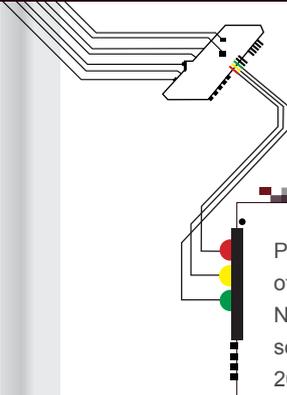




Left to right, retired Army LTG Ed Anderson, BG Kurt S. Story and BG Jeffrey A. Horne made remarks as guest speakers during the 2009 Army Space Cadre Symposium.



Peter B. Teets, former Undersecretary of the Air Force and former Director, National Reconnaissance Office also served as a guest speaker at the 2009 Army Space Cadre Symposium.



SPACE CADRE

SYMPOSIUM 2009 KEYNOTE SPEAKERS

PHOTOS BY DJ MONTOYA

The 2009 Army Space Cadre Symposium was conducted Aug. 1-7 in Colorado Springs, Colo. The purpose of the symposium was to update Army Space Cadre members and educate them on force improvements and new initiatives at strategic, operational and tactical levels; educate Army Space Operations Officers on their roles, responsibilities and opportunities; provide a forum for Army Space Cadre members to discuss Army Space issues that impact the Army and their community. The weeklong event featured keynote speakers highlighted on these pages, as well as numerous program speakers from various Space backgrounds. The following pages contain executive summaries on the topics of discussion from each of the program speakers.



U.S. Army Space and Missile Defense Command / Army Forces Strategic Command Commanding General, LTG Kevin T. Campbell listens to a question from a symposium attendee.



COL B. Shannon Davis, former Deputy Senior Commander and Chief of Staff, Fort Carson, Colo., addresses attendees during the 2009 Army Space Cadre Symposium.



MAJ Philip Speth addresses the attendees during the 2009 Army Space Cadre Symposium in Colorado Springs, Colo. Photo by DJ Montoya, 1st Space Brigade

Charles Anderson

John Hopkins Program

Applied Physics Laboratory is a University Affiliated Research Center focused on providing core engineering and science capabilities across a broad spectrum of critical Department of Defense mission areas.

The Laboratory currently partners with the Functional Area 40 (FA40) Personnel Proponent Office in providing a unique Training with Industry opportunity to FA40 Space Professionals, allowing them to work with leading science and engineering experts, in areas directly related to Army Space and Missile Defense missions. Recently the Laboratory and U.S. Army Space and Missile Defense Command/Army Forces Strategic Command expanded their formal relationship by establishing an Indefinite Duration Indefinite Quantity contract between the two organizations, thereby establishing the Laboratory as one of USASMDC/ARSTRAT's University Affiliated Research Centers.

The presentation provides insight into Laboratory's current activities directly supporting USASMDC/ARSTRAT, via the new IDIQ relationship, with a focus on understanding how this new partnership benefits the FA40 community. Highlights include the Laboratory's work on USASMDC Battle Lab's Joint Space Tactical Planning Tool, Defense Satellite Communication System and Wideband Global SATCOM Operations Centers, Federally Funded Research and Development Center and University Affiliated Research Center Consortium support to the Operationally Responsive Space office and future efforts centered on cyber, Space protection, Space control, and GPS.



Army Space Cadre Symposium 2009

PROGRAM SPEAKERS

Brad Baehr

JTAGS/OPIR and Scout Space Cadre Portal

The Joint Tactical Ground Station/Overhead Persistent Non-Imaging Infrared experiment focused on net-centricity and explored the ability to bring Partially Processed Overhead Persistent Non-Imaging Infrared Data from a sensor then via SIPRNet to widely distributed warfighters using a simple internet browser. This exciting capability was successfully demonstrated through live events and in exercises Keen Edge 09, Terminal Fury 09, and the U.S. and NATO Coalition Warrior Interoperability Demonstration 09.

The Space and Missile Defense Battle Lab has a unique capability called Scouts. This program consists of a small group of highly qualified individuals with the mission to analyze Army Space, missile defense, high-altitude, information and cyber operations gaps and shortfalls and then assist in the discovery of relevant concepts and solutions. The Scouts Space Cadre Portal is the next step toward providing the Army Space cadre and various Communities of Interest a means to input, share, and collaborate on their ideas, concepts, needs and solutions.

MAJ Mike Belton

Training With Industry

The Training with Industry assignment at the Applied Physics Laboratory at Johns Hopkins University is a great professional development opportunity to receive advanced training while serving. This training opportunity focus was on serving the needs of the warfighter and looking for innovative solutions that can be integrated in the Department of Defense. Certainly, there are opportunities to continue personal educational goals, but there is also a need for valuable military expertise that the Space

Operations Officer can serve in multiple roles while gaining the most of the training opportunity. This assignment offers a wide range of mission areas to develop a training and service portfolio. There are opportunities in both civilian and military Space programs. Some of the opportunities include Air and Missile Defense, National Security Space, Civilian Space, Science and Technology, Precision Engagement, Strategic Systems, Homeland Protection, Biomedicine, Undersea Warfare, Warfare Analysis, and Infocentric Operations.

The primary areas of my assignment were focused on Counter-IED, Operationally Responsive Space, and COPOPS development for Satellite Ground Station development. Additional tasks consisted of previewing military Space documentation by providing subject matter expertise as a Space Operations Officer. Counter IED focus is on signature efforts that are multi-faceted finding roots in the arenas of physical sciences, human behavioral analysis, and systems networking. These efforts are designed to enhance IED defeat efforts. Operationally Responsive Space efforts work is focused on the development of a rapid integration facility at Kirtland Air Force Base and development of Systems Engineering Plans for three satellite spacecraft; ORSat-1, PnPSat-1, and TacSat-5. Each officer assigned to the Applied Physics Lab will have the opportunity to tailor their portfolio to serve in a capacity that interests them. This opportunity is very challenging when you integrate yourself with Applied Physics Lab's greatest minds, to tackle the hardest problem sets, and address our nation's future capability needs. This briefing will discuss these related programs and the overall opportunities that an FA40 can take advantage of if assigned to this Training with Industry assignment.

MAJ Don Brooks

Joint Navigation Warfare Center

The mission of the Joint Navigation Warfare Center is to integrate Navigation Warfare across the Department of Defense and to operationalize it for the warfighter. Collateral missions include a core interagency framework to coordinate, conduct, and report on Navigation Warfare testing and integration; identify and develop mitigation strategies and tactics, techniques and procedures for position, navigation and timing based vulnerabilities. Additionally, the Joint Navigation Warfare Center conducts Navigation Warfare field tests of U.S. and coalition systems and equipment and develops Navigation Warfare Electronic Attack, Electronic Warfare Support and Electronic Protection technology prototypes; and advises decision-makers on significant Navigation Warfare issues.

The Joint Navigation Warfare Center Warfighter Support Team's main effort in accordance with U.S. Strategic Command OPDIR 08-003 is to provide warfighter support to Combatant Commands on Navigation Warfare issues, capabilities and vulnerabilities of equipment and missions. The Center also assists the warfighter in developing effective Navigation Warfare tactics, techniques and procedures and mitigations to maintain and/or regain mission effectiveness against current NAVWAR threats. Additionally, the Center solicits warfighter input to test events and functions as a Navigation Warfare consultant to warfighters in operational planning and issue resolution.

As the Space Based portion of GPS becomes a taskable, offensive and defensive weapon system in support of operations, it is essential for the Joint Navigation Warfare Center to carry the Navigation Warfare concept forward to the warfighter. This brief will provide an overview of the Joint Navigation Warfare Center organization, GPS Threats, and Mitigations in a GPS jamming environment.

Dave Carrithers

Future Warfare Center Battle Lab

The U.S. Army is currently engaged in the update of the Army's Capstone Concept approved in 2005. This update is required due to lessons learned in past concepts and the Chief of Staff Army's direction to define The Army of the 21st Century: A Balanced Army for a Balanced Strategy. The new Army Capstone Concept: The Army in Unified Action will enable U.S. Army Space and Missile Defense Command/Army Forces Strategic Command to define the Space and missile defense capabilities required to support this new concept. The Space and Missile Defense Battle Lab is a member of the writing team for this Capstone Concept and has conducted several key wargaming seminars that have contributed to its development. Several events are also planned for Fiscal year 2010 that will support the Army Unified Quest Seminar Wargame. Space Support Elements are a critical part of the Army Service Components, Corps and Divisions. The SMD Battle Lab has participated in critical design reviews of each of these organizations during the past year to ensure this capability was retained in each structure. The SMD Battle Lab also is

supporting several Joint Capability Technology Demonstrations that will provide the critical capability to the Army to reduce its reliance on Space, and enhance the communications and intelligence, surveillance and reconnaissance networks. The High Altitude-Enabled assessment was conducted by the Space and Missile Defense Battle Lab and approved by the Senior Army Space Council in July 2009. Key efforts to enhance Joint Friendly Force Tracking and Missile Defense Early Warning have also been successful this year. Finally, the Space and Missile Defense Battle Lab has initiated a Space Warfighting Forum Web site to increase dialogue with Space elements in the field so that requests for support and capability can be addressed across the Army.

MAJ Sean D. Duncan

WSOC Modernization

Through fiscal year 2014, four Wideband Satellite Communications Operations Centers are undergoing modernization. Delta Company, in particular, is also moving from California to Hawaii into a new Wideband Satellite Communications Operation Center facility currently under construction. This move, in conjunction with the new facility, will greatly enhance U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's capability to effectively manage communications capabilities. Satellite control infrastructure continuously operates near maximum capacity; no one Wideband Satellite Communication Operations Center can be out of service for an extended period of time. Therefore, key to the modernization plan is the delicate balance of issues to maintain uninterrupted operations while simultaneously taking care of Soldiers and Families.

MAJ Darin Eades

Training With Industry

Training with Industry at Lockheed Martin provides a unique opportunity to see and participate in the industrial world while still serving on active duty. The advantage of this is that, while much of the contractor world understands the way the military works (normally by having been there) not that many military members know how the contractor world works. Exposure to how industry fits into the Joint Capabilities Integration Development System process can lead the Army and Army Space in particular to make better, more definable requirements that can result in viable solutions that answer the real needs of the end user.

Lockheed Martin in the Denver and Colorado Springs area works in the Defense, Intelligence, and Civil lines of business areas of the greater Lockheed Martin Corporation. I have worked on developmental and Operations and Maintenance contracts as well as on a proposal team responding to a government Request for Proposals (a.k.a. government acquisitions.)

One of the greatest benefits to Lockheed Martin and its employees has been their day-to-day interaction with me and the real world knowledge I brought to their programs. Countless times I've been asked how a certain piece of information or a product is really used out there in the world and my responses have been used to make products or processes better. Having me





COL William Whitney, deputy director, USASMDC FWC and retired BG Steve Ferrell of Scitor Corporation take a moment to gather their thoughts. *Photo by DJ Montoya, 1st Space Brigade*

“embedded” inside the company wearing their uniform (khakis, collared shirts, and an LM badge) has removed the perception of me being “the customer” and has allowed for more candid and open conversations.

COL Jeffrey Farnsworth *1st Space Brigade*

The Army’s only Space Brigade provides forces and conducts operations that bridge across the Strategic, Operational and Tactical levels. This requires a different paradigm than is typically thought of for a Brigade in order to effectively organize, train, equip, and employ the Brigade’s forces. There are a number of initiatives that the entire Space community will benefit from that we will cover at the symposium. These include efforts to enhance planning and integration with Army level Space Support Elements, ensuring Space Support Teams come fully enabled with the latest expertise and special access skills to fully support traditional Space functions and special activities. The Brigade has implemented its own version of the Army Force Generation and Reset models to sustain a maximum level of deployable Space forces for a given theater. We are also breaking new ground with the latest in tactics, techniques, procedures and integration of new capabilities to enhance Space situational awareness, interference characterization and geolocation, ways to provide more commercial imagery faster, and techniques to optimize the Wideband Global System to enable Space forces. We are integrating more and more officers with Space Support Element experience into the Brigade and this is a boon to our culture and capabilities. We are also ensuring those with Brigade experience get out into the rest of the force with their follow on assignments as soon as they are eligible. Finally, we are examining alternative employment concepts for Space forces and supporting experiments that will bring much needed operational enhancements to the Space Professional’s portfolio. We welcome any insights from the field and look forward to an informative and productive dialogue at this year’s symposium.

Kirk C. Foeller

Operationally Responsive Space

Operationally Responsive Space is a Department of Defense program focused on rapid improvements for Space support to the Warfighter. Based upon three “tiers,” Operationally Responsive Space will quickly ascertain Warfighter urgent Space needs and field workable solutions. In concert with the Joint program, the Future Warfare Center is focusing efforts on Tier I needs – solutions in a matter of days and weeks. Using the Doctrine, Organizations, Training, Leader Development, Materiel, Personnel and Facilities framework, Future Warfare Center is proposing a “hotline” for Space professionals to address urgent Space needs that require rapid resolution. Based upon U.S. Special Operations Command’s rapid acquisition processes, Future Warfare Center will address urgent Space needs and develop workable solutions to those needs or if necessary, coordinate with other Operationally Responsive Space-supporting agencies for solutions. The proposed Future Warfare Center process will ensure Army Tier I Space needs are aggressively managed and resolved and that the supported Space professional has feedback on the status of their urgent need.

MAJ Jeffery C. Kacala

Mobile User Objective System Program

The Mobile User Objective System is the Department of Defense’s next generation Ultra-high Frequency Satellite Communications system. The Mobile User Objective System development includes not only design and on-orbit placement of satellites, but development and fielding of an integrated system that includes the System ground sites and the System common air interface. The Mobile User Objective System Program Overview Briefing gives the latest status on the health and availability of legacy Ultra-high Frequency Satellite Communications constellations and a projection of their availability in the future. With that as a starting point, the briefing then moves to the Mobile User Objective System program with a look at the requirements, architecture, status, schedule and terminals. The architecture is



LTC Victoria Miralda, Deputy Director Space Forces, discuss the days agenda with Bob Kyniston.
Photo by DJ Montoya, 1st Space Brigade

based on current 3G cellular telephone technology. As such, Mobile User Objective System users will be able to make point-to-point calls and access the Global Information Grid as current 3G cell phones can today. The briefing will explain these and other benefits to the warfighter and give production updates on the spacecraft, ground sites and waveform.

LTC Mike McKay

JFCC-Space

This presentation provides a brief review of Joint Functional Component Command-SPACE (JFCC-SPACE) mission and organization, and focuses on changes and future developments and will highlight how this joint assignment can provide some unique opportunities. FA40 assignments within the JFCC-SPACE range from current operations in the Joint Space Operations Center to near-term operations in J3 to long-term requirements (six months and out) in J5. There are opportunities to implement systems like the Selective Availability Anti-Spoofing Module and work its transition from Federally Funded Research and Development Center through the force provider (Air Force Space) to JFCC-SPACE and tactical units for operational management. JFCC-SPACE is on the forefront of incorporating new Space systems from across the community, to include Integrated Space Situational Awareness, Space command and control enhancements, and RAIDERS Block 20. JFCC-SPACE also implements new processes. For example, U.S. Strategic Command is changing the overall responsibility for Electromagnetic Imaging resolution from Joint Task Force – Global Network Operations to JFCC-SPACE. JFCC-SPACE deals with burning Congressional/National issues like Collision Avoidance and Commercial and Foreign Entities Space Situational Awareness support/services. For U.S. Strategic Command, JFCC-SPACE will inherit a Commercial and Foreign Entities operational program from the Air Force Space pilot program. JFCC-SPACE provides FA40s many unique challenges working with Department of Defense/Interagency/Allied/ and commercial partners which enhance the more traditional FA40 operational experience.

LTC Victoria Miralda

Current Space Support in Theater

The U.S. Central Command Space Coordinating Authority is responsible for the appropriate provision of Space support to U.S. and Coalition forces. The operational transition in U.S. Central Command is driving a corresponding need for a “reset” of Space support and capabilities in theater. The changing operational environment requires new technology applications along with innovative tactics, techniques and procedures and unprecedented cross-mission area integration. The Director Space Forces briefing will provide updates on the current theater Space posture, emerging requirements and the plan to meet them.

Jerry Pepin

FA40 Initiatives

FA40 Professional Development:

Each year, the Training with Industry program places two FA40 officers in a corporate environment, allowing them to experience the latest technology development processes, industrial operations and organizational structures and cultures.

Advanced Civil Schooling - The FA40 community is allocated six schooling slots per year. Currently, FA40s are at Virginia Tech, Georgia Tech, MIT, Webster University, Naval Post Graduate School and Air Force Institute of Technology.

National Security Space Institute Schools - A 15-day capstone course for Space professional development at the National Security Space Institute in Colorado Springs, Colo.

The FA40 PDO currently manages all Army billets to Space 300. In fiscal year 2010, they will take over the management of Space 200 and the Space Fundamentals Courses.

FA40 Initiatives: In early June 2009, the first FA40 Senior Leader Steering Group meeting was conducted. Here a number of initiatives were presented and direction and concurrence were given on the way ahead.

Greg Piper

Army Space Cadre

The mission of the Army Space Cadre Office is to identify Army Space Cadre members, track positions, personnel and training data and report data and metrics in accordance with Department of Defense directives and guidance. Currently, the Army Space Cadre consists of 296 Space Professional billets

“We are currently in the processing of coding the approved Space billets on source documents and developing a Space Cadre tracking system for both Soldiers and Civilians.”

— Greg Piper
Army Space cadre

(FA40s) and over 2250 Space Enabler billets (1500 Soldiers and 750 Civilians). These billets are across the Active, Reserve and Guard forces. We are currently in the processing of coding the approved Space billets on source documents and developing a Space Cadre tracking system for both Soldiers and Civilians. Recently, Headquarters Department of Army G1 approved our request to rename and expand the 3Y skill identifier for use with all categories of Soldiers. This will allow us an additional method to track Soldiers with Space experience. We are also working with other services to develop and implement codes for Department of Defense Civilians with Space experience. Additionally, we are the proponent for the awarding of the 3Y skill identifier and the Air Force Space Badge.

Brian Plaisted

AGI Node Support to USASMDC

The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command Advanced Geospatial Intelligence Node has changed in a variety of ways over the last five years. The size of the Node has increased to over 30 personnel and the number of Department of Army Civilians will increase to 16 in 2010. The mission of the Node has expanded to include support for U.S. Northern Command and U.S. Transportation Command as well as its traditional support to USASMDC/ARSTRAT and U.S. Strategic Command. Product types created by the Node have grown from primarily image maps, GIS, and spectral based products to include Synthetic Aperture Radar and thermal products. This will further increase in fiscal year 2010 with the stand up of an Overhead Persistent Infrared cell to support ground forces. But a number of things have not changed. One is the emphasis on providing support to the warfighter. Today that support is provided not only through 1st Space Brigade elements, but also through federated requests received from the 513th Advanced Geospatial Intelligence Node that supports the U.S. Central Command Area of Operations. Another is the Node's emphasis on exploration activities. This includes assessing the utility of commercial radar satellites for military applications and involvement in the TacSat-3 program,

exploiting the hyperspectral sensor on board the satellite and providing support to the Space and Missile Defense Battle Lab on the assessment of the tactical utility of the system.

Jules Prendergast

Naval Postgraduate School

There are a variety of opportunities for Space related Degree opportunities at the Naval Postgraduate School. These include a Master of Science in Remote Sensing Intelligence, a Master of Science in Space Systems Operations, and the Space Systems Engineering Program which can lead to a Master of Science in Astronautical Engineering, Electrical or Computer Engineering, Physics, Mechanical Engineering, or Computer Science. Remote Sensing encompasses a variety of technologies to wed multiple scientific and engineering disciplines. Relevant Image Intelligence disciplines incorporated in the Master of Science-Remote Sensing Intelligence include Space Systems, Mathematics, Physics, Information Sciences, Computer Sciences, Operational Sciences, and National Security (Intelligence) Studies. The Space Systems Operations curriculum is designed to provide officers with knowledge of military opportunities and applications in Space. Students are provided instruction about the operation, tasking and employment of Space surveillance, communications, navigation and atmospheric/oceanographic/environmental sensing systems as well as payload design and integration — specifically for the exploitation of Space and Information products. The Space Systems Engineering program provides officers, through graduate education, with a comprehensive scientific and technical knowledge of national security, and military Space systems. This curriculum is designed to equip officers with the theoretical and practical skills required to design and integrate national security and military Space payloads with other spacecraft subsystems. Graduates will be prepared by their education to design, develop and manage the acquisition of Space communications, navigation, surveillance, electronic warfare and environmental sensing systems.

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“Wideband Global SATCOM will provide critical command and control communications to the Joint and Army warfighters through 2025.”

— Peter Stauffer, G6
USASMDC/ARSTRAT

COL Bruce Smith

Quadrennial Defense Review Space

Congress has directed the Department of Defense to conduct a Space Posture Review. This review is being conducted at a very high level in order to assess if national Space capabilities, organizations and policies are sufficient to meet future challenges. In coordination with COL Schantz from DA G3/5/7, COL Smith will provide an overview of issues being assessed in the Space Posture Review and outline the Army's concerns

Peter Stauffer

Wideband Global SATCOM

U.S. Army Space and Missile Defense Command/Army Forces Strategic Command has been assigned as the Wideband Global SATCOM System Expert since 1999. SATCOM System Expert duties are outlined in Strategic Forces Instruction 714-02 with a focus on all segments of the Wideband Global SATCOM system - Space, terminal, and management and control. The Wideband Global SATCOM briefing for the Space Cadre Symposium will discuss Wideband SATCOM management, planning, and control responsibilities, Wideband Global SATCOM capabilities and status, and Wideband Global SATCOM-2 activation plan. Wideband Global SATCOM system provides a 10 time increase in capabilities and throughput when compared to the legacy system, Defense Satellite Communications System. Wideband Global SATCOM will provide critical command and control communications to the Joint and Army warfighters through 2025.

LtCol Eric Swenson

Air Force Institute of Technology

Graduate Space education at Air Force Institute of Technology consists primarily of three programs: Astronautical Engineering, Space Systems, and Systems Engineering - Space Systems Track. Students, predominantly military officers, can earn either a master's degree or Ph.D. in any of these programs. In the traditional master's program, students enter as a class in September and graduate in 18 months. Currently, AFIT has one Army FA40 officer in our Astronautical Engineering program and another in our Space Systems program. The very first Army student

graduate from Air Force Institute of Technology's Astronautical Engineering program completed his master's degree just two years ago.

The Graduate Astronautical Engineering program is dedicated to the engineering fundamentals of design, test, and development of spacecraft, missiles, launch vehicles, and related systems. The Graduate Space Systems program is designed to provide officers with a broad knowledge of Space systems engineering and Space science. Education in the fundamentals of these areas will increase military officers' effectiveness in planning, executing, and evaluating Space systems and operations. The Graduate Systems Engineering - Space Systems Track degree program is focused on educating students on the process by which a customer's needs are satisfied through the conceptualization, design, modeling, testing, implementation, and operation of a working Space system. Students in this program will complete courses in Space physics, surveillance and/or the Space environment, be knowledgeable in the wealth of unclassified and classified Space technologies and systems and apply lessons learned through a sponsored Space-related Capstone project.

MAJ Chris Turner

Advanced Civil Schooling: TINYSCOPE

As a company commander in a Combined Arms Battalion in Iraq, I was able to observe firsthand a gap in the imagery products that were available for mission analysis and planning. The imagery that is currently available to the typical tactical level commander either consists of days or even weeks old satellite or aerial photos or feeds that come from organic Unmanned Aerial Vehicles. The former provides a firm foundation for initial mission planning and the latter is an excellent way to maintain situational awareness during execution. What is missing is in between, a system that can provide current imagery of a potential target without the risk of detection or commitment of organic assets. The TINYSCOPE program at the Naval Postgraduate School is an attempt to provide a reasonable solution.

TINYSCOPE is a tactical imaging nanosatellite that is being developed by graduate students in the Space Systems curriculum at the school. There are currently three Army FA40s participat-



Greg Piper, Deputy Army Space Cadre Office, reviews his notes as he listens to one of the presenters of this year's symposium.

ing in the program to design and build a prototype satellite capable of providing 3m imagery to a tactical user within 30 minutes of a tasking request. The system is being designed utilizing a Cubesat form factor and is expected to be 50cm x 10cm x 10cm, weigh in at under 15kg, and have a per unit cost of approximately \$250,000. The project is currently in the preliminary design phase with an engineering design unit expected to be complete by December 2009 and a flight prototype to follow one year later. The objective of the program is to launch the initial satellite in 2011 to confirm that the system is feasible. A subsequent constellation of 63 satellites would provide near-persistent coverage of the earth and would be available for tasking by tactical echelons using a standard secret internet protocol router connection.

LTC Shelley Volkwein

HQDA Space Force Structure

The Space and Ground-based Midcourse Defense Organizational Integrator integrates and synchronizes force management actions from an operational perspective across the Doctrine, Organization, Training, Material, Leader Development, Personnel and Facilities domains. An Organizational Integrator supports the Army G3 Organizational Requirements Determination and Organizational Integration efforts to review its force structure and force modernization initiatives and its plans to adapt that structure and equipment to meet future doctrine and warfighting requirements. This is accomplished by participation in core force management processes including Total Army Analysis, Force Management Review, Force Design Updates, Force Feasibility Review and Force Validation Committees.

This presentation will provide an overview of the Space and Ground-based Midcourse Defense Organizational Integrator's roles and responsibilities with a focus on the impact of Total Army Analysis 12-17 decisions on current and future Space and Ground-based Midcourse Defense force structure, ongoing Force Design Issues, and other force management initiatives that will impact the Space and Ground-based Midcourse Defense force. 