



**U.S. AIR FORCE**

**SPACE PROFESSIONAL  
STRATEGY**

**16 April 2003**

A handwritten signature in black ink, appearing to read 'LW Lord', with a long, sweeping underline that extends to the right.

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General, USAF**

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## SECTION I—TASKINGS AND THE AIR FORCE APPROACH

### A. TASKINGS

As military dependence on space grows, the Air Force must meet the challenge of developing the right people to acquire, operate, and employ military space capabilities. These people are an indispensable component of our national security force. This challenge was documented in the Report of the Commission to Assess United States National Security Space Management and Organization (Jan 11, 2001). The Commission noted, “The DoD is not yet on course to develop the space cadre the nation needs.”<sup>i</sup> These professionals “will have to master highly complex technology; develop new doctrine and concepts of operations for space launch, offensive and defensive space operations, power projection in, from and through space...and operate some of the most complex systems ever built and deployed.”<sup>ii</sup> This conclusion led the Commission to call for initiatives to “create and sustain a cadre of Space Professionals”<sup>iii</sup> and to “create a stronger military space culture through focused career development, education, and training, within which the space leaders for the future can be developed.”<sup>iv</sup> This change was endorsed and implemented in (1) the Secretary of Defense (SECDEF) memorandum (Oct 18, 2001) tasking the Secretary of the Air Force (SECAF) to prepare a space career management plan for military and civilian Air Force personnel; and (2) the FY 2002 National Defense Authorization Act (NDAA) directing the SECAF to “establish and implement policies and procedures to develop a career field for officers in the Air Force with technical competence in space-related matters...”<sup>v</sup> In addition, the dual-hatted Undersecretary of the Air Force and Director, National Reconnaissance Office has made developing space professionals one of his top priorities.

#### SPACE COMMISSION CONCLUSIONS

*“...create and sustain a cadre of Space Professionals and...create a stronger military space culture through focused career development, education and training, within which the space leaders for the future can be developed.”*

### B. THE AIR FORCE APPROACH

The Air Force has a solid history of innovative career development for space and missile operators over the past 30 years and we believe an even stronger, more comprehensive Space Professional development program is now essential to safeguarding our nation’s leadership position in space. During CORONA SOUTH, in Feb 02, the Air Force confirmed the validity and importance of the Space Commission’s findings and emphasized the need for a new and innovative Space Professional development construct. This construct should be similar to proven Air Force career management models with common initial training, certification, continuing education and training, and appropriate experiences. Further, CORONA SOUTH reaffirmed that the Commander of Air Force Space Command (AFSPC/CC) would be the Space Functional Authority.

To implement this direction, Air Force Space Command (AFSPC) and the National Reconnaissance Office (NRO) have collaborated on this Space Professional Strategy to describe a structured approach for developing Space Professionals. This strategy describes a professional development construct that is comprehensive while recognizing the unique roles that officers, enlisted, and civilians play in National Security Space as well as the distinctive professional development needs of each. To that end, career development initiatives are already nearing completion for space professional officers, with similar plans soon to follow for the enlisted and civilian workforce.

The Space Professional Strategy leverages the Air Force's Core Competencies of Developing Airmen, Technology-to-Warfighting, and Integrating Operations in building a team of space professionals. As Secretary Roche recently stated, "Our Air and Space Core Competencies form the foundation upon which we organize, train and equip, and are the cornerstone of our strength as a military service."<sup>vi</sup> This strategy builds on these core competencies and integrates seamlessly with the Air Force Chief of the Staff's Force Development program. Our strategy meets the CSAF's Force Development goal "to continue developing professional airmen who instinctively leverage their respective strengths together."<sup>vii</sup> The Space Professional program reinforces that members of the space team are committed first to the greater Air Force institution, and then to the space profession.

This strategy addresses the varied disciplines represented in the Space Professional team—a team that accomplishes the complex functions required to take space systems from concept to employment. Given the importance and complexity of the professional development task reflected in the Commission's charge to "create and sustain a cadre of Space Professionals,"<sup>viii</sup> the Air Force approach begins with three basic components of the task:

- **Clearly Identifying Space Professionals**—Who they are, where they serve and what they do
- **Improving the Career Development Processes**—How Space Professionals gain the required competencies that develop them from focused technical/operational expert to space leader, while taking space systems from concept to employment
- **Defining Space Professional Management Responsibilities**—How to determine requirements, plan, program, and budget to effectively utilize this important national resource

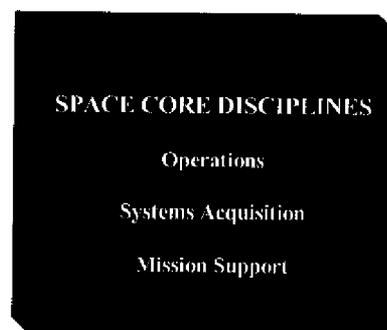
Each component is crucial to addressing the Commission's conclusions and ensuring the purpose of this strategy is achieved. That purpose is to define the approach required to develop premier Space Professionals who provide the United States the expertise to exploit space in the interest of national security.

## SECTION II—IDENTIFYING THE SPACE PROFESSIONAL

### A. DISCIPLINES

An important first step toward achieving the goal of developing premier Space Professionals is understanding who they are and what they do. Since Space Professionals focus on all aspects of space systems from concept to employment, the cadre is made up of members from many disciplines and Air Force Specialty Codes (AFSCs). Additionally, each component of the Total Force (officer, enlisted, civilian, National Guard, and Reserve) is included. The core disciplines are:

- **Operations.** Individuals trained, certified and experienced to conduct hands-on, day-to-day operations of their mission system and integrate and employ those systems into joint and combined warfighting operations and in support of national security decision-making. This includes Intercontinental Ballistic Missiles, satellite operations, spacelift, space control, and missile warning.



- **Systems Acquisition.** Scientists, engineers, analysts, and acquisition professionals involved in research, space system development, and procurement. Individuals conduct and transition research on emerging technologies, translate user requirements into system designs and manage the development, testing and fielding of space systems. The complexity of space systems drives the need for skilled acquisition leaders and system engineering experts.
- **Mission Support.** Individuals who provide vital expertise and support space mission capabilities to include maintenance, communications, intelligence, and weather. Many of these individuals specialize in space-based operations. Others will return to non-space duties; however, while in space positions they will be encouraged to take advantage of appropriate space education and training programs. Their Functional Manager will continue to manage their careers.

## **B. SPACE PROFESSIONAL TEAM**

These space disciplines capture the full range of expertise needed to accomplish our complex space missions. Instead of limiting our approach to AFSC-specific career development, this strategy will create expanded opportunities for all mission-related disciplines. Space Professionals will:

- Initially focus on gaining outstanding technical and operational expertise in a single mission system and discipline while at the same time developing their leadership skills.
- Have the option to take that expertise to emerging systems and other disciplines as they progress in their careers. While integration between disciplines will be encouraged and needed, it is anticipated that most future space leaders will have extensive expertise in a primary career path (defined in Section 3 below) and a primary discipline.
- Have many paths to success and senior leadership as a Space Professional. These career paths provide the Air Force flexibility in satisfying the needs of the Service while providing individuals expanded opportunities based on their areas of expertise.
- Be encouraged to serve in assignments in other MAJCOMs, Services, and Agencies. Integrating space professionals with other Air Force professionals and other Service professionals will facilitate better integration of space systems capabilities into our nation's overall warfighting and intelligence collecting capabilities.
- Be encouraged to accomplish all Air Force professional development activities such as Professional Military Education (PME) and graduate-level education. In addition, be afforded the opportunity to participate in career enhancing assignments, such as the Air Force Intern Program, executive officer positions, and joint duty to stay competitive with Air Force peers.
- Understand these development activities are fundamentally focused on enhancing combat readiness, unit effectiveness, and mission accomplishment.

## **C. SPACE PROFESSIONAL DEMOGRAPHICS**

The Space Professional community is approximately 10,000 members comprised of officers, enlisted and civilians serving in acquisition, operations, maintenance, and mission support roles. Most of the Space Professionals are assigned to AFSPC, the National Reconnaissance Office (NRO), and US

Strategic Command (USSTRATCOM), but many also serve at the Air Force Research Lab, the Air and Joint staffs, other MAJCOMS, Unified Commands, Air Logistics Centers, and in numerous other government agencies.

## SECTION III—CAREER DEVELOPMENT

### A. INTRODUCTION

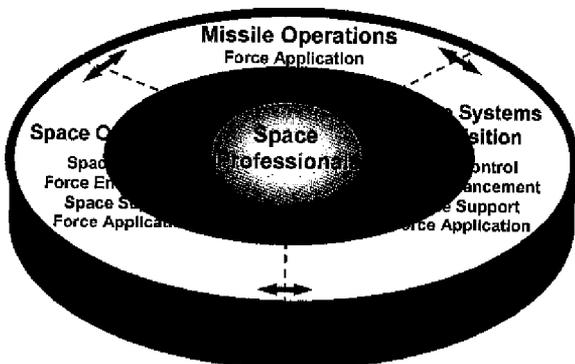
Focused professional development processes and programs are crucial to ensuring Space Professionals gain the appropriate competencies to acquire, operate, and support critical space systems. Defining these processes led the Air Force to three principles for the Space Professional development construct.

- **Capabilities driven**—Focused on current and future military space mission requirements while addressing Space Commission recommendations and SECDEF and Congressional taskings
- **Competency based**—Centered on the skills, knowledge, and experience needed to accomplish their assigned missions -- tactical, operational and strategic levels of understanding and experience
- **Measurable**—Validated based on well-defined professional development guidelines, education, and training

### B. CAPABILITIES DRIVEN

**Space Commission Recommendations.** The Space Commission provided specific recommendations that address requisite Space Professional capabilities. These include greater technical and mission depth and a broader understanding of space across all mission areas.

**Space Professional Paths—Purpose.** Space career paths provide focus and definition to the “depth” and “breadth” concepts. Since each path has an identifiable set of competencies, individual Space Professionals can concentrate on a given path with its set of career development attributes such as training, education, and experience. Additionally, a path focus ensures Space Professionals understand that while not bound to a single path, they are not expected to acquire depth and breadth in the entire space field. Finally, paths underscore that the Space Professional’s career is focused on developing the depth and technical expertise the national security space community needs to ensure mission accomplishment.



Notional Space Professional career paths include:

These paths represent the competencies needed to accomplish today’s space missions. Future space missions will place greater demands on our Space Professionals. While these competencies will provide a foundation for future missions, these career paths may change to effectively meet future demands. Using these career paths and the Space Professional disciplines (systems acquisition, operations, and mission support), the concepts of depth and breadth

can be defined. For the purpose of professional development (and for use in the certification process, discussed later) the following descriptions apply:

- **Depth**—The Commission called for “more depth of experience in their field and more extensive education and training...Career tracks need to be developed that will provide commanders at all levels more expertise within their mission areas.”<sup>ix</sup> Depth is achieved by providing individuals a path to focus their continued technical development and mission area concentration. Depth is the more important criterion and the one to master first.
- **Breadth**—The Commission cited a need for greater breadth stating “Tomorrow’s Space Professionals need a broader understanding of operations across the range of space mission areas.”<sup>x</sup> This includes the “...exchange of personnel across space communities, between the operational and acquisition commands and between the Air Force and NRO...”<sup>xi</sup> In this Strategy, breadth is encouraged by crossflow opportunities between operations and acquisition, crossflow assignments between AFSPC, NRO, USSTRATCOM, and other AF/Joint operational positions. This provides a broader perspective to build upon as a space professional advances in their career.

### C. COMPETENCY BASED

**Space Professional Competencies.** Having established depth as the foundation and breadth for diversity, the next step is to define competencies, which is the foundation of career development. These competencies are the specific skills that serve as the benchmarks of an individual’s professional development, from a tactical level first, to operational and strategic levels as one progresses.

*The foundation of our space professional strategy is to deliberately develop our force through the training, education, and experiences needed to achieve national security space objectives from concept to employment.*

Space Professional competencies consist of:

- **Air Force Level**—Leadership, interpersonal, and organizational skills. Developed through Air Force accession training, Professional Military Education, and experience.
- **Space Professional Level**—Basic knowledge needed by all Space Professionals, regardless of discipline or career path (e.g. space mission areas and space physics). Developed through Space Professional training, education and experience.
- **Discipline Specific**—Skills directly applicable to the Space Professional’s primary specialty. (e.g., Operations--Training and Stan/Eval processes; System Acquisition--Systems Engineering, program management, etc). Developed through technical training, continuing education and experience.

- **Mission Area/System Specific**—Required to operate, sustain, or acquire specific systems (e.g., commanding a missile warning satellite) in support of space missions. Developed through system-specific initial, unit qualification and recurring training.

**Competency Development.** Space Professionals require a variety of competencies as they progress through their careers. Each competency can be achieved through training, education, and experience—the right mix being dependent on the individual’s basic skills, background, and career path. Examples of competency-development initiatives include:

**Training and Education.** Consistent with the Space Commission recommendations, AFSPC is “creating a stronger military space culture through focused career development, education, and training, within which the space leaders for the future can be developed.”<sup>xii</sup> Specific education and training initiatives will develop military and civilian space leaders with a stronger foundation in space and a greater understanding of the capabilities of our mission systems.

Formal space education will begin with Space 100 courses at Vandenberg AFB. These courses will instruct officer, enlisted and civilian personnel on fundamental space competencies. After Space 100, operations personnel will receive initial/unit qualification training (IQT/UQT) in their specific mission system. Acquisition personnel will receive acquisition fundamentals and proceed to system program office specific training.

Throughout space professional development, individuals will require greater technical and system knowledge for specific space positions. They will be given expanded opportunities through education initiatives such as (1) advanced space education courses focused on the operational and strategic applications of space systems (notionally Space 200/300), (2) targeted advanced technical degree programs, (3) advanced space training courses focused on specific missions, and (4) other professional development programs (e.g. Education with Industry).

**Experience.** There are existing Air Force programs that serve as the foundation for developing Space Professionals as described in this strategy. These programs include the Operations Experience (OPEX) initiative that provides operational experience to new acquisition officers; the Space and Acquisition Exchange Program that accommodates the cross-flow of company grade officers between operational and acquisition assignments; the Space Weapons Instructor Course for highly qualified space officers to gain expertise in taking space to the battlefield; the Top Hand Program for conducting operational ICBM and space system testing; and the inclusion of NRO Air Force officers in the AFSPC squadron and group command central selection process. The next step is to mature and institutionalize these and other programs to ensure Space Professionals are provided early operational experience, and to produce a cross flow of personnel between AFSPC operators and acquirers and the NRO.

#### **D. MEASURABLE**

**The Certification Process.** The final step for the Space Professional development construct is to ensure the process is measurable. This is done through a certification process—the quality assurance component of the Space Professional initiative. It also serves as a guide for commanders at all levels and each Space Professional to assess his or her professional development and career progress.

Conceptually, there will be three levels of certification for officer, enlisted and civilians. Personnel will progress from a foundation of technical competency, through demonstrated depth of knowledge, to extensive knowledge in space and warfighting operations. Certification criteria will be tied to years

and types of experience and commensurate training and education. Additionally, certifications will be an integral part of the assignment process in that successful completion of the appropriate certification level will be key to filling competitive command and staff billets.

**Defense Acquisition Workforce Improvement Act (DAWIA) Certification.** Since many Space Professionals are also Acquisition Professionals whose careers are directed by DAWIA, this certification construct recognizes and is compatible with the certification approach and mechanisms prescribed by that Act. Space Professional requirements complement but do not replace DAWIA requirements. Space Professionals in acquisition-coded positions must continue to meet DAWIA-defined certifications.

## SECTION IV—CAREER MANAGEMENT

### A. INTRODUCTION

To ensure success of the Space Professional initiative, new management roles and responsibilities are needed. AFSPC will work with HQ USAF, NRO, Air Education and Training Command (AETC), and the Air Force Personnel Center (AFPC) to define specific management processes; however, the following roles and responsibilities apply:

- The Air Force Secretariat, Air Staff, and USECAF/DNRO staff have ultimate responsibility for sustaining Air Force Space Professionals. This includes (1) coordinating space professional policies with other career field functional managers, (2) validating, and approving the implementation of Air Force space professional development policies, and (3) ensuring space professional career development requirements are appropriately resourced.
- AFSPC/CC is the Space Functional Authority. As such, the Commander: (1) develops and implements Air Force policy governing career development of Air Force Space Professionals; (2) develops and maintains standardization, evaluation, and certification programs; (3) develops and maintains the full range of training and education activities for Space Professionals; and (4) periodically reviews Space Professional development with the USECAF, NRO, as well as other service chiefs and combatant commanders, as appropriate.
- The Air Force Personnel Center serves as the execution arm of the Space Professional initiative. The Center's responsibilities include (1) defining accession, training, and education allocations, (2) making assignment actions to support mission, organizational and professional development needs, and (3) assessing current space professional inventory to meet mission requirements.
- Air Force space leaders and commanders (at all levels) monitor, advise, and implement training and utilization of Space Professionals—actively mentoring career development.

### B. MANAGEMENT TOOLS

The Space Commission recommended that personnel managers “have a comprehensive view of all space career positions within the national space community....”<sup>xiii</sup> This initiative responds to that recommendation by employing Space Professional management tools (e.g., database, website, and certification standards). These tools will permit individuals and their supervisors to document and

track space education, training, experience, assignments and certification levels. In addition, commanders at every level will depend on these tools to advise and mentor space professionals at every stage of their career.

## **SECTION V—OTHER SERVICES AND AGENCIES**

This strategy focuses on Air Force space professional requirements; however, given the Air Force's designation as the Executive Agent for DoD Space, every effort is being made to ensure Air Force programs support other services and agencies. When fully implemented, the strategy may also serve as a development model for Army, Navy and other government agency Space Professionals.

This Space Professional initiative, as part of the implementation phase, will take an overarching DoD perspective toward space and focus on efforts to accomplish the following:

- Understand other Service/Agency training and education requirements and make Air Force programs and resources available to them
- Encourage inter-service and joint assignments

## **SECTION VI—IMPLEMENTATION STATUS**

### **A. PLANNING SCHEDULE**

The Air Force has world-class space system acquirers and operators. This is validated over and over by excellence in mission accomplishment and our ever-growing contributions to joint operations and support to national security decision-making. This strategy builds on these accomplishments and will more deliberately develop our next generation of space leaders.

Air Force Space Command stood up a management office in August 2002 to implement this strategy through development of new career guidance and education and training programs. Implementation of key aspects of this strategy is ongoing and below is a brief description of these initiatives. These efforts will serve as the cornerstone of professional development for all space professionals along with future initiatives to meet specialized requirements.

- Space 100 – Today, all space operators attend initial technical training at Vandenberg AFB. With courses for officer and enlisted operators, Air Education and Training Command teaches over 530 students annually in initial common training and over 1450 students in mission-specific training. Under this strategy, beginning in FY 04 Air Force Space Command will send new space acquisition accessions to the initial training. This common training for all space accessions will begin building the common culture and technical foundation for their careers as space professionals. In parallel, AFSPC has developed and validated new requirements for this course. This revised Space 100 course will improve the technical foundation for all space professionals and is currently being developed by AETC. When fully implemented, all entry-level officer, enlisted, and civilian space professionals will attend Space 100.
  - Implementation: Space acquisition accessions attend current training – Oct 2003
  - Implementation: Space 100 Course – FY06

- Space 200 – In FY 02 the Space Warfare Center’s Space Operations School taught over 440 students on courses in advanced space operations and space in the Air Operations Center, to include preparation for AEF deployments. In our efforts to educate space professionals throughout their career, the concept for an intermediate level course was developed with the intention of building on existing courses. This advanced space education course will build on Space 100 and focus on the integration and application of space power in joint operations and intelligence activities. Our goal is for all officer, enlisted, and civilian space professionals to attend this course at approximately the eight-year point.
  - Implementation: Prototype Course – July 2003
  - Implementation: Space 200 Course – FY 04
- Space 300 – During FY 03 the Space Operations School has instructed many senior space leaders preparing for deployment as the senior space operator in theater. Space 300 will be the advanced course for space leaders and focus on strategic concepts of warfighting and intelligence activities.
  - Implementation: Prototype Course – Summer 2004
  - Implementation: Space 300 Course – FY 05
- Additional Education Initiatives – To round out the education construct for space professionals, over the next year Air Force Space Command will be evaluating advanced degree programs for space. This evaluation will address which programs are most relevant to space professionals and how they fit in the new Force Development construct. Air Force Space Command is also working with Air University in its efforts to create a specialized studies course in space in order to implement Force Development.
- Career Path Guidance – AFSPC is developing specific career path guidance for officer, enlisted and civilian personnel that builds on the overarching direction in this strategy. This guidance will be closely linked to the broader AF Force Development initiatives to more deliberately develop our personnel. Individuals, commanders, supervisors, development teams, and assignment teams will use this information in mentoring space professionals.

Implementation: End of FY 03

## B. FUNDING

A small amount of FY03 discretionary funding was obtained to standup the space professional management function and to begin initial development activities. Out-year funding is required primarily for implementation of the new space professional initiatives.

Current programmed funding line:

FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
\$10 M	\$12 M	\$15 M	\$16 M	\$18 M	\$22 M

## SECTION VII—SUMMARY

The purpose of this strategy is to define the Air Force approach to developing premier Space Professionals whose expertise will allow the United States to fully exploit space in the interest of national security. The method by which this will be accomplished is noted below.

**Capabilities Driven** - Focused on current and future military space mission needs as described in the Space Commission recommendations and SECDEF and Congressional taskings

**Competency Based** - Respond to those recommendations and taskings with a professional development construct that is based on competencies to produce Space Professionals with outstanding depth, breadth, and technical expertise

**Measureable** - Establish a certification approach that validates the professional development processes and provides quality control of the product...premier Space Professionals

**Focused Management** - Establish the AFSPC/CC Space Professional Career Manager construct

**Linkage to other Services & Agencies** - Serves as a developmental model for Army, Navy, and other government agency Space Professionals

The strategy builds on the Space Commission recommendations and the need for Space Professionals with more depth of experience in their fields, a broader understanding of operations across the space mission areas, and more extensive training and education. By incorporating these recommendations, the strategy provides the development guidelines for Space Professionals.

AFSPC is actively implementing key initiatives spelled out in this strategy. The first tasks include revising Space Professional education courses, completing and implementing the officer, civilian and enlisted career development guidance, and validating the certification process. In addition, the Space Functional Authority will issue updates to introduce and explain this strategy to the current space professional population.

Full implementation of this strategy will take several years and require active support by leaders and commanders at all levels. While the AFSPC/CC is the Space Functional Authority, leaders must mentor, coach, and guide the Space Professional team as they proceed to fully develop their individual skills. Additionally, these initiatives will require dedication and close coordination by AFSPC with key organizations such as the NRO, USSTRATCOM, AFMC, AETC, and AFPC.

In summary, developing and sustaining a team of Space Professionals is essential to the future of the nation's National Security Space programs. The Air Force eagerly accepts this challenge.

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## ENDNOTES

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- i *Report of the Commission to Assess United States National Security Space Management and Organization*, 11 Jan 01, 42
- ii *Ibid, Executive Summary*, 18
- iii *Ibid*, 18
- iv *Report of the Commission to Assess United States National Security Space Management and Organization*, 11 Jan 01, 42
- v S.1438, *National Defense Authorization Act for Fiscal Year 2002*, 28 Dec 01, Section 912(a)
- vi *The Secretary's Vector*, 14 Jan 03, 1
- vii *Chief's Sight Picture*, 6 Nov 02, 1
- viii *Report of the Commission to Assess United States National Security Space Management and Organization, Executive Summary*, 11 Jan 01, 18
- ix *Report of the Commission to Assess United States National Security Space Management and Organization*, 11 Jan 01, 44
- x *Ibid*, 44
- xi *Ibid*, 45
- xii *Ibid*, 42
- xiii *Ibid*, 45