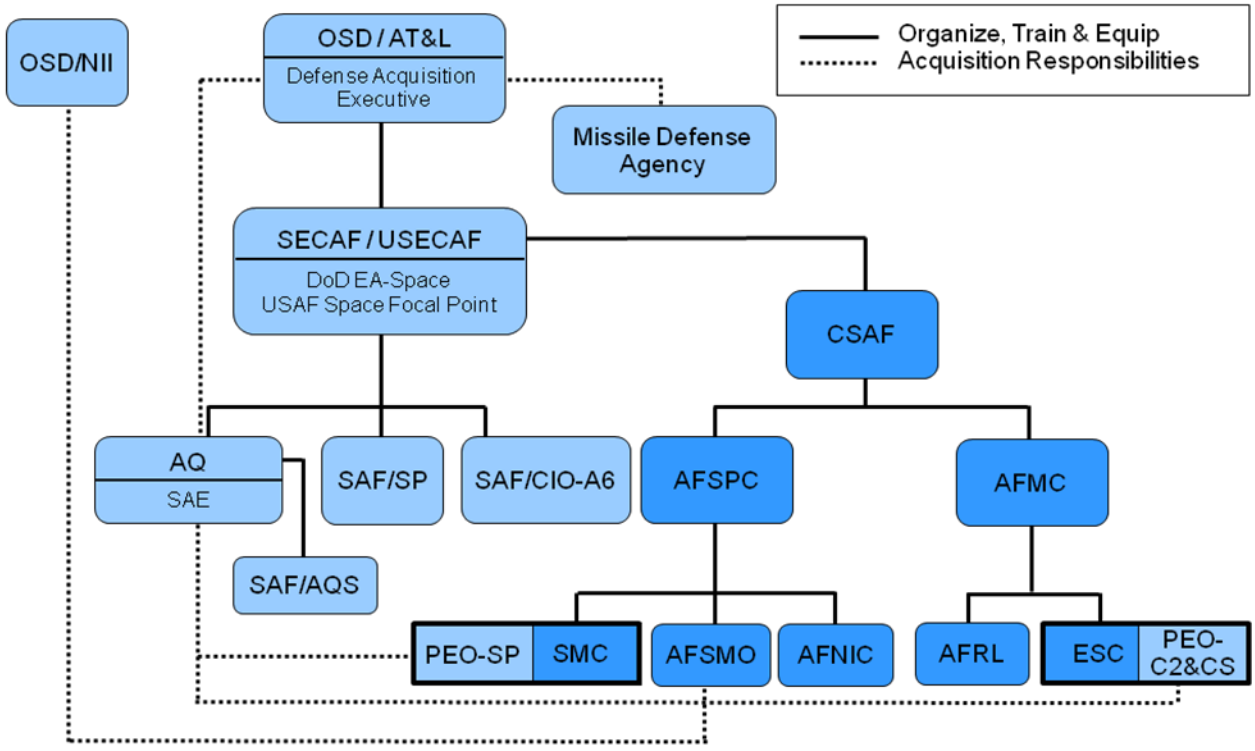

Figure 1. Organizational Authorities.

2.2. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD/AT&L): USD/AT&L is responsible for Department of Defense (DoD) acquisition policy, guidance and training. The USD/AT&L is the Defense Acquisition Executive (DAE) and serves as the Milestone Decision Authority (MDA) for Major Defense Acquisition Programs (MDAP) and Major Automated Information System (MAIS) programs (unless delegated to the Service Acquisition Executive (SAE)). In addition, the USD/AT&L may serve as MDA for programs of special interest.

2.3. Office of the Assistant Secretary of Defense for Networks and Information Integration (OSD/NII): OSD/NII provides policy, oversight, and guidance for all DoD matters related to the electromagnetic spectrum, including the management and use of the electromagnetic spectrum. OSD/NII works directly with the Office of Information Dominance and Chief Information Officer (SAF/CIO A6) and the Air Force Spectrum Management Office (AFSMO) implementing

spectrum policy. Potential consolidation with J6 on the Joint Staff exist, however, the roles and responsibilities of the organization will remain.

2.4. Service Acquisition Executive (SAE): The senior official for acquisition within each Military Department serves as the SAE. The SAE is responsible for acquisition of systems/services and establishing life-cycle management structures as described in DoDI 5000.02. For the AF, SAF/AQ (as delegated by the SECAF) is the SAE for all AF programs.

2.5. Secretary of the Air Force (SECAF)/DoD Executive Agent for Space (DoD EA-Space): The SECAF, dual-hatted as the DoD EA-Space, develops, coordinates and integrates plans and programs for space systems.

2.5.1. The Under Secretary of the Air Force (USECAF) serves as the focal point for space within the HAF and is responsible for coordination of functions and activities across the space enterprise. As such, the USECAF is the senior AF official for space matters to include planning, policy, strategy, international relations, space interagency relations and the primary interface to OSD for space matters.

2.6. Assistant Secretary of the Air Force for Acquisition (SAF/AQ): SAF/AQ is the SAE responsible for execution of acquisition programs and for developing and promulgating all AF acquisition policy. SAF/AQ works with SAF/FM and appropriate headquarters to develop Program Objective Memorandum (POM) inputs.

2.7. Directorate of Space Acquisition (SAF/AQS): SAF/AQS provides acquisition support, financial management support and program management guidance for space programs.

2.8. Deputy Under Secretary of the Air Force for Space (SAF/SP): SAF/SP reports to the USECAF and directs the HAF staff responsible for space policy, issue integration and strategy. This office provides the principal support for the USECAF's role as the HAF focal point for space matters and in coordinating activities across the AF space enterprise.

2.9. Office of Information Dominance and Chief Information Officer (SAF/CIO-A6): SAF/CIO-A6 is responsible responsible for developing and codifying Communications and Information (C&I) policy and overarching guidance, advocating for C&I program resources (Air Staff level) and Cyberspace Operations and C&I workforce management. In the SAF/CIO role, oversees portions of the compliance with Clinger-Cohen (Title 40) certification process not delegated to AFSPC, develops a strategic plan for information resource management, establishes enterprise architecture and interoperability standards, establishes Capital Planning & Investment Control plan, develops/manages information security and information assurance programs, oversees information access, ensures adherence to evaluation/compliance reporting and develops Information Technology (IT) governance and policy.

Chapter 3

COMMAND RELATIONSHIPS

3.1. Combatant Commands and Component Organizations.

3.1.1. **USSTRATCOM**: The UCP is signed by the President and promulgates assigned missions to the CCDRs. AFSPC organizes, trains, equips and primarily provides forces for CDRUSSTRATCOM assigned missions. Figure 3.1 shows the relationship between USSTRATCOM'S Title 10 unified mission execution responsibilities and the Title 10 force provisioning responsibilities of AFSPC.

3.1.2. USSTRATCOM is organized for force employment around Joint Functional Component Commands (JFCC), Task Forces (TF) and a subordinate unified command. This subunified command, US Cyber Command (USCYBERCOM), reports to USSTRATCOM with direct liaison authorized (DIRLAUTH) to the Geographic Combatant Commands (GCCs) for UCP assigned cyberspace missions.

Figure 3.1. AFSPC Unified and Force Provisioning Relationships

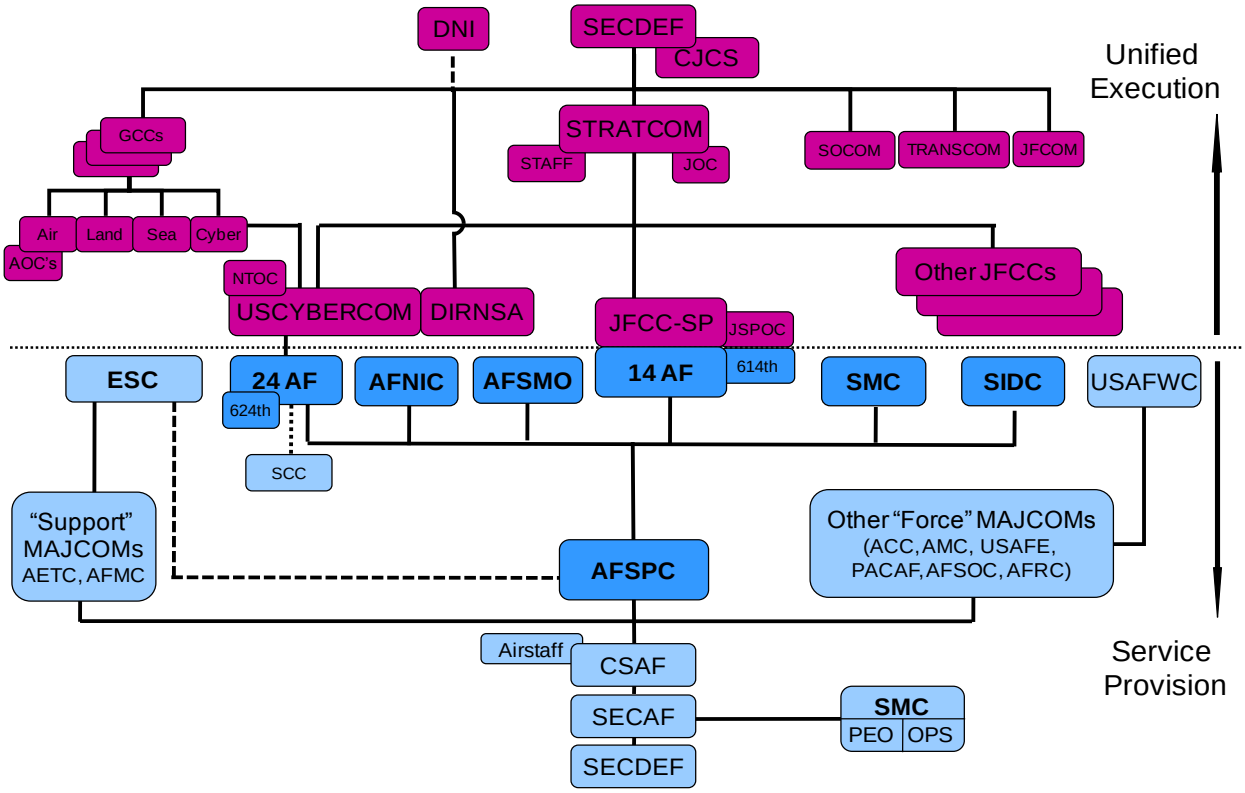

Figure 2. AFSPC Unified and Force Provisioning Relationships.

3.2. AFSPC: The Chief of Staff of the Air Force (CSAF) designated AFSPC as a Component MAJCOM (C-MAJCOM). As a C-MAJCOM, AFSPC is responsible for organizing, training, equipping and providing space and cyberspace forces.

3.2.1. In accordance with the Forces For and Joint Doctrine AFSPC is designated as the AF Service Component to USSTRATCOM for space and cyberspace operations. Therefore, the Commander, AFSPC (COMAFSPC) serves as the COMAFFOR for all AF space and cyberspace forces assigned to USSTRATCOM.

3.2.2. Additionally as the lead commander of space and cyberspace forces, COMAFSPC is responsible for decisions and corresponding recommendations to the HAF, CSAF, SECAF, CDRUSSTRATCOM and other joint commanders as required.

3.2.3. COMAFSPC, as the COMAFFOR to CDRUSSTRATCOM, presents space and cyberspace forces through the Commanders of 14 AF (AFSTRAT) and 24 AF (AFCYBER).

3.3. Fourteenth Air Force (Air Forces Strategic) (14 AF (AFSTRAT)): As a C-NAF, 14 AF (AFSTRAT) is the AF space operations component to USSTRATCOM and the headquarters element designated to support the AF component commander. 14 AF (AFSTRAT) includes an Air and Space Operations Center (AOC) and Air Force Forces (AFFOR) staff and is responsible for presenting space forces and units to the Joint Functional Component Commander-Space (JFCC-SP).

3.3.1. As a C-NAF, 14 AF (AFSTRAT) is focused on delivering combat effects to CDRUSSTRATCOM. HQ AFSPC supports the C-NAF through robust reachback support, effective lines of communication and responsive staff action.

3.3.2. CSAF designated 14 AF (AFSTRAT) as the AF space component to USSTRATCOM. 14 AF (AFSTRAT) executes assigned missions and operates space forces as part of JFCC-Space, fitting the model where an operational AF Commander has two lines of authority: one to the "provisioning" Commander (MAJCOM Commander) and Service, and the other to the mission executing CCDR. Even though 14 AF (AFSTRAT) is an AF entity, the Commander, also dual-hatted as Commander, JFCC-Space, directly reports to CDRUSSTRATCOM with a separate but co-located joint staff and C2 node. See Figure 3.2 for 14 AF (AFSTRAT) and JFCC-Space command relationships.

Figure 3.2. 14 AF JFCC-SP Command Relationships

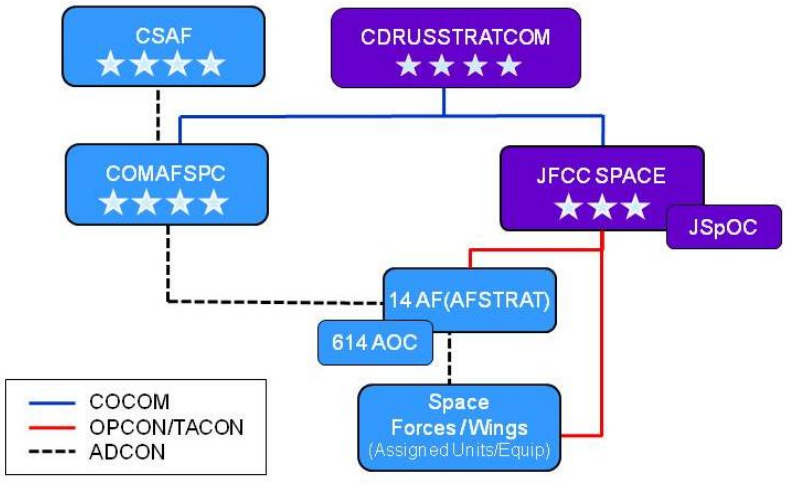

Figure 3. 14 AF JFCC-SP Command Relationships.

3.3.3. This construct formalizes the relationship for Joint space concepts, requirements, policy, employment and sustainment between the "provisioner" (USAF/AFSPC) and CDRUSSTRATCOM in numerous ways to include requirements and capabilities identification and advocacy through both the Service and Unified chains of command (example; IPL development). To accomplish space missions, 14 AF (AFSTRAT) is assigned two space support wings, one space control wing and two space force enhancement wings. Functionally, these wings are supported and sustained by HQ AFSPC with 14 AF (AFSTRAT) "skipped" but monitoring and knowledgeable.

3.3.4. As a C-NAF, 14 AF (AFSTRAT) establishes advanced training requirements for its operational and tactical-level units and communicates those requirements to the USAF Warfare Center (USAFWC). The USAFWC will plan and execute advanced training events in support of 14 AF (AFSTRAT) units to ensure those units are better prepared to execute contingency or wartime taskings. The USAFWC will work closely with 14 AF (AFSTRAT) operational and tactical-level units in the planning and execution of these events.

3.3.5. The 614th Air and Space Operations Center (614 AOC) is directly subordinate to 14 AF (AFSTRAT) and forms the core of the Joint Space Operations Center (JSpOC), the C2 center for the Commander, JFCC-Space.

3.4. Twenty Fourth Air Force (Air Forces Cyber) (24 AF (AFCYBER)): As a C-NAF, 24 AF (AFCYBER) is the AF cyberspace operations component to USSTRATCOM and the headquarters element designated to support the AF component commander. 24 AF (AFCYBER) includes an Operations Center (OC) and AFFOR staff and is responsible for presenting cyberspace forces and units to the Commander USCYBERCOM.

3.4.1. As a C-NAF, 24 AF (AFCYBER) is focused on delivering combat effects to CDRUSSTRATCOM. HQ AFSPC supports the C-NAF through robust reachback support, effective lines of communication, and responsive staff action. CSAF designated 24 AF (AFCYBER) as the AF cyberspace component to USSTRATCOM. 24 AF (AFCYBER) executes assigned missions and operates cyberspace forces through a subunified command, USCYBERCOM. USCYBERCOM is authorized DIRLAUTH with other CCDRs for UCP assigned cyberspace missions.

3.4.2. This arrangement, between 24 AF (AFCYBER) and USCYBERCOM, formalizes the relationship for Joint cyberspace requirements, policy, employment, sustainment and concepts between the AF "provisioner" and CDRUSSTRATCOM in numerous ways to include requirements and capabilities identification and advocacy through both the Service and Unified chains of command (e.g., IPL development). To accomplish cyberspace missions, 24 AF (AFCYBER) is assigned three cyberspace wings. Functionally, these wings are supported and sustained by HQ AFSPC with 24 AF (AFCYBER) "skipped" but monitoring and knowledgeable. See Figure 3.3 for cyberspace command relationships.

3.4.3. Units conducting cyberspace operations and tasks (operate, defend, exploit and attack) are assigned to 24 AF (AFCYBER) and subordinate to the operational authority of 24 AF (AFCYBER)/CC. This chain of command is responsible for all operational matters and usual administrative control (ADCON) responsibilities. Authority to perform Computer Network Exploitation (CNE) is derived through normal service cryptologic means and with oversight by the Service Cryptologic Component (SCC) Commander.

Figure 3.3. Cyberspace Command Relationships

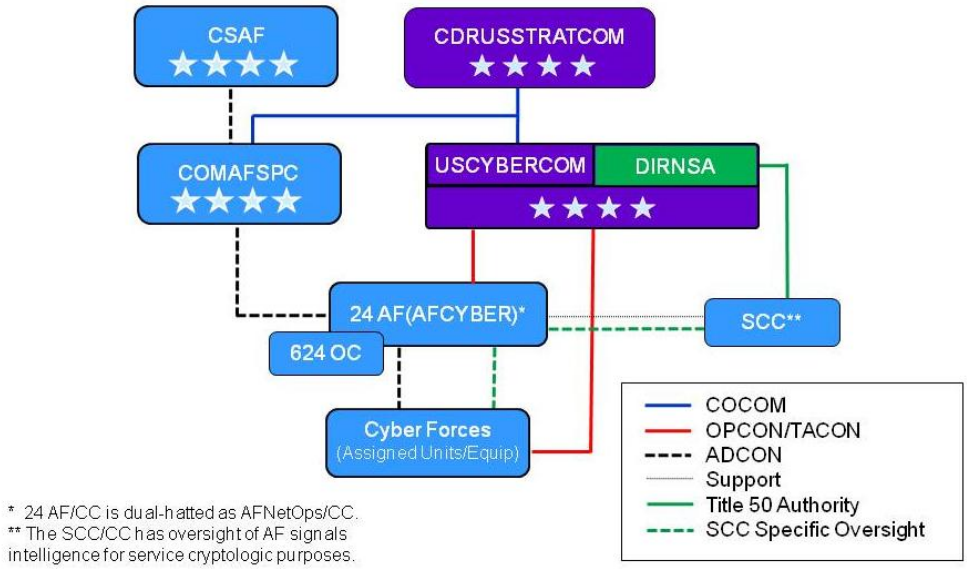

Figure 4. Cyberspace Command Relationships.

3.4.4. The 624th Operations Center (624 OC) is directly subordinate to 24 AF (AFCYBER) and is the 24 AF (AFCYBER)'s C2 center for the C-NAF as it interfaces and integrates joint cyberspace operations with the C2 node at USCYBERCOM.

3.4.5. AFSPC has responsibility for Air Force Network Operations (AFNetOps). The 24 AF (AFCYBER)/CC, dual-hatted as the AFNetOps/CC, is authorized DIRLAUTH with US military and civilian Departments and Services for the purpose of coordinating cyberspace infrastructure integration and implementation matters. The AFNetOps/CC directs AF cyberspace forces in executing missions and tasks assigned by the Cyberspace Joint Force Commander (USCYBERCOM) and exercises OPCON over Air Force forces assigned/attached to USCYBERCOM to implement NetOps actions in support of joint objectives. The AFNetOps/CC also executes AF service responsibilities (COMAFFOR actions) to protect the AF portion of the Global Information Grid (GIG).

Chapter 4

HQ AFSPC ROLES AND RESPONSIBILITIES

4.1. Headquarters Air Force Space Command (HQ AFSPC)

4.1.1. AFSPC is the AFs' Lead MAJCOM for space and cyberspace. AFSPC's responsibility is to organize, train, and equip space and cyberspace forces. AFSPC is the authoritative source of space and cyberspace information and services, capability requirements, priorities, synchronized portfolio funding, roadmaps, and concepts (i.e. functional, enabling, and operating) for space and cyberspace capabilities.

4.1.2. AFSPC monitors, tracks and interfaces with SAF/CIO-A6, the Air Force Program Executive Officers for Space (AFPEO-Space)/SMC, Command and Control and Combat Support/ESC (C2/CS) and other AFMC product centers to define, develop, acquire, field and sustain space and cyberspace requirements. Included in this role, HQ AFSPC provides guidance, prioritization, and oversight to its centers and the S&T communities to ensure future needs are met. HQ AFSPC, SMC, AFSMO and AFNIC also work with ESC and HQ AFMC, its product and logistics centers, and laboratories to ensure space and cyberspace systems are properly planned and sustained, and that science and technology support is focused and balanced.

4.1.3. HQ AFSPC is responsible for the approval of all AF 3-1 Tactics, Techniques, and Procedures (TTP) Manuals for space and cyberspace tactical systems as well as AF 3-3 Operational TTPs for space and cyberspace systems at the operational level. The 561st Joint Tactics Squadron (JTS) develops such manual and TTPs and will forward all new and revised space and cyberspace AF 3-1 and 3-3 manuals through the USAFWC/CC for endorsement and approval by the AFSPC/A3.

4.1.4. HQ AFSPC is responsible for creating an annual schedule including all combat and contingency taskings; Service level training, exercise, wargame and test requirements; and Joint training, exercise, and test requirements. This schedule is complementary to and coordinated and deconflicted with other Combat Air Forces (CAF) testing, exercise and wargame activities to the maximum extent possible.

4.1.5. HQ AFSPC is responsible for certifying all space and cyberspace systems as operationally safe, suitable, and effective. USAFWC/CC will make space and cyberspace fielding recommendations from space and cyberspace operational test units to AFSPC/A3 for final approval and fielding direction. The USAFWC/CC will also conduct annual non-kinetic space and cyberspace Weapon System Evaluation Programs (WSEP) and present those results to the CSAF and COMAFSPC.

4.1.6. AFSPC wing organizations interface with HQ AFSPC for certain functional support activities such as civil engineering, personnel, basing issues, etc. with NAF Commander knowledge and tracking (skip echelon concept).

4.2. Major Command Responsibilities:

4.2.1. MHQ.The MHQ supports the Commander's responsibilities of overseeing, directing and controlling subordinate organizations and units by: developing and issuing policies; providing policy guidance; defining operational capability requirements; evaluating program

performance; allocating and distributing resources; and conducting planning, programming, budgeting and analyses. Other responsibilities include strategic planning; communications planning and oversight; infrastructure construction, repair and maintenance; and logistics planning and system sustainment.

4.2.2. C-MAJCOM.As a C-MAJCOM, HQ AFSPC is the senior AF component headquarters element designated to support the AF component commander at the strategic level in providing organized, trained and equipped forces to the Combatant Commander.

4.2.3. Lead MAJCOM. HQ AFSPC is also a Lead MAJCOM for space and cyberspace forces. Lead MAJCOMs are MHQs that have the full range of functional staff and consolidate responsibilities for particular functions or weapon system capabilities in a single headquarters, supporting the entire AF as applicable.

4.3. Command Leads: COMAFSPC established Command Leads (normally an O-6) and associated Capability Teams for each major capability element within the MAJCOM. The Command Lead is the knowledgeable agent and leads a matrix team drawn from across the A-staff and, in some case, from across the space/cyberspace enterprise. Command Leads are accountable for program decisions and related program activities within their assigned capability element from cradle-to-grave. The Command Lead/Capability Team structure exists in conjunction with the headquarters A-Staff and Special Staff structure. In general, the Command Leads execute AFSPC's organize, train and equip responsibilities while the A-Staff and Special Staff provide MHQ support through policy, guidance and oversight.

4.3.1. Command Leads are designated in writing by the AFSPC/CV. Command Leads report to an A-Staff Director. Program Element Monitors (PEMs) perform their responsibilities in direct support and at the direction of the appropriate Command Lead.

4.4. Capability Teams: Capability Teams will be formed for each major core capability area with the primary purpose to facilitate, coordinate and synchronize issues for their assigned capability. These teams are headed by the Command Lead and composed of experts from across the A-staff, SMC Systems Directorates, Air Staff, AFNIC, and other government partners for specific capabilities. Capability teams are supported as needed by Federally Funded Research & Development Centers (FFRDC) and other contract support. Capability Teams will meet regularly and address the full set of issues in defining, developing, fielding and operating a new capability (e.g., requirements, trade-offs, human resources, training, infrastructure, tactics and procedures). Capability Teams are major contributors to the Integrated Planning Process (IPP) and Corporate Processes (refer to ch 6).

4.5. HQ AFSPC Office of the Chief Scientist and Science Advisor (HQ AFSPC/CCJ): The Chief Scientist and Science Advisor is COMAFSPC's primary advisor on scientific and technical matters concerning space and cyberspace research and development programs. On behalf of COMAFSPC, CCJ oversees the scientific and technical program activities within AFSPC and is chartered to build enduring relationships with our military partners, government entities, industry, academia and other scientific and technology organizations.

4.6. Directorate of Manpower and Personnel and Services (HQ AFSPC/A1): Responsible for manpower and personnel resources and wartime manpower planning processes and execution. Responsible for manpower estimate reports (MER) in support of AFSPC acquisition programs to ensure accurate manpower requirements are including in program cost estimates.

Directs all Military and Civilian Personnel, Military Equal Opportunity and Family Matters programs. Advises AFSPC/CC on senior officer personnel matters and issues. Provides direction, policy, guidance and oversight for AFSPC Services programs to enhance readiness, fitness and quality of life for AF members and their families. A1 is the focal point for space and cyberspace professional development activities.

4.7. Directorate of Intelligence, Surveillance and Reconnaissance (HQ AFSPC/A2): Responsible for developing Intelligence, Surveillance and Reconnaissance (ISR) policy, guidance, planning and managing AFSPC ISR functions. Serves as Senior Intelligence Officer (SIO) for AFSPC. Describes and supports AFSPC's foundational space and cyberspace ISR needs and interfaces with AF and national-level ISR organizations to ensure those foundational needs are met. Oversees all ISR related functions performed by the MHQ.

4.7.1. Responsible for managing and overseeing ISR activities in support of concept development, developmental planning and requirements development/validation processes for space and cyberspace capabilities. Oversees threat assessment, ISR policy, ISR programs and ISR force planning related to R&D, acquisition, fielding and sustainment of space and cyberspace capabilities. Specific responsibilities include:

4.7.1.1. Development and refinement of derived ISR requirements and leads resolution of ISR supportability gaps uncovered during concept and requirements development processes.

4.7.1.2. Oversight, management and reachback support for SMC-led ISR acquisition activities. (**Note**: SMC/IN has primary responsibility for providing or obtaining ISR support for programs managed by SMC.)

4.7.1.3. Providing subject matter expertise reachback to AFMC/A2 to include system-specific architecture support and space- and cyberspace-specific threat and scenario support. (Note: ESC/XR has primary responsibility for providing and obtaining ISR support for programs managed by ESC.)

4.7.1.4. Coordinate development of future threat assessments / scenarios with AFSPC/A9X to support: 1) A9X's development of baseline data for the Defense Planning Scenarios; 2) assessing and prioritizing future capabilities; and 3) development of both functional concepts and future system concepts.

4.7.1.5. Provide subject matter experts to contribute ISR-related insights in the various IPP Action Officer (AO) level teams and tasks, and collaborate with AFSPC/A8X on ISR issues included in the AFSPC Master Plan (AMP).

4.8. The Directorate of Air, Space and Cyberspace Operations (HQ AFSPC/A3): Responsible for operations policy, readiness, and training for all AFSPC core capabilities. Identifies and articulates mission responsibilities and supports the development of functional and operating concepts. Provides policy, guidance and funding to support training, evaluation and testing to ensure successful accomplishment of AFSPC missions. Serves as primary COMAFSPC interface with AFSPC operating components for daily awareness of operational activities through the AFSPC Command Center.

4.8.1. Provides subject matter expertise and supports the appropriate Capability Lead/Capability Team in the development of enabling or operating concepts and requirements

4.8.2. Approves the AF TENCAP investment strategy to align activities to the broader operational needs of AFSPC and the AF. Integrates planning, programming, development, testing and implementation between AF TENCAP projects, AFSPC development activities, and core Major Force Programs.

4.9. Directorate of Logistics, Installations and Mission Support (HQ AFSPC/A4/7): Responsible for life-cycle sustainment of AFSPC systems, capabilities and installations. Develops logistics, installation support, and contract policies, plans and programs. Provides direction and allocates resources for all activities associated with maintenance, munitions, transportation, supply, contracting, logistics plans, civil engineering and security. Develops, directs and provides guidance to design, construct, renovate, operate, maintain and repair facilities to support core AFSPC capabilities. Implements policies and plans; accountable for providing security, force protection, anti-terrorism and information, physical and personnel security for space and cyberspace missions; expeditionary combat support readiness; fire protection; disaster preparedness and explosive ordnance disposal; base development and operations; Military Construction Program projects; facilities excellence; environmental protection; and Logistic Capability Assessment.

4.9.1. Responsible for sustainment of expeditionary communications systems as well as developing and coordinating life cycle logistics and maintenance policy and guidance governing cyberspace systems. Additionally, A4/7 develops, implements and sustains support policies and plans for expeditionary systems.

4.9.2. In collaboration with AFSPC/A6 and AFNIC, responsible for sustainment of the mobile and deployable portion of the AFNET systems under AFSPC control.

4.10. Directorate of Requirements (HQ AFSPC/A5): Responsible for the requirements definition process for core AFSPC capabilities. Responsible for operational requirements development and oversight of the development, acquisition and fielding of new space and cyberspace capabilities. Recommends modification to existing weapon systems and support infrastructure to achieve validated operational requirements through technology insertion. Manages the Command's S&T program and FFRDC support to the MHQ.

4.10.1. Leads the requirements development and validation process with active dialogue between HQ AFSPC, SMC, ESC, and AFNIC. The purpose of this process is to produce operational requirements and concepts that yield military mission systems and capabilities that are clearly traced to mission needs supporting CCDRs.

4.10.2. Facilitates Joint Capabilities Integration and Development System (JCIDS) validation for new space and cyberspace capabilities and modifications to existing systems exceeding specified minimum threshold dollar values. Leads AFSPC development planning, concept development, requirements development, and S&T guidance processes. Specific responsibilities include:

4.10.2.1. Oversight of activities and processes such as Analysis of Alternatives (AoA), developing Initial Capabilities Documents (ICD), Capability Development Documents (CDD), Capability Production Documents (CPD) and guiding review and approval

through the Air Force Requirements Oversight Council (AFROC) and Joint Requirements Oversight Council (JROC).

4.10.2.2. Management of the Development Planning (DP) process for space and cyberspace activities. Co-chair with AFMC for DP Group, Board and Council. Responsible for DP activities within AFSPC and acts as the day-to-day interface with AFMC/A2/A5 for DP issues.

4.10.2.3. Training for all HQ personnel on the DoD Decision Support Systems focusing on the Planning, Programming, Budget and Execution (PPBE) system, Defense Acquisition System and JCIDS.

4.10.2.4. Requirements expertise and consulting to SMC, ESC and AFNIC as required.

4.11. Directorate of Communications and Information (HQ AFSPC/A6): Responsible for policy, plans, architectures, integration, interoperability, resource management, system management, business process reengineering and security of communications and information systems and programs. Serves as CIO for AFSPC. Specific responsibilities include:

4.11.1. Responsible for all aspects of C&I systems and programs, including plans, policy, resource management, baseline and future network architectures, business process reengineering and mission assurance.

4.11.2. Oversees (as the CIO for AFSPC) IT from cradle to grave. This responsibility covers stand-alone IT systems, IT systems that connect to the AFNET, the AFNET itself and IT embedded in AFSPC mission systems. Aspects of CIO governance include portfolio management, information assurance, AF and DoD network architectures and migration to standard systems.

4.11.3. Serves as Designated Accrediting Authority (DAA) for the AFNET and for space systems. A6, with AFNIC support, certifies and accredits AF and AFSPC systems on behalf of COMAFSPC, the AF DAA; ensures Information Assurance (IA) controls are built in to all systems; ensures that existing systems connected to AF and space systems maintain their IA controls and/or operate with an acceptable level of risk; and works with program offices to ensure new systems have mandated IA controls throughout acquisition, development and sustainment.

4.11.4. In collaboration with AFSPC/A4/7 and AFNIC, responsible for overseeing and managing acquisition, development and sustainment processes related to the fixed infrastructure portion of the AFNET. Works with AFSPC/A5 to process, coordinate and validate requests through the Cyberspace Infrastructure Planning System.

4.11.5. In collaboration with AFSMO, provides support for policy generation and deconfliction of spectrum issues and concerns across the AF and DoD.

4.12. Directorate of Plans, Programs and Analyses (HQ AFSPC/A8/9): Responsible for resource planning and programming and for the coordination and control processes and structures that support acquisition of required core AFSPC capabilities.

4.12.1. Provides oversight and manages the AFSPC Integrated Planning Process. Develops strategy, policy and doctrine for space and cyberspace operations.

4.12.2. Provides oversight of modeling and simulation efforts, as well as scientific analyses, assessments and lessons learned.

4.12.3. Responsible for managing AFSPC's classified/unclassified resource allocation and Program Objective Memorandum (POM) development processes. Serves as the focal point for command interaction and coordination with the AF Corporate Structure for all POM and Program Budget Review (PBR) issues.

4.12.4. Manages AFSPC basing, international affairs and foreign disclosure processes.

4.13. HQ AFSPC/FM: Responsible for budget formulation, distribution of budget and execution oversight for base infrastructure and space weapon systems sustainment, funds control and distribution for all appropriations and overall financial resource management, accounting and oversight for AFSPC. AFSPC/FM supports AFSPC/A5 in the requirements definition process, specifically in leading the cost analysis working group for AoA studies for satisfying warfighter requirements and furnish expertise for independent review, when applicable, of cost estimates produced by other entities.

4.14. Special Staff: The AFSPC Director of Staff leads the special staff. The special staff supports the COMAFSPC, A-staff directors, and AFSPC commanders with safety, financial management, history, legal, chaplain, inspector general, public affairs, surgeon and other specialized expertise.

4.15. Space and Missile Systems Center (SMC): SMC designs, develops, acquires and sustains space and related systems and programs. Responsible for acquisition and sustainment of space capabilities, including life cycle management planning, sustainment planning and sustainment management for all assigned AF space and missile systems.

4.15.1. The SMC/CC has two separate, but closely related chains of authority, responsibility and reporting: (1) as the Air Force Program Executive Officer for Space (AFPEO/SP) reporting to the DAE and SAE; and (2) product center commander reporting to COMAFSPC. These chains are shown in Figure 2.1.

4.15.1.1. In the acquisition chain, the AFPEO-Space (SMC/CC) executes National Security Space programs under the direction of the SAE in accordance with statutory and regulatory requirements and DoD and AF policy. The AFPEO-Space is accountable for all programs assigned to him that are executed by the SMC/ESC systems organizations and reports directly to the DAE and SAE and other DoD acquisition officials as required. Program execution roles and responsibilities include formulating programs and system solutions derived from COMAFSPC capability needs and requirements, as well as defining, budgeting and managing resources provided by AFSPC (and other supported organizations such as the National Reconnaisiance Office (NRO), Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and NASA) for successful program execution. The AFPEO-Space establishes contractual relationships with industry to execute programs and manages/monitors contract execution.

4.15.1.2. In the AF product center chain, the SMC/CC receives requirements from COMAFSPC, which have been refined, validated and programmed in concert with HAF/Joint Staff processes. SMC also executes typical ADCON responsibilities for which they receive administrative, resource and other support from HQ AFSPC. Other responsibilities include organizing, training and equipping the Center for successful

mission execution to include recruiting, training and retaining a qualified acquisition workforce. SMC implements critical processes, standards and best practices in systems engineering, program management, financial management, contracting, mission assurance, specifications and standards, and develops and manages capabilities and competencies for life cycle management of AF space systems.

4.15.2. The SMC/CC is responsible and accountable to COMAFSPC for delivering space capabilities to perform AFSPC missions. This includes establishing and maintaining Development Plans and systems roadmaps as well as establishing overall space system sustainment and industrial base viability strategies in coordination with AFMC.

4.15.3. SMC plays a critical role in translating AFSPC operational requirements and concepts into system/technical requirements and executable programs that meet cost, schedule, performance and risk objectives. SMC proposes and defines systems and programs that provide the capabilities to meet established requirements with COMAFSPC serving as the final decision authority for approving system definition. As the COMAFFOR to USSTRATCOM, COMAFSPC ensures that supported CCDR requirements and integrated priorities are met (with appropriate interface with the AF and Joint processes) while staying in concert with CSAF and SECAF direction and AF and AFSPC priorities.

4.15.4. Once acquisition programs begin, any needed operational requirements, schedule and budget/funding trades are proposed by AFPEO-Space/SMC, synchronized and orchestrated under the leadership of HQ AFSPC, and approved by COMAFSPC for HAF and Joint Staff consideration. This process prevents introduction of new requirements into approved program baselines ("requirements creep") without specific approval from COMAFSPC. SMC/CC keeps COMAFSPC informed of program progress via periodic, formal program reviews.

4.15.5. SMC also performs a critical role in the launch, operational checkout and transfer of operational space capabilities to 14 AF (AFSTRAT). This role is different from the aircraft model where the operating command "accepts" an aircraft at the factory after successful flight-testing. For space systems, authority, responsibility, accountability and resources for placing capability on-orbit are ultimately aligned under COMAFSPC. The SMC/CC has contractual and Operational Safety, Suitability and Effectiveness (OSS&E) responsibility for the launch system through satellite vehicle separation and the satellite through on-orbit delivery. The 14 AF (AFSTRAT)/CC is responsible for launch day execution, public safety, range support, collision avoidance analysis, satellite control network support and operational execution. SMC/CC exercises overall authority, responsibility and accountability for space system flight worthiness until the system is formally transferred to 14 AF (AFSTRAT)/CC on orbit. Therefore, all authority, responsibility and accountability for successful acquisition through delivery of AF capabilities on orbit and subsequent operations, are aligned within AFSPC under the working authority of COMAFSPC.

4.15.6. SMC is the single focal point for life cycle management of space systems logistics and sustainment functions for AFPEO-Space delivered systems. SMC consolidates, coordinates, and provides a single focal point for logistics/sustainment activities including cross system integration, acquisition logistics, logistics readiness, sustaining engineering and program support of assigned System Support Managers (SSMs).

4.15.7. SMC's Space Development and Test Directorate develops, integrates, tests, launches and operates experimental technologies and prototypical space systems, and evaluates these for residual and/or future tactical exploitation. As such, they must work closely with 14 AF (AFSTRAT), JFCC-Space and the Space Innovation and Development Center (SIDC) in executing assigned functions.

4.16. Space Innovation and Development Center (SIDC): The SIDC/CC reports to COMAFSPC and is a supporting commander to the USAFWC/CC for advanced training, operational test activities, and tactics development for space. SIDC also performs: space experimentation as assigned; cross-domain integration; rapid prototyping and tactical exploitation of emerging technologies; and plans, supports, executes exercises and wargames; and develops advanced space modeling tools. In this capacity, the SIDC/CC functions as a full member of the USAFWC and participates fully in all USAFWC processes.

4.16.1. The SIDC/CC also identifies resource and personnel shortfalls impacting its ability to execute USAFWC missions and works with the HQ AFSPC and USAFWC staff to develop inputs to HHQ programming and budgeting processes in order to address the shortfalls.

4.16.1.1. The SIDC works with the USAFWC/CC, as needed, to develop or mature the organizations, processes and capabilities required to further normalize space-related advanced training, operational test, and tactics development.

4.16.1.2. AFSPC/A3, in coordination with AFSPC/A1, SIDC/CC, 688 IOW/CC and the USAFWC/CC, develops operating concepts and associated courses of action for organizational changes needed to fully address integrated USAFWC space (SIDC) and cyberspace (688 IOW) advanced training, operational test, and tactics development for mission requirements. These courses of action include potential locations such as Schriever AFB, Hurlburt Field, Nellis AFB, Kirtland AFB and Lackland AFB.

4.16.1.3. There are closely related and synergistic capabilities resident within the SIDC's and the Space Development and Test Directorate's test, experimentation, operational prototype and tactical exploitation functions for space systems. These two organizations should work closely together to determine opportunities to leverage best practices and expertise, and develop Courses of Action (COAs) for the most effective alignment of these functions and certification milestones.

4.16.1.4. The SIDC, through the 595th Space Group (SG), provides operational test, advanced training, and space control tactics development. The 595th SG is responsible for demonstrating new technologies and testing space experiments; operating the Space Test and Training Range (STTR); integrating space capabilities through exercise planning and execution; and developing space modeling tools and simulated space environments. It serves as the focal point for coordinating test activities and advanced training events between HQ AFSPC, 14th AF, space wings, test squadrons and external agencies.

4.16.1.5. As a part of the 595th SG, the Advanced Space Operations School (ASOpS) provides advanced training on space sub-systems and theater deployment training (all supporting enhanced delivery of space and missile capabilities to the warfighter). Advanced courses are designed to train and educate space professionals in warfighting TTPs, enhance subject matter expertise, support development and evaluation of new

TTPs and guide students through the process of integrating space capabilities, limitations, vulnerabilities and threats into doctrine. Warfighter Preparation training courses are designed to train Space Professionals with broad based space applications with an emphasis on theater integration. ASOpS also offers fundamental courses designed to educate non-credentialed Space Professionals, other space enablers, and foreign allies on space capabilities and integration. The school capitalizes on the synergy of being located alongside the SIDC and the USAFWC to tap into the latest innovations in TTP development.

4.17. Air Force Spectrum Management Office (AFSMO): AFSMO plans, provides and preserves access to the electromagnetic spectrum for the AF and selected DoD activities in support of national policy objectives, systems development, and global operations. The AFSMO/CC reports directly to COMAFSPC, however, AFSMO maintains a relationship with SAF/CIO-A6 in their role as the AF CIO. AFSMO communicates directly with AF, Federal Government agencies, private sector entities, and international organizations on tasks for which AFSMO is responsible. Specific responsibilities include:

4.17.1. Serve as OPR for all AF spectrum management requirements supporting spectrum-dependent (S-D) programs throughout their life cycle.

4.17.2. Implement DoD, national and international spectrum management guidelines and instructions specific to supporting the AF mission. Ensure such instructions and procedures comply with national and international telecommunications rules and regulations, and appropriate multinational and bilateral agreements.

4.17.3. Provide spectrum engineering (allocation) and radio frequency spectrum management (assignment) procedural guidance to MAJCOMs, field activities, operational, and functional communities, to include acquisition, research, development, test, and evaluation (RDT&E), and logistics to certify and license S-D systems.

4.17.4. Monitor spectrum developments in DoD, national, and international arenas; evaluate impacts on AF operations, RDT&E programs, and spectrum-dependent systems acquisition efforts.

4.18. Air Force Network Integration Center (AFNIC): AFNIC shapes and integrates the AFNET enabling assured core cyberspace capabilities to achieve warfighting advantage in support of AFSPC. AFNIC communicates, collaborates and coordinates with other AF organizations and domain experts to develop "speed of need" cyberspace net-centric concepts, architectures, as well as tactics, techniques, and procedures. Additionally, AFNIC leverages emerging cyber technologies to meet requirements for current and future air, space and cyberspace operations; allowing the AF to complete the sphere of information dominance.

4.18.1. The AFNIC/CC reports directly to COMAFSPC; however, AFNIC maintains a coordination relationship via DIRLAUTH with SAF/CIO-A6 in their role as the AF CIO and with other MAJCOMs. The coordination relationship with the MAJCOMs includes: Common Core Training; Certification and Accreditation (C&A); Long Haul Communications; Information Technology and Asset Management (ITAM); Information Assurance (IA) Management; Command Records Management; Maintenance and Sustainment; Publications and Forms Management; High Frequency Global Communications System (HFGCS); and Video Teleconferencing (VTC) Management.

4.18.2. AFNIC supports AFSPC in shaping the AFNET to expand cyberspace capabilities for warfighter needs. AFNIC characterizes the cyber battle space, develops the infrastructure portion of cyber architecture (AFNET), serves as an integral member of the AFSPC Cyberspace Capability Teams, and provides cyberspace engineering services and strategic and capability planning support. AFNIC provides cyberspace technology assessment input to the AFSPC S&T guidance development process.

4.18.3. AFNIC provides standardization for the AFNET and manages the network for mission assurance. AFNIC pursues and implements the AFSPC initiative to standardize the network and determines interoperability requirements in collaboration with 24 AF (AFCYBER) and ESC for deploying AFNET components and systems. AFNIC identifies capability shortfalls and implements/improves cyber surety by developing and disseminating security standards, policies and procedures; modernizes, transforms and sustains Cryptological Systems; and performs IA and C&A Management. AFNIC provides cyberspace technology assessments, including risk assessments, and assesses requests for system and application network connection for networthiness attributes (SISSU-Security, Interoperability Supportability, Sustainment and Usability).

4.18.4. AFNIC supports AFSPC (as the lead operating command for Comm and Information Systems Management) and ESC to sustain the AFNET. A prime priority for the cyberspace enterprise is developing and implementing the Single Integrated Network Environment (SINE) for the entire AF. The SINE will deliver the promise of full range net-centric capabilities, finally closing gaps and seams within the kill chain, and achieving warfighting advantage across the entire air, space, and terrestrial domains. AFNIC works with ESC to fulfill responsibilities for cradle-to-grave sustainment. AFSPC/A5 has appointed AFNIC Requirements Leads to support the AFSPC Command Leads to ensure life-cycle planning, sustainment, and resource Management cradle-to-grave activities. As AFNIC partners with AFSPC/A4/7, A5, A6, in the sustainment workshops and summit, these functional areas will be integrated and aligned to meet Command strategic goals for HQ sustainment program.

Chapter 5

ORGANIZATIONAL RELATIONSHIPS

5.1. Major organizational relationships.

5.1.1. MAJCOM to MAJCOM relationships.

5.1.1.1. Air Combat Command (ACC): ACC provides combat airpower to America's warfighting commands and serves as the Lead MAJCOM for the CAF (AFSPC is one of six MAJCOMs comprising the CAF). To support global implementation of national security strategy, ACC operates fighter, bomber, reconnaissance, battle-management, and electronic-combat aircraft. It also provides command, control, communications and intelligence systems, and conducts global information operations.

5.1.1.2. As a force provider, ACC organizes, trains, equips and maintains combat-ready forces for rapid deployment and employment to meet the challenges of peacetime air sovereignty and wartime air defense. ACC NAFs provide the air component to US Central, Southern and Northern Commands, with HQ ACC serving as the air component to Joint Forces Command. ACC also provides forces to US European, Pacific and Strategic Command.

5.1.1.3. The purpose of the CAF is to integrate and leverage capabilities, systems, forces and operations in and through all domains to deliver precise effects for the JFC across the full range of military operations. Under ACC leadership, the CAF members establish consistent, well-integrated plans, goals and priorities to ensure effective operations in air, space and cyberspace. The fundamental reason for strategic planning across the CAF is integration. The primary organization for CAF integration is the USAFWC.

5.1.1.4. ACC provides primary funding and administration oversight of the USAFWC. The USAFWC reports to ACC, but ***works for*** and is ***responsible to*** all MAJCOMs and AFOTEC for integrated combat training; support for operational testing and evaluation; and advanced tactics development. AFSPC both directly supports the USAFWC (primarily through the SIDC) and is a "demanding customer" to advocate and establish a consistent set of requirements and capability development on behalf of the warfighter. This relationship necessitates strong communication and coordination between ACC and AFSPC to avoid duplication of effort, conflicting guidance, and consistent prioritization of requirements.

5.1.2. Air Force Materiel Command (AFMC): AFMC conducts research, development, test and evaluation, acquires systems, provides acquisition management support and ensures logistics support necessary to keep AF weapon systems ready for operations. AFMC and AFSPC have a supporting/supported relationships in these areas.

5.1.2.1. Several space and space support programs are executed by AFMC product center personnel but fall within the AFPEO/SP portfolio. In addition, other AFSPC programs are executed by AFMC under ESC-led AFPEO portfolios. AFMC works collaboratively with AFSPC/A1, SMC and AFNIC on space and cyberspace professional development and acquisition career management issues.

5.1.2.2. AFMC fulfills its mission of equipping the AF with weapon systems through AFRL and Centers, which are responsible for "cradle-to-grave" oversight for aircraft, electronic systems, missiles and munitions. Most AF weapon systems are developed and acquired through three AFMC product centers, Aeronautical Systems Center at Wright-Patterson AFB; Air Armament Center at Eglin AFB; and ESC at Hanscom AFB. The systems are then tested at AFMC's two test centers, the AF Flight Test Center, Edwards AFB and the Arnold Engineering Development Center, Arnold AFB.

5.1.2.3. ESC acquires the bulk of the cyberspace and C2 systems needed by AFSPC; however, AFSPC also interacts with HQ AFMC for development planning, acquisition and weapons system sustainment support; with AFRL for science and technology (S&T) requirements; and with ESC for ground-based systems. Developmental testing is the responsibility of the acquirer, with independent operational test and evaluation provided by AFOTEC with support and interaction from the USAFWC (space and cyberspace components). Space and cyberspace developmental testing is performed by SMC and ESC in close collaboration with the SIDC Test Integration Office (STIO), ESC, AFOTEC, USAFWC, AFNIC and 688 IOW to ensure synchronization of developmental test and operational test activities.

5.1.3. Air Education and Training Command (AETC): AETC provides basic military training, initial qualification training, professional continuing education and academic education for all MAJCOMs. While AFSPC is supported by AETC for this training and professional military and developmental education, the two MAJCOMs share training and education responsibilities.

5.1.3.1. Second Air Force (2 AF) conducts basic military and technical training for AF non-flying enlisted members and officers, to include space and cyberspace operations and space and cyberspace maintenance personnel. Commissioned officers and enlisted personnel attend space and cyberspace qualification training courses provided by AETC.

5.1.3.2. Air University (AU) provides developmental education, professional military education and professional continuing education to prepare graduates to develop, employ, command, research and champion air, space and cyberspace power at all levels. AU's mission is to provide the full spectrum of AF education for officers, enlisted and civilian personnel. The University's Professional Military Education (PME) programs educate Airmen on the capabilities of air, space, and cyberspace power and their role in national security. Specialized professional continuing education programs at the Eaker Center for Professional Development provide scientific, technological, managerial and other professional expertise to meet the needs of the AF.

Figure 5.1. NSSI/ASOpS Organization

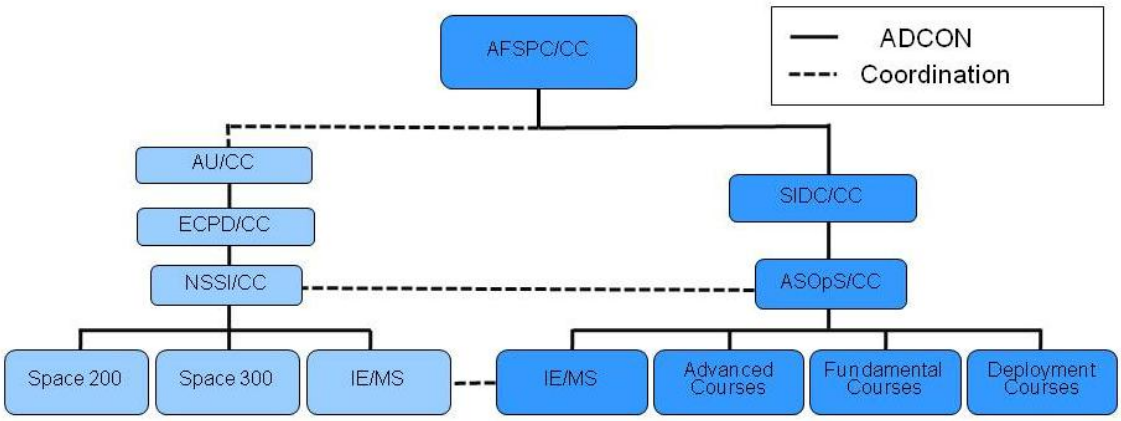

Figure 5. NSSI / ASOpS Organization.

5.1.3.2.1. The National Security Space Institute (NSSI) is part of the Eaker Center for Professional Development and conducts continuing education required to prepare space warfighters for joint military operations. NSSI education programs complement ASOpS training programs to provide a broad spectrum of space courses both for space professionals and non-space personnel. Figure 5.1 shows the organization of the NSSI and the relationship with ASOpS.

5.1.3.2.2. The NSSI prepares and teaches a comprehensive DoD space capabilities curriculum preparing warfighters to integrate space capabilities into joint military operations. As the lead agent for the execution of the education portion of the AF Space Professional Development Program (SPDP), the NSSI provides courses that emphasize the understanding of space capabilities, limitations and vulnerabilities. NSSI courses are prerequisites to space professional certification milestones.

5.1.3.3. The Air Force Cyberspace Technical Center of Excellence (AFCyTCoE) at the Air Force Institute of Technology (AFIT) conducts continuing education for cyberspace professionals. The AFCyTCoE prepares and teaches a comprehensive cyberspace capabilities curriculum to prepare warfighters to integrate cyberspace capabilities into joint military operations.

5.1.3.4. For its part, AFSPC establishes space and cyberspace professional standards, states training and education requirements to AETC, provides instructors as needed, advocates for training support and monitors and holds AETC accountable for meeting COMAFSPC training and education requirements. AFSPC conducts mission qualification training (MQT), recurring/specified training and advanced weapon system training (ASOPS) in support of its operational missions. AFSPC/A3 provides oversight and guidance for space and cyberspace operational standardization, training and support activities.

5.2. Centers, Agencies, and Other Key Stakeholder Relationships:

5.2.1. Electronic Systems Center (ESC): ESC designs, develops, acquires and sustains cyberspace, C2 and related systems and programs needed by AFSPC.

5.2.1.1. As with the SMC/CC, the ESC/CC has two separate (but closely related) chains of authority, responsibility and reporting: 1) as the AFPEO- C2/CS reporting to the DAE and SAE; and 2) as a product center commander reporting to AFMC.

5.2.1.2. In the acquisition chain, the AFPEO-C2/CS (ESC/CC) executes C2 and cyberspace programs under the direction of the SAE in accordance with statutory and regulatory requirements and DoD and AF policy. In some cases, the ESC/CC executes programs that are under the acquisition supervision of the AFPEO/Space. The AFPEO-C2/CS is accountable for all programs assigned that are executed by the ESC Systems organizations. Program execution roles and responsibilities include formulating programs and system solutions derived from COMAFSPC capability needs and requirements, as well as defining, budgeting and managing resources provided by AFSPC for successful program execution. The AFPEO-C2/CS establishes contractual relationships with industry to execute programs and manages/monitors contract execution. In the AF product center chain, the ESC/CC works for and reports to AFMC/CC, but also reports functionally to and receives requirements from COMAFSPC which have been refined, validated and programmed in concert with the HAF. ESC implements critical processes, standards and best practices in systems engineering, program management, financial management, contracting, mission assurance, specifications and standards, and develops and manages capabilities and competencies for life cycle management.

5.2.1.3. The ESC/CC is responsible and accountable to COMAFSPC for delivering cyberspace and C2 capabilities to perform AFSPC missions. This includes establishing and maintaining Development Plans and Systems Roadmaps as well as establishing overall space and cyberspace system sustainment and industrial base viability strategies in coordination with AFMC.

5.2.1.4. ESC plays an important role in translating AFSPC operational requirements and concepts into systems/technical requirements and executable programs that meet cost, schedule, and performance and risk objectives. ESC proposes and defines systems and programs that provide the capabilities to meet established requirements. As the COMAFFOR to USSTRATCOM, COMAFSPC ensures that supported CCDR requirements and integrated priorities are met (with appropriate interface with the AF and Joint processes) while staying in concert with CSAF and SECAF direction and AF and AFSPC priorities.

5.2.1.5. Once acquisition programs begin, any needed operational requirements, schedule and budget/funding trades are proposed by AFPEO-C2/CS and ESC, synchronized and orchestrated under the leadership of AFSPC and approved by COMAFSPC for HAF and Joint Staff consideration. This process prevents introduction of new requirements into approved program baselines (“requirements creep”) without specific approval from COMAFSPC. ESC/CC keeps COMAFSPC informed of program progress via periodic, formal program reviews including metrics developed by AFSPC/A5.

5.2.1.6. ESC is the single focal point for life cycle management of cyberspace systems logistics and sustainment functions for AFPEO-C2/CS delivered systems. Sustainment is the planning, programming and executing of a support strategy for a system, subsystem

or major end item to maintain operational capabilities from system fielding through disposal.

5.2.1.7. For cyberspace and C2 systems, ESC is responsible for coordinating sustainment activities for all AFSPC and USAF cyberspace systems. ESC consolidates, coordinates, and provides a single focal point for logistics/sustainment activities including cross system integration, acquisition logistics, logistics readiness, sustaining engineering and program support of assigned SSMs.

5.2.2. Air Force Personnel Center (AFPC): AFPC integrates and executes personnel operations to develop AF personnel and meet field commanders' requirements. AFPC supervises and directs the overall management and distribution of military officers (Lieutenant Colonel and below); enlisted members (Senior Master Sergeant and below); and civilian personnel (GS-15/equivalent and below). While the bulk of AFSPC's interaction with AFPC is led by AFSPC/A1, to ensure space and cyberspace operational needs drive career field management practices, the AFSPC/A3 chairs the USAF 13S and 17D Development Team. The chair of the 17X (cyberspace) Development Team will be determined at a later date.

5.2.3. Air Force Intelligence, Surveillance and Reconnaissance Agency (AFISRA): AFISRA's mission is to organize, train, equip and present assigned forces and capabilities to conduct intelligence, surveillance and reconnaissance for combatant commanders and the nation. The 70 ISRW, 480 ISRW, National Air and Space Intelligence Center (NASIC), and AF Technical Applications Center are aligned under AFISRA. The Commander, AFISRA, is currently dual-hatted as the SCC/CC, with final determination of any changes in authority to be determined at a later date. In that role, the SCC/CC provides oversight of service cryptologic activities for operational elements of 24 AF (AFCYBER).

Figure 5.2. USAF Warfare Center Organization

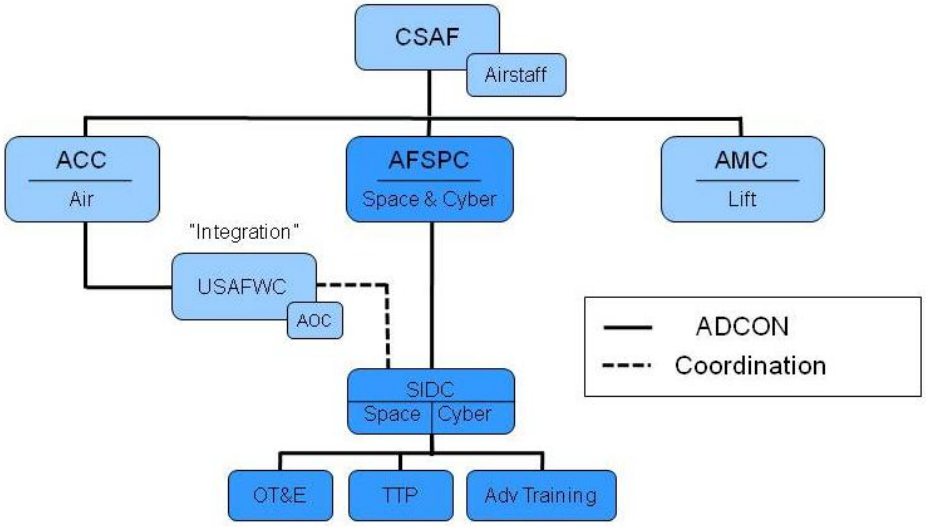

Figure 6. USAF Warfare Center Organization.

5.2.4. USAF Warfare Center (USAFWC): The USAFWC's mission, directed in a CSAF-signed strategic charter, is to shape the way the AF fights through advanced training, operational testing and tactics development in air, space and cyberspace at the operational and tactical levels. The USAFWC reports administratively to the Commander, ACC (COMACC); however, per CSAF direction the USAFWC/CC works for and supports the USAF's MAJCOM commanders and air, space, and cyberspace component commanders (C-NAF and NAF commanders who are dual-hatted as joint commanders) to supported unified commands. The USAFWC organization and relationships with AFSPC are shown in Figure 5.2.

5.2.4.1. The USAFWC is the AF's single focal point for integrated combat training support for OT&E and advanced TTP development.

5.2.4.2. COMAFSPC supports the CSAF-directed USAFWC mission and is a demanding customer of the USAFWC's advanced training, operational testing, and tactics development missions. In that regard, HQ AFSPC works (primarily through the SIDC) with USAFWC to normalize USAFWC processes in support of the following initiatives:

5.2.4.3. The normalization of an aggressor force expert on the adversary threats that will face our space and cyberspace tactical units, able to teach the threat to space and cyberspace tactical units, and able to replicate these threats to our tactical units in advanced training. The HQ AFSPC staff works with the USAFWC to identify shortfalls in its ability to meet the above requirements.

5.2.4.4. The integration of tactical-level space and cyberspace capabilities and operators as a full-training audience into advanced training venues such as Red Flag, or other events as required to meet space and cyberspace advanced training requirements.

5.2.4.5. The integration of operational-level space and cyberspace capabilities and operators as a full-training audience into advanced training focused on the 614 AOC and 24 OC. The purpose of this training is to mirror equivalent USAFWC training in support of other AOCs in the CAF. It also includes advanced training in Virtual Flag or Blue Flags exercises focused on the operators and staff in our space and cyberspace operations centers (614 AOC and 624 OC). These training events are directed by the AFSPC Exercise Program.

5.2.4.6. The integration of the required air, space and cyberspace capabilities into AF and Joint Live, Virtual and Constructive test and training venues.

5.2.4.7. The normalization of air, space and cyberspace tactics development processes and organizations. In particular, develop COAs to ensure space and cyberspace test and evaluation units have the expertise and resources to also develop mission design series (MDS) TTPs during the OT&E process.

5.2.4.8. The execution and coordination of a weapons systems certification process for space and cyberspace systems testing in support of space and cyberspace component commanders and HQ AFSPC.

5.2.5. National Reconnaissance Office (NRO): The NRO develops, acquires and operates space-based intelligence capabilities for both the DoD and Intelligence Community. The

USAF has historically contributed to the NRO a substantial number of people from many specialties, has collaborated on critical mission operations capabilities (e.g. launch, satellite network support, space surveillance), has provided S&T support and continues to do so today. In 2006 the CSAF and Director, NRO (DNRO) established their intent regarding the AF-NRO relationship and proposals to enhance relations, space capabilities, and mission performance. Figure 5.3 shows the resulting relationship between AFSPC and the NRO.

5.2.5.1. The AF has assigned a two-star general officer to serve as the Deputy Director, NRO (DDNRO). Primary duties include: senior military advisor to the DNRO; DDNRO acquisition responsibilities; Commander, NRO AFSPC Element (AFSPC ELEM/CC) for all USAF personnel assigned to the NRO with administrative reporting responsibilities to COMAFSPC; and NRO's representative to COMAFSPC for AF space professional development actions.

Figure 5.3. Relationship of AFSPC and NRO

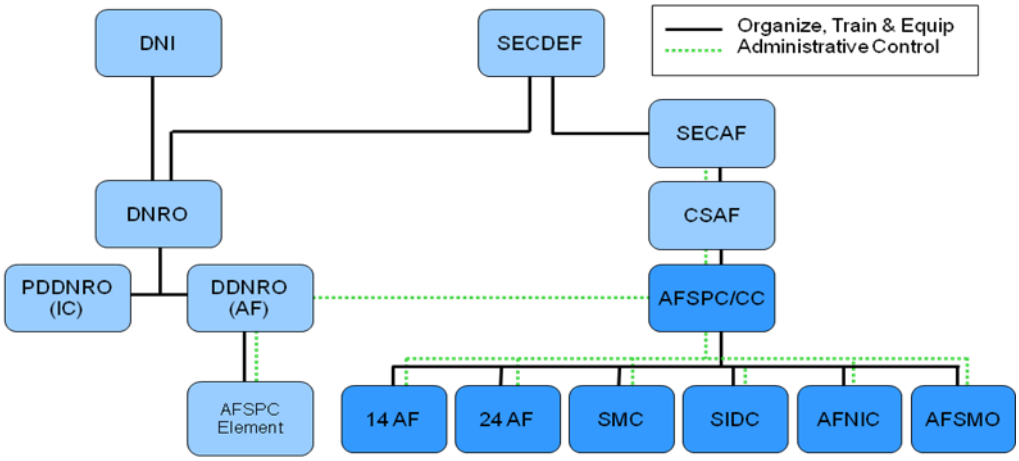

Figure 7. Relationship of AFSPC and NRO.

5.2.5.2. All USAF personnel assigned to the NRO are under the operational control of the DNRO who has authoritative direction over all aspects of NRO operations and activities. The fact that an ADCON relationship exists between the NRO AFSPC ELEM and COMAFSPC does not alter this guiding tenet of the NRO.

5.2.5.3. The NRO has assigned a senior NRO leader (one-star equivalent) to HQ AFSPC as the Deputy, AFSPC/A3. Primary duties include: senior NRO Advisor to COMAFSPC; and permanent deputy to the Director, AFSPC/A3.

5.2.5.4. AF personnel assigned to the NRO are under the ADCON of COMAFSPC, are managed within existing USAF personnel management processes (e.g., AFPC assignment teams; "Green Door" assignment policies; assignment designations; Command Selection Boards, etc.) and, for USAF space professionals, are managed under guidance issued by COMAFSPC acting in his Space Professional Functional Authority (SPFA) role.

5.2.5.5. NRO and AFSPC have established a Space Assignment Advisory Board to oversee assignments of all (O-5 and below) space professionals to include those assigned to the NRO. This board meets annually, is comprised of AFSPC and NRO O6s

representing the primary career fields (acquisition, operations, communications, and intelligence), is co-chaired by AFSPC/CV and the DDNRO and is responsible to the SPFA. The objective of this Board is to strengthen the oversight and career development of all Space Professionals and, ultimately, to enhance mission success in AFSPC and the NRO.

5.2.5.6. The NRO Office of Space Launch (OSL), SMC and 14 AF (AFSTRAT) have a long history of cooperation and interdependence for launch mission success. In addition, SMC and 14 AF (AFSTRAT) execute launch operations in collaboration with and in support of NRO mission requirements.

5.2.5.7. NRO assets are operated in a support relationship between the NRO and its mission partners and capabilities are provided to CCDRs via established national intelligence tasking, processing, exploitation and dissemination (TPED) processes and procedures.

5.2.6. Air Force Operational Test and Evaluation Center (AFOTEC): AFOTEC is responsible for testing and evaluating new weapon systems in realistic operational environments in order to provide COMAFSPC and other AFSPC decision makers a range of accurate, balanced and timely assessments of system effectiveness, suitability and mission capability. AFOTEC, with support and cooperation from AFSPC, is moving forward with efforts to plan and execute integrated developmental test/operations test (IDT/OT) across all acquisition programs, as well as making a concerted effort to maximize use of IDT/OT events and the sharing of relevant data. Therefore, AFOTEC will be involved and execute operational test design earlier than in the past in order to provide OT&E plans to program offices as soon as possible.

5.2.6.1. AFOTEC, USAFWC and AFSPC share test responsibilities. As the AF Operational Test Agency, AFOTEC is responsible for operational test activities for Acquisition Category (ACAT) I, IA and II programs, and programs on the Office of the Secretary of Defense (OSD) Director, Operational Test and Evaluation (DOT&E) Oversight List. AFSPC oversees DT&E responsibilities (through AFPEO-Space/SMC organizations) and leads MAJCOM OT&E responsibilities, including Tactics Development Evaluations (TDE), Force Development Evaluations (FDE) and Operational Utility Evaluations (OUE) for systems in sustainment and new acquisition programs for which AFSPC is the lead operational test (OT) organization.

5.2.6.2. AFOTEC and SIDC, along with SMC, ESC and the USAFWC, work in concert through the STIO and Integrated Test Teams (ITT) to synchronize efforts in the execution of assigned OT&E of space and missile systems.

5.2.7. Air Force Research Laboratory (AFRL): The AFRL mission is to lead the discovery, development and integration of affordable warfighting technologies for our air, space and cyberspace force. AFRL delivers technology options for current and next-generation air, space and cyberspace programs, discovering advanced technologies with potential for future space applications and providing quick-turn solutions for near-term operational shortfalls. As the Technology Executive Officer (TEO), AFRL/CC coordinates with PEOs and AFSPC/A5 on S&T initiatives. AFSPC provides prioritized S&T needs to the AFRL/CC, for incorporation into the S&T portion of the AFRL POM.

5.2.8. Missile Defense Agency (MDA): MDA, following SECDEF direction, initiated the urgent development and deployment of the integrated Ballistic Missile Defense (BMD) System and implemented a capabilities-based system engineering process to achieve early capability and ongoing evolution. AFSPC manages its role in the BMD program following CJCSI and AF instructions for JCIDS and capabilities-based requirements development. AFSPC and MDA have a Memorandum of Agreement (MOA) specifying AFSPC roles in developing, testing, fielding, operating and sustaining the Global Ballistic Missile Defense System. Documents referenced in the MOA and previously signed MOAs/Memorandum of Understandings (MOUs) further outline roles, responsibilities, relationships and partnerships of the MDA, AFSPC, SMC, AFPEO/SP and AFMC.

5.2.9. Air Force Cost Analysis Agency (AFCAA): AFCAA is a Field Operating Agency to SAF/FMC. They provide non-advocate cost analyses to support AF acquisition decisions. AFCAA works closely with AFSPC, SMC and ESC.

Chapter 6

PROCESSES

6.1. Processes: The HQ AFSPC A-Staff, with support from the NAFs and Centers, will use the following processes to ensure effective interaction and coordination across AFSPC and with external organizations. These processes serve as a mechanism for coordination and do not take the place of normal staffing activities or remove accountability from the A-staff Directors.

6.1.1. Requirements Definition Process (A5):

6.1.1.1. . HQ AFSPC works with users and warfighters to determine requirements needed to fulfill operational mission capabilities identified from higher-level guidance to include National Security Strategy, Integrated Priority Lists, Joint Operating Concepts, COMAFSPC Vision, etc. The AFSPC requirements definition process is a collaborative activity led by AFSPC/A5, and closely supported and informed by AFSPC's Integrated Planning Process, SMC, ESC and AFNIC. Using the Capability Team, the Command Lead oversees requirements development products IAW AFSPCI 10-103, *Capabilities-Based Operational Requirements Guidance*, in formulating and documenting requirements for space and cyberspace systems. After determining capability needs, AFSPC/A5 works with SMC/XR and other program offices/organizations to conduct AoAs, trade studies, etc., to determine the best way to address mission capability gaps, including consideration of resources and technology maturity. HQ AFSPC uses this information to develop capability documents (ICD, CCD, CPD), which, SMC and ESC use to develop technical requirements which form the basis of contracts with industry to develop hardware and software systems solutions.

6.1.2. The JCIDS is closely integrated with the acquisition process and exists to identify, develop, and validate defense-related requirements. JCIDS implements a capabilities-based approach that leverages the expertise of DoD and non-DoD agencies and industry to identify, assess, and prioritize joint force capabilities. The process validates warfighting capability needs while considering the full range of materiel and non-materiel solutions. Within DoD, there is a distinct separation between the requirements authority and acquisition authority, which requires early and continual collaboration between both communities in order for the processes to work effectively together. AFSPC/A5 leads the JCIDS process in AFSPC, with involvement from all directorates as well as SMC/ESC, and other pertinent centers and agencies. For further information regarding the how AFSPC implements the JCIDS process, refer to AFSPCI 10-103, *Capabilities-Based Operational Requirements Guidance*.

6.2. Resource Allocation Process (A8/9): The AFSPC Corporate Process provides a deliberative means to facilitate and coordinate development of resource allocation priorities and decision recommendations. The process forms the basis of AFSPC positions and interaction with HHQ resource allocation activities. The process enables responsive action while ensuring senior leadership receives advice from relevant staff elements and subordinate commanders.

6.3. Corporate Structure and Process: The HQ AFSPC Corporate Process, described in AFSPCHOI 16-10, is managed by AFSPC/A8/9 and provides a deliberative means to generate programmatic courses of action for COMAFSPC. The Corporate Process is also used for other decision forums, such as requirements.

6.4. POM Development: AFSPC/A8/9 is responsible for developing the Command's annual POM, Change Proposals (CP) and President's Budget (PB) submission and for reviewing, revising and approving all documents relating to AFSPC's Future Years Defense Plan (FYDP). COMAFSPC prioritizes POM submissions and submits the MAJCOM position to HAF through the appropriate panels (Space, Cyber, Installation Support, etc.). The POM is the programming process used to implement DoD and AF guidance for the FYDP, including manpower, force levels, procurement, facilities and research and development. SMC, ESC and AFNIC are supporting organizations to AFSPC/A8/9 and all submissions to the POM are submitted through the AFSPC Corporate Process. HQ AFSPC Command Leads are involved throughout the POM process for their respective programs. The AFSPC Corporate Process includes cost analyses developed by AFCAA. These analyses prepare the AFSPC Group and Board to fund to the best-known estimates and provide analytical rigor for alternatives that diverge from known estimates.

6.4.1. The Pre-POM process begins with training conducted by AFSPC/A8PE to the Command Leads, Capability Teams, and PEMs in the Sep/Oct timeframe. The PEMs in coordination with their respective Centers (SMC, ESC, and AFNIC), produce Resource Allocation Programming Information Decision System (RAPIDS) and supporting documentation as identified by AFSPC/A8P describing known initiatives, disconnects and/or offsets throughout the FYDP. The PEMs in coordination and approval with their respective Directorates and Command Leads forward information to AFSPC/A8P for inclusion in the AFSPC Corporate POM Process.

6.5. Integrated Planning Process (IPP) (A8/9): The AFSPC IPP provides coordination and synchronization to identify and articulate AFSPC mission responsibilities, identify gaps in mission capabilities, identify potential solutions to capability gaps, create capability roadmaps, and analyze and propose integrated investment alternatives. The output of the IPP is a master plan that provides guidance for AFSPC's resource decisions and requirements development.

6.5.1. AFSPC/A8/9 leads the AFSPC IPP to develop the AMP and corresponding Investment Strategy. The IPP provides direction to create, manage and validate information for development of AF strategic guidance documents in support of effective resource allocation. The IPP is AFSPC's response to HAF direction to develop capabilities-based planning processes and guidance in the Air Force Strategic Planning System (AFSPS) that establishes reporting criteria to meet the needs of the Nation now and into the future.

6.6. Space and Cyberspace Superiority Core Function Master Plans (CFMP): The CFMPs provide top-down strategic guidance to the AF and define the capabilities necessary to win today's and tomorrow's conflicts. The CFMPs encompass a long-term view of AF capabilities starting with the FYDP and ending 30 years out--defining strategies, dollars and total inventory needed to deliver an optimized force for the CCDRs. The AF derives prioritizations and force development data for space and cyberspace from the command's IPP, but constrained to CSAF fiscal guidance.

6.7. Science and Technology (S&T): COMAFSPC provides S&T guidance and prioritization to shape the space and cyberspace S&T portion of the AFRL portfolio IAW AFPD 61-1 to provide requirements, recommended program guidance and direction to the Commander, AFRL. The IPP provides priorities and shortfall analysis necessary to develop this guidance. COMAFSPC requests the AFRL/CC review this guidance and provide the AFSPC S&T Council an assessment of AFRL's POM submission to address AFSPC's prioritized technology needs.

6.7.1. AFSPC/A5 leads the AFSPC S&T written guidance development process and serves as the AFSPC focal point for all S&T activities. Other AFSPC/A5 S&T responsibilities include Joint Capability Technology Demonstrations, identifying and understanding policy and capability implications from emergent space and cyberspace S&T; reviewing space and cyberspace-related S&T portfolios and innovation activities to ensure alignment with S&T needs; collecting space and cyberspace technology requirements from other MAJCOMs and CCDRs and participating in S&T reviews to verify S&T alignment with AFSPC's IPP.

6.7.2. A key review is the Space/Cyberspace PEO/TEO review led by respective product center(s) in conjunction with AFRL and AFSPC/A5. The PEO/TEO review ensures identification, documentation, prioritization and development of required technologies to meet program and development planning needs. Technology needs vetted through PEO/TEO reviews form the foundation for the HQ AFSPC S&T guidance document. Product center(s) also leverage other S&T development efforts to meet their technology needs, including: cooperating with AFRL in the Independent Research and Development (IR&D) program; conducting the AF Space Experiments Review Board (SERB) and serving as a voting member at the DoD SERB and developing and managing technology transition programs for maturing technologies.

6.8. Development Planning (DP): DP is the process used to develop potential materiel solutions to satisfy a need. It bridges the gap between capabilities planning and program initiation in the acquisition lifecycle model. It is responsible for supporting the definition of future capability needs by capturing required system-performance characteristics; investigating future threats; evaluating alternative concepts; assessing technology maturity and risk factors; defining sustainment and life-cycle cost issues; and forming executable acquisition strategies.

6.8.1. DP includes early system engineering, life-cycle analyses, studies and cost estimates in pursuit of new capabilities, from identification of a need for a potential materiel solution to initiation of an acquisition program. For space programs, AFSPC coordinates efforts with AFMC to ensure overall DP is standardized and identified across the AF. AFSPC/A5 is the entry point for space DP requests, and AFMC/A2/5 is the entry point for all non-space DP requests.

6.8.2. SMC performs development planning for space systems in accordance with SAF/AQ's Early Systems Engineering Guide to explore and develop potential space materiel solution concepts. Capability needs across near-, mid- and far-term horizons are provided in JCIDS-derived ICD and outputs from AFSPC's IPP. SMC/XR decomposes these capability needs along with additional warfighter constraints, issues and goals into a bounded tradespace for subsequent evaluation of potential solution concepts. Each concept is evaluated to determine the architecture, infrastructure, enabling technologies and associated costs and risks to produce a candidate solution set. Using the solution sets, SMC/XR then generates courses of action that include first-order acquisition strategies, schedules and implementation plans in support of Pre-Milestone A acquisition functions. This work is documented in the form of Concept Characterization Technical Descriptions (CCTD) for potential solutions to identified gaps and shortfalls. SMC's responsibilities include providing baseline technical requirements for current and future space systems; developing CCTDs for future space programs as needed; monitoring progress of conceptual programs and providing data to maintain currency for DP working group/board and council consideration.

6.8.3. ESC performs development planning for cyberspace and C2 materiel solutions. AFSPC/A5 is responsible for coordination and oversight of AFSPC DP efforts and requests ESC support through AFMC/A2/5. AFSPC/A5 works with the appropriate Command Lead and AFNIC to compile information and support needed for submission to AFMC/A2/5. ESC maintains a close working relationship with AFSPC/A5 for AFSPC-led cyberspace programs.

6.9. Developmental Test and Evaluation (DT&E): DT&E demonstrates systems feasibility, confirms engineering design and development are complete, minimizes design risks, and ensures systems perform as required in their intended environments. DT&E results support weapon system life cycle decisions and certification of the system as ready for dedicated AF Initial Operational Test and Evaluation (IOT&E).

6.9.1. SMC has acquisition responsibility that includes directing DT&E and facilitating integrated testing. DT&E is conducted throughout the acquisition and sustainment processes to assist in engineering design and development, and to verify that Critical Technical Parameters (CTP) have been achieved.

6.9.2. Similarly, ESC develops and acquires major weapon systems for AFSPC. Their respective PEOs have acquisition responsibility to include directing DT&E and facilitating integrated testing.

6.9.3. DT&E supports the acquisition of materiel or operational capabilities before Full-Rate Production (FRP) or fielding decisions. After FRP or fielding, DT&E supports the sustainment of systems to extend their useful life, performance, and capabilities. DT&E activities should be conducted in environments that are as operationally relevant as practical without compromising engineering integrity, safety, or security.

6.9.4. Collaboration and early tester involvement are the cornerstones to achieving "Capabilities Based T&E" for Space Systems. AFI 99-103 defines the ITT as the mechanism to achieve collaboration and seamless verification of system performance. Additionally, even before an ITT is formed, testers must be involved early on in all acquisition and sustainment programs to infuse testability and operational realism into requirements development while ensuring test assets are available to test the potential capability.

6.10. Architecture Development: Architectures provide a holistic view of a set of capabilities to better enable system-wide design and development. Architectures are used for understanding space and cyberspace as an enterprise; identification of operational requirements; rationalization of IT investment decisions; and improvements to interoperability among various systems. AFSPC's approach is organized around integrated architecture models that provide standardized viewpoints with traceable architecture elements usable by DoD organizations, including AFSPC, to support mission requirements. AFSPC is responsible for architectures within the space and cyberspace domains. HQ AFSPC Command Leads assume the responsibility for their mission area architecture and associated DoD Architecture Framework (DoDAF) viewpoints.

6.10.1. Command Leads develop architecture viewpoints for each mission area delineated by the AFSPC Capability Teams. The intent of the mission area architecture is to support all other MAJCOM processes to optimize systems and families of systems to provide maximum capability to the warfighter within the context of the overall mission area and fiscal constraints. These products specifically serve production of operational requirements and

functional, enabling and operating concepts that yield compatible, effective combinations of military mission systems and capabilities traced to mission needs.

6.10.2. Command Leads are responsible for creating system-specific operational architecture viewpoints. These viewpoints add system requirements detail to the overall MAJCOM mission area architecture.

6.10.3. Acquisition agents are responsible for system and technical architectures. Acquisition agents ensure fully traceable architecture elements demonstrate successful accomplishment of the mission area architecture. SMC is the acquisition agent for AF space systems; ESC is the acquisition agent for command and control, combat support systems and cyberspace systems. These organizations are responsible for describing and maintaining the current as well as future system architecture baselines for their respective portfolios within the mission area architectures.

6.10.4. AFSPC/A6 is responsible for establishing policies, procedures, guidelines and a governance structure to oversee HQ AFSPC and lower-level architecture activities. AFSPC/A6 also reviews and recommends certification of architectures developed by assigned/responsible organizations, such as SMC, ESC, AFNIC or that fall within the purview of their assigned portions of the AF Enterprise Architecture (i.e., cyberspace infrastructure). In addition, AFSPC/A6 shall ensure an Architect is appointed to oversee AFSPC architecture development activities, ensure architecture compliance and serve as lead for AFSPC architecture governance bodies. HQ AFSPC, SMC, ESC and AFNIC shall develop and maintain architectures for designated portions of the AF Enterprise Architecture and use the architectures as an authoritative source to support AFSPC execution of AF processes. HQ AFSPC ensures that the architectures are consistent with the AF Enterprise Architecture, including AF activities, IT standards and profiles. For their respective portfolios, SMC, ESC and AFNIC shall publish certified and under-development AFSPC architecture metadata and contact information to the Air Force Federal Acquisition Regulation Supplement (AFFARS). This ensures full life cycle visibility of architectures and their components from initial development, through certification, and subsequent evolution.

6.10.5. In support of cyberspace activities, AFSPC/A6 established the AF Cyberspace Architecture Collaboration Forum to provide collaboration and coordination of cyberspace architecture development. AFSPC/A6, as the AFSPC CIO, has responsibilities for developing architecture governance and identifying supporting processes for cyberspace architectures. It also establishes a virtual repository for all AF cyberspace architecture products and tools and help integrate cyberspace architecting into the existing HQ AFSPC Enterprise Architect and corporate processes. In conjunction with the cyberspace architecture community, including AFNIC, AFSPC/A6 develops and maintains the cyberspace mission and domain architectures.

6.11. Concept Development: Concept development provides the cornerstone for planning and acquisition of space capabilities. Per AFSPCI 10-102, *Concept Development*, AFSPC will not pursue acquisition programs without thought out and approved concepts. Concepts describe the ways that we employ military means to accomplish desired ends. As ideas mature into requirements and funded programs, concepts mature in detail and lead the requirements and acquisition processes. Success is measured by how well concepts are developed, prototyped and

integrated into the joint force. AFSPC concepts are developed IAW AFSPCI 10-102 and consistent with existing higher-level guidance as applicable.

6.11.1. AFSPC develops concepts IAW AFSPCI 10-102 to support strategic planning and capability development. AFSPC/A8/9 leads functional concept development to support the IPP and maintain linkage to capabilities listed in AF-level operating concepts and AF CFMP. These AF-level concepts link capability efforts to joint warfighter needs expressed in the Family of Joint Operating Concepts. Command Leads follow AFSPCI 10-102 to develop enabling and operating concepts to ensure requirements activities have an operationally focused expression of specific ends, ways and means that can achieve effects desired by the warfighter. Additionally, HQ AFSPC works closely with USSTRATCOM, 14 AF (AFSTRAT), 24 AF (AFCYBER) and other operational elements in the development of warfighter CONOPS. The concept development process ensures we have sound, joint-warfighting operational context to drive subsequent planning, requirements and acquisition efforts.

6.12. Rapid Capability Development and Fielding: Urgent needs are addressed through innovative employment, modification of existing systems, rapid prototyping and tactical exploitation of emerging technologies, or the rapid development and deployment of small, responsive systems through the AF TENCAP. System concepts are collected through various means such as consulting previously generated concepts, requesting industry responses and consulting with other DoD, government and non-profit organizations. Both materiel and non-materiel solutions are solicited. The Director AFSPC/A3 will approve the AF TENCAP investment strategy to better align the activities to the broader operational needs of AFSPC and the AF. The Director AFSPC/A3 will integrate planning, programming, development, testing and implementation between AF TENCAP projects, AFSPC development activities, and core Major Force Programs.

6.12.1. Operational Responsive Space (ORS): The 2007 National Defense Authorization Act and USSTRATCOM CONOPS for ORS created a set of capabilities to meet urgent CCDR needs.

6.12.1.1. AFSPC/A5 works with the ORS Office and USSTRATCOM to formulate system requirements in response to urgent ORS needs and plans to meet future needs for rapid augmentation and reconstitution.

6.12.1.2. SMC/XR provides long-range plans supporting operationally responsive space system concepts in response to CCDR urgent needs.

6.12.1.3. SMC's Space Development and Test Directorate is the executing organization for AFSPC ORS solutions.

6.12.2. Rapid Cyber Acquisition: The rapid cyber acquisition process is a joint AFSPC and AFMC effort to ensure delivery of cyberspace capabilities at the speed of need.

6.12.2.1. A three-tiered construct, across the entire life cycle, provides the responsiveness to meet cyberspace timelines. From providing real-time, operator-run, quick reaction capability, to rapid acquisition (weeks to months) of urgent capability and finally the foundational, JCIDS/DoD 5000 process for major AF-wide systems.

6.12.3. Warfighter Rapid Acquisition Process (WRAP): The AF WRAP is part of a larger effort to make the acquisition system more responsive to changing needs of the warfighter and rapid technological advances. AFSPC/A5 is the OPR for the WRAP. AFSPC/A5 does an annual call for submittals, validates and prioritizes proposals for nomination for funding. The proposals are approved by AFSPC/CV or his designee. AF WRAP accomplishes the following objectives: accelerates the development and fielding of operational initiatives resulting from innovation; speeds the initiation decision and funding allocation for a small number of competitively selected projects that either increase capability or significantly reduce cost; transition funding is allocated in the execution year to support selected projects for up to two years.

6.12.4. Joint Urgent Operational Need (JUON): The JUON process is a time sensitive means to support a CCDR involved in a combat-related (ongoing) operation. It provides a method of rapidly validating, resourcing and fielding urgent operational solutions, which are outside the Services normal processes. JUON assets should prevent combat loss of life or a combat mission failure. AFSPC/A5 is the OPR for the JUON process. AFSPC/A5 works with the Command Leads and stakeholders as needed to develop a response IAW AFI 10-601 guidance.

6.12.5. JUON assets should not involve technology development; however, the acceleration of an Advanced Technology Demonstration (ATD) or minor modification to an existing COTS/GOTS system, which allows it to be used for a new mission, is permissible. This process is documented in CJCSI 3470.01, *Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONS) in the Year of Execution*.

6.13. Space Systems Sustainment: COMAFSPC has overall authority/responsibility for space sustainment activities. AFSPC manages the Logistics Requirements Determination Process (LRDP) used to plan, budget and execute Depot Purchased Equipment Maintenance (DPEM); Sustaining Engineering; Technical Orders and Contract Logistics Support (CLS) requirements. AFSPC/A4/7 is responsible for LRDP and conducts the AFSPC Logistics Panel to prioritize requirements. In addition, AFSPC/A4/7 is responsible for developing and coordinating life cycle logistics and maintenance policy and guidance governing all space systems and the network portion of AFSPC-unique enterprise systems. AFSPC/A4/7, in collaboration with AFNIC as applicable, serves as the primary interface with AFMC/A4 for sustainment and maintenance management issues to include, but not limited to, Integrated Life Cycle Management (ILCM) policy, Depot Source of Repair (DSOR), Centralized Asset Management (CAM), maintenance, supply chain management, technical orders and support equipment. AFSPC/A4/7, in collaboration with SMC and ESC, shall establish overall space system sustainment and industrial base strategies and coordinate with HQ AFMC.

6.13.1. SMC's Space Logistics Group (SLG) is responsible to the AFPEO/SP as the single focal point for all space logistics/sustainment activities to include, but not limited to, cross system integration, logistics readiness, sustaining engineering and program support of assigned System Sustainment Managers (SSMs). The SLG will collaborate with SMC/PI on acquisition logistics activities for systems in development.

6.13.2. SMC and ESC program offices work directly with the AFSPC Command Leads and Capability Teams and are responsible for budgeting for and conducting space system sustainment, executing configuration management responsibilities for assigned systems,

providing technical expertise to resolve sustainment issues and maintaining operational safety, suitability and effectiveness . System Program Managers (SPMs) retain system management responsibility throughout the life cycle. A SSM, who reports directly to the SPM, performs sustainment management activities as assigned by the SPM per AFI 63101.

6.14. Cyberspace Sustainment: COMAFSPC has overall authority and responsibility for sustainment of the AFNET, excluding end user devices.

6.14.1. AFSPC/A4/7, in collaboration with AFSPC/A6, 24 AF (AFCYBER) and AFNIC, establishes overall cyberspace system sustainment strategies (fixed and deployed) and coordinates with ESC. AFSPC/A4/7, in concert with AFSPC/A6 and AFNIC, provides sustainment support for AFSPC cyberspace systems. AFSPC/A4/7 and AFNIC, in coordination with ESC and the 689 CCW, are responsible for expeditionary communications sustainment as well as developing and coordinating life cycle logistics and maintenance policy and guidance governing expeditionary communications systems. Additionally, AFSPC/A4/7 develops, implements and sustains support policies and plans.

6.14.2. AFSPC/A4/7 and AFNIC, in coordination with ESC, are responsible for expeditionary communications sustainment as well as developing and coordinating life cycle logistics requirements, developing and implementing plans, and MAJCOM maintenance policy and guidance governing expeditionary communications systems cyberspace systems. AFSPC/A4/7 develops, implements and sustains support policies and plans.

6.14.3. AFSPC/A4/7, in collaboration with AFSPC/A6, 24 AF (AFCYBER) and AFNIC, supports development of fixed AFNET infrastructure life cycle logistics.

6.15. Controlling Operational Baselines: The Operational Baseline for mission critical systems is the approved configuration baseline (specifications, drawings and software listings) at system turnover from the acquiring organization to the operational unit. The SPM establishes the operational baseline during development and updates and maintains it as changes (threat, operational usage, aging, maintenance, etc.) and improvements are made to the system or end item. The SPM is the decision authority for changes to system configurations and baselines per AFI 63-1201. Changes to the operational baseline require approval through the Configuration Control Board (CCB) process. Key participants include the Command Leads/Capability Teams, program offices, operational units and the Space Logistics Group or ESC SSMs.

6.16. Space Industrial Base Assessment: SMC monitors industrial base risks through interfacing and collaborating with our space suppliers, other space agencies, industry forums and Working Groups (WGs). In addition, SMC identifies potential technology and economic risks by collaborating with the Space Industrial Base Council (SIBC); the Critical Technologies Working Group (CTWG); the Parts, Material and Process (PMP) WG; and the Space Parts and Space Power WGs. SMC advocates for funding for identified industrial base risks from various sources, including S&T and Productization and Qualification (P&Q) funding from multiple agencies and programs to mitigate risks.

6.17. Acquisition Support to Other Organizations: Several programs executed by AFPEO/SP fall outside AFSPC mission area responsibility. Non-space programs executed within the AFPEO/SP portfolio follows non-space program reporting chains, guidance and regulations. DP and other A-Staff functions (i.e., requirements, planning and programming) are

the responsibility (oversight and funding) of the owning MAJCOM. Investment funding will continue to flow through AFSPC as a materiel command, and SMC organizations executing those programs will utilize SMC functional support.

JOHN W. RAYMOND, Brigadier General, USAF
Director of Plans, Programs and Analyses

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

ACAT—Acquisition Category

ACC—Air Combat Command

ACTD—Advanced Concept Technology Demonstration

ADCON—Administrative Control

ADM—Acquisition Decision Memorandum

AETC—Air Education and Training Command

AF—Air Force

AFB—Air Force Base

AFCAA—Air Force Cost Analysis Agency

AFCYBER—Air Forces Cyber Command

AFCyTCoE—Air Force Cyberspace Technical Center of Excellence

AFFARS—Air Force Federal Acquisition Regulation Supplement

AFFOR—Air Force Forces

AFISRA—Air Force Intelligence, Surveillance, and Reconnaissance Agency

AFI—Air Force Instruction

AFIT—Air Force Institute of Technology

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFNET—Air Force Network

AFNetOps—Air Force Network Operations

AFNIC—Air Force Network Integration Center

AFOTEC—Air Force Operational Test and Evaluation Center

AFPC—Air Force Personnel Center

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRL—Air Force Research Lab

AFROC—Air Force Requirements Oversight Council

AFSMO—Air Force Spectrum Management Office

AFSPC—Air Force Space Command

AFSPC/CC—Commander, Air Force Space Command

AFSPC/CV—Vice Commander, Air Force Space Command

AFSPCHOI—Air Force Space Command Headquarters Operating Instruction

AFSPCI—Air Force Space Command Instruction

AFSPS—Air Force Strategic Planning System

AFSTRAT—Air Forces Strategic Command

AMP—AFSPC Master Plan

ANG—Air National Guard

AO—Action Officer

AoA—Analysis of Alternatives

AOC—Air and Space Operations Center

APPG—Annual Planning and Programming Guidance

ASOpS—Advanced Space Operations School

AT&L—Acquisition Technology and Logistics

ATD—Advanced Technology Demonstration

AU—Air University

BMD—Ballistic Missile Defense

C&A—Certification and Accreditation

C&I—Communications and Information

C-MAJCOM—Component Major Command

C-NAF—Component Numbered Air Force

CAF—Combat Air Forces

CAM—Centralized Asset Management

C2—Command and Control

CC—Commander

CCB—Configuration Control Board

CCDR—Combatant Commander

CCTD—Concept Characterization Technical Description

CDD—Capability Development Document

CFMP—Core Function Master Plan

CIO—Chief Information Officer

CJCSI—Chairman Joint Chief of Staff Instruction

CLS—Contract Logistics Support

CNE—Computer Network Exploitation

COA—Course of Action

CONOPS—Concept of Operations

COMAFSPC—Commander Air Force Space Command

COMAFFOR—Commander Air Force Forces

COTS—Commercial Off-the-Shelf

CP—Change Proposals

CPD—Capability Production Document

CS—Combat Support

CSAF—Air Force Chief of Staff

CTP—Critical Technical Parameters

CTWG—Critical Technologies Working Group

CV—Vice Commander

DAA—Designated Accrediting Authority

DAE—Defense Acquisition Executive

DoD—Department of Defense

DoDAF—Department of Defense Architecture Framework

DoDD—Department of Defense Directive

DoDI—Department of Defense Instruction

DT—Developmental Test

DT&E—Developmental Test and Evaluation

EA—Executive Agent

ESC—Electronic Systems Center

FAA—Functional Area Analysis

FDE—Force Development Evaluations

FFRDC—Federally Funded Research & Development Center

FNA—Functional Needs Analysis

FRP—Full-Rate Production

FSA—Functional Solutions Analysis

FY—Fiscal Year

FYDP—Future Years Development Program

GIG—Global Information Grid

GCC—Geographic Combatant Commands

GOTS—Government Off-the-Shelf

HAF—Headquarters Air Force

HFGCS—High Frequency Global Communications System

HQ—Headquarters

HHQ—Higher Headquarters

IA—Information Assurance

IAW—In Accordance With

IC—Intelligence Community

ICD—Initial Capabilities Document

ID—Implementation Directive

IDT/OT—Integrated Developmental Test/Operations Test

ILCM—Integrated Life Cycle Management

IOC—Initial Operational Capability

IOT&E—Initial Operational Test and Evaluation

IOW—Information Operations Wing

IPL—Integrated Priorities List

IPP—Integrated Planning Process

IR&D—Independent Research and Development

ISWG—Intelligence Support Working Group

ISR—Intelligence, Surveillance and Reconnaissance

IT—Information Technology

ITAM—Information Technology and Asset Management

ITT—Integrated Test Team

JCIDS—Joint Capabilities Integration and Development System

JFC—Joint Force Commander

JFCC—Joint Functional Component Command

JROC—Joint Requirements Oversight Council

JSpOC—Joint Space Operations Center

JTS—Joint Tactics Squadron

JUON—Joint Urgent Operational Need

LRDP—Logistics Requirements Determination Process

MAIS—Major Automated Information System

MAJCOM—Major Command

MDA—Milestone Decision Authority

MDAP—Major Defense Acquisition Program

MDS—Mission Design Series

MER—Manpower Estimate Report

MHQ—Management Headquarters

MOA—Memorandum of Agreement

MOU—Memorandum of Understanding

MQT—Mission Qualification Training

NAF—Numbered Air Force

NASA—National Aeronautics and Space Administration

NASIC—National Air and Space Intelligence Center

NII—Networks and Information Integration

NOAA—National Oceanic and Atmospheric Administration

NRO—National Reconnaissance Office

NSS—National Security Space

NSSI—National Security Space Institute

O&M—Operations and Maintenance

OC—Operations Center

OPCON—Operational Control

OPR—Office of Primary Responsibility

ORS—Operationally Responsive Space

OSD—Office of the Secretary of Defense

OSL—Office of Space Launch

OSS&E—Operational Safety Suitability and Effectiveness

OT—Operational Test

OT&E—Operational Test and Evaluation

OTE—Organize, Train and Equip

OUE—Operational Utility Evaluations

P&Q—Productization and Qualification

PAD—Program Action Directive

PB—President's Budget

PBR—Program Budget Review

PE—Program Element

PEM—Program Element Monitor

PEO—Program Executive Officer

PM—Program Manager

PME—Professional Military Education

PMP—Parts, Material, and Process

POM—Program Objective Memorandum

PPBE—Planning, Programming, Budgeting, and Execution

PPlan—Programming Plan

QDR—Quadrennial Defense Review

R&D—Research and Development

RDT&E—Research Development Test and Evaluation

RAPIDS—Resource Allocation Programming Information Decision System

RDS—Records Disposition Schedule

S&T—Science and Technology

S-D—Spectrum Dependant

SAE—Service Acquisition Executive

SCC—Service Cryptologic Component

SDTW—Space Development and Test Wing

SECAF—Secretary of the Air Force

SECDEF—Secretary of Defense

SERB—Space Experiments Review Board

SG—Space Group

SIBC—Space Industrial Base Council

SIDC—Space Innovation and Development Center

SINE—Single Integrated Network Environment

SIO—Senior Intelligence Officer

SISSU—Security, Interoperability, Supportability, Sustainment and Usability

SLG—Space Logistics Group

SMC—Space and Missile Systems Center

SME—Subject Matter Expert

SORTS—Status of Resources and Training Systems

SPD—System Program Director

SPFA—Space Professional Functional Authority

SPDP—Space Professional Development Plan

SPM—System Program Managers

SSM—System Support Managers/System Sustainment Managers

STIO—SIDC Test Integration Office

STTR—Space Test and Training Range

T&E—Test and Evaluation

TACON—Tactical Control

TDE—Tactics Development Evaluations

TENCAP—Tactical Exploitation of National Capabilities

TEO—Technology Executive Officer

TTP—Tactics, Techniques & Procedures

TF—Task Forces

TPED—Tasking, Processing, Exploitation, and Dissemination

UCC—Unified Combatant Command

UCP—Unified Command Plan

US—United States

USAF—United States Air Force

USAFWC—USAF Warfare Center

USCYBERCOM—United States Cyber Command

USECAF—Under Secretary of the Air Force

USC—United States Code

USSTRATCOM—United States Strategic Command

VTC—Video Teleconferencing

WG—Working Group

WRAP—Warfighter Rapid Acquisition Process

WSEP—Weapon System Evaluation Programs

Terms

Administrative Control (ADCON)—Direction or exercise of authority over subordinate or other organizations in respect to administration and support, including organization of Service forces, control of resources and equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in the operational missions of the subordinate or other organizations.

Capability Development Document (CDD)—The CDD contains the information needed to develop a system that will provide the capabilities required by the warfighter. It will result in an affordable capability that can be effectively acquired, supported, and deployed

Direct Liaison Authorized (DIRLAUTH)—That authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command. Direct liaison authorized is more applicable to planning than operations and always carries with it the requirement of keeping the commander granting direct liaison authorized informed. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised.

Initial Capabilities Document (ICD)—The ICD establishes the need for a materiel solution to address a capability gap identified during the JCIDS analysis. It is supported by the FAA, FNA, and FSA.

Milestone Decision Authority (MDA)—The individual designated to approve entry of an acquisition program into the next phase.

Milestones—Major decision points that separate the phases of an acquisition program.

Operational Control (OPCON)—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command. Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning task, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command.

Operational Test and Evaluation (OT&E)—Test and evaluation conducted in as realistic an operational environment as possible to estimate the prospective system's operational effectiveness and operational suitability. In addition, operational test and evaluation provides information on organization, personnel requirements, doctrine and tactics. In turn, it also provides data to support or verify material in operating instructions, publications, and handbooks.

Program Executive Officer (PEO)—A military or civilian official who has primary responsibility for directing several Major Defense Acquisition Programs (MDAPs) and for assigned major system and non-major system acquisition programs.

Program Manager (PM)—The PM is the designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs.

Tactical Control (TACON)—Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements and maneuvers necessary to accomplish missions or task assigned. Tactical control is inherent in operational control.