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Army Space Journal
A Professional Journal on U.S. Army **Space** and **Missile Defense** Operations

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THE COMMON GROUND OF SPACE

2011 Army Space Cadre Symposium

A Greater Capability to All Military Operations
GROUND.AIR.SEA.

michael.howard@smdc-cs.army.mil

Illustrating the Complexity of Space

Floyd Light
Chief, Joint Friendly Force Tracking Division, FWC

SPC Brandon Kitchen
25S Satellite Communications Operator, B Company, 53rd Signal Battalion

Wanda Woodson
Telecommunications Specialist, Wideband Global SATCOM

Talk about a phrase that can take a discussion in many different directions–the Common Ground of Space. It should stretch our ability as creative, critical thinkers to find as many examples of commonality in the Space business. It's healthy. It should help our own understanding and, by doing so, it should also help our effort to communicate to people the very complicated answer to how Space impacts our lives in both commercial and military arenas. The beauty of it is that commonality in the Space business can be defined in as many different ways as it impacts our world. And, all those ways illustrate the many different pieces of complexity in the Space puzzle of deriving value for our Nation.

And, if you want to get technical and energetic, exploring the various ways of commonality in Space may also help in developing the much-needed theory on Space power. Theory is supposed to show relationships and explain how in the context of achieving national power. We have that fairly well-defined in terms of Air, Ground, and Sea powers–but not in Space. A reader from outside the Space community e-mailed his astonishment that an understanding of this level does not already exist in theoretical terms for Space power. It is true. Even though Space has matured into the lifeblood of military and civil operations over the last decade, there is little clearly established scholarly work to articulate it.

This is an argument for a fundamental reason for why many people–in both military and commercial communities–have little understanding of what Space capabilities actually achieve for the Nation. If our community wants the big boys and girls to truly and fully recognize Space power value alongside Ground, Air, and Sea, then it needs to be articulated in terms of proven theory. With the last ten years of war with technological development and integration, there is ample material to at least begin developing this Space power theory today. Once it is developed, the heart of it will have something to do with this question of what is common in terms of use, delivery, integration, and dominance in Space capabilities.

A natural beginning point today has to do with our perspective on these four key words–use, delivery, integration, and dominance–when it comes to Space. Our national effort is focused on partnerships both within and outside the military context. Partnerships take the whole concept of military "joint" to a more mature place. We in the military work very hard to overcome service cultures that can block efficiencies. In terms of partnerships, though, there are required investments and desired equities for the parties involved in the arrangement. When it comes to commercial and military Space, these partnerships become a very easily identified common ground as they can cross over nations, militaries, agencies, services, and specialties.

Our cover art for this mini edition of the Army Space Journal demonstrates partnerships on several levels–military, Civilian, contractor; ground, air, sea; move, shoot, communicate. But there is another consideration of commonality that needs to always be in the forefront of our thinking. Last week a fallen Soldier arrived on Peterson Air Force Base, killed in Iraq in July. He was a young sergeant from Colorado Springs, Colo., whose brother also served as a sergeant and their father as an Army officer. Soldiers, Airmen, and Civilians lined the boulevard from the flight line to the gate of the base to pay respect. The ultimate value of cumulative military power is to conclude conflict and maintain peace. From the Warfighter's perspective, the most important common ground is in knowing how Space power contributes to this objective.

Integrating Space Capability Gaps

BY DAVID L. LADY &
STEPHEN BRODERSEN

Capability Development Realities

The reality of capability development has changed greatly over the last few years. In an era of constrained resources there is little appetite for costly technology solutions to Army capability gaps, and many of USASMDC/ARSTRAT's capability development efforts must be nested within larger Army solutions and acquisition programs; relevant to the enduring operational needs of the force and demonstrating definite cost benefit to the Army.

It is important for all members of the Army Space Cadre to understand the current Capability Integration process; the changes now instituted will require any capability initiative to be validated as relevant and important to an Army Warfighting Function—one or more of the six Warfighting Functional Centers of Excellence (CoE) must also champion the capability. SMDC/ARSTRAT will continue to develop or mature capabilities to meet United States Strategic Command missions as well as Army missions and develop capabilities that take advantage of technological advances. The surest way to transition a new capability into an enduring Acquisition Program is to integrate the capability into the solution sets for the Required Capabilities of a Warfighting Functional CoE.

Army Warfighting Concepts and Capability Integration

Concepts feed the capability development process and products. Concepts illustrate how forces will operate, describe the capabilities required to carry out full-spectrum operations against adversaries, and how a commander might employ these capabilities to achieve desired effects and objectives. Each concept describes problems to solve, the components of potential solutions, and how those components work together to solve military problems for a period 6-18 years in the future.

The Training and Doctrine Command's Army Capability Integration Center (TRADOC ARCIC) develops the Army Capstone and Operating Concepts. Based on these concepts, Army Centers of Excellence lead the development of Warfighting Functional Concepts (WfF): The Mission Command CoE at the Combined Arms Center develops the Mission Command Concept; the Intelligence CoE, the Intelligence Concept; the Fires CoE, the Fires Concept; the Maneuver CoE, the Movement and Maneuver Concept; the Maneuver Support Center, the Protection Concept; Combined Arms Support Center, the Sustainment Concept. TRADOC ARCIC has empowered each of these centers by chartering them to lead an Integrated Capability Development Team (ICDT). These teams consist of both branch proponents and force modernization proponents who participate in Capability Based Assessments in order to establish and describe required capabilities in the Functional Concept Pamphlet (TRADOC Pam series 523-). SMDC/ARSTRAT is primarily aligned with the Mission Command CoE and ICDT, and has also been designated as a major additional component to the other five CoE ICDTs. All Army Space Operations required capabilities and gaps must be validated by the Mission Command ICDT or by one of the other ICDTs. Although some might view this process as cumbersome, DOTLMPF solutions to validated capability gaps will have much better opportunity to transition into Army Doctrine or Acquisition Programs.

Influencing the Capability Integration Process – The Way Ahead

The SMDC/ARSTRAT Future Warfare Center focuses on integrating space capability gaps into the Capstone, Operating, and Functional Concepts written by ARCIC or one of the six Warfighting CoEs. ARCIC and CoEs are on a two year cycle to regularly revise their concepts. The first cycle of this new process began nearly two years ago and developed the initial set of integrated WfF Concepts. The next cycle will soon begin to update the Capstone, Operating, and Functional Concepts. Our SMDC Battle Lab Concepts and Wargames Division will expand the description of Army Space in the next versions of all concepts. Future Warfare Center directorates and divisions will become involved as integral or supporting members of each ICDT, with emphasis on the Mission Command CoE. SMDC/ARSTRAT military analysts will learn the OPTEMPO of the ICDTs and participate in all of their processes in order to convince the other participants of the relevance and importance of Space to solving the warfighting functional problems, and to develop support for SMDC/ARSTRAT-developed capability solutions.

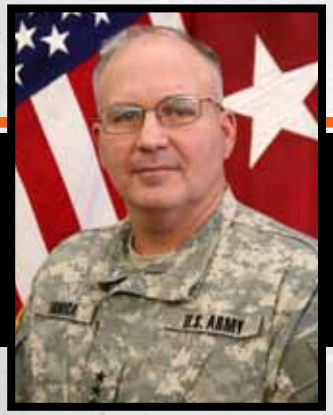
Within this revised concept to capability framework, SMDC/ARSTRAT will develop the next generation of Army Space capabilities utilizing a full DOTLMPF approach, seeking to integrate capabilities into existing doctrine, architectures, and programs. To this end, the Future Warfare Center is actively seeking input to this process. Recommendations and suggestions across the DOTMLPF areas or specific capability or gap suggestions are welcome.

As the Army resets and reorganizes over the next few years, this command intends to be well-positioned to influence the capabilities development process and address all the Army Warfighting Functions. SMDC/ARSTRAT will develop from an organization providing stove-piped, independent, niche capability solutions into one that is fully integrated into the process of bringing the strategic level capabilities of Space and Space-enabled systems to the tactical edge.

WELCOME TO THE 2011 ARMY SPACE CADRE SYMPOSIUM

THE COMMON GROUND OF SPACE

What is the Common Ground of Space? This symposium aims to shed light on the many ways Space ties together Warfighters from all services. Space assets are utilized for a myriad of reasons, from making a satellite phone call from a remote location to scouting where the enemy has set up. Space and Missile Defense professionals play critical roles in providing capabilities that touch everyone in the Armed Services. It's important that Space professionals fully understand our parts and how we all tie together. During this symposium, we will explore the various aspects of the Space world and how constantly improving technology helps to define the tremendous contribution Space provides in the defense of our Nation.



LTG Richard P. Formica

Commanding General
USASMDC/ARSTRAT

Symposium Attendees:

Welcome to the 2011 Army Space Cadre Symposium. This symposium is focused on delivering Space capabilities to the Warfighter. Its theme, agenda, and speakers were selected with that in mind.

During the symposium we'll discuss the Army's role in Space – as a user of Space capabilities; the Army's strategy and policy; and the Army as a provider of Space capabilities. You'll also have a very important opportunity to address the Army Profession of Arms, what it means to be a Space professional today and in the future. We'll do this within the theme of **The Common Ground of Space.**

My message to you will be about getting into the fight and operationalizing Space capabilities; being agile and responsive to commanders; and being fully proficient in the capabilities and employment of Army, Joint, and National Space systems for warfighting.

Critical elements such as persistent intelligence, surveillance, and reconnaissance (ISR), integrated Missile Defense, friendly force tracking, and enemy force tracking provide Soldiers with advanced capabilities. Those vital capabilities – Army, Joint, National – are provided to the Warfighter by the Army Space Cadre and our joint counterparts.

Providing Space capabilities to the Soldier requires expert, trained, and agile Space professionals. The Army Space Cadre Symposium is an excellent opportunity to learn and grow as a professional and to build lasting professional relationships with each other.

Take full advantage of this week's agenda and leave here better trained and more ready to provide Space capabilities to the Combatant Commanders and to the Warfighter.

Sincerely,

Richard P. Formica
Lieutenant General, U.S. Army
Commanding General

The Sun Never Sets on USASMDC/ ARSTRAT

CSM Larry S. Turner

Command Sergeant Major
USASMDC/ARSTRAT

Fellow Space Professional:

Welcome to the 2011 Army Space Cadre Symposium. This year's theme is **"The Common Ground of Space."** The term common ground means *"something that people can agree about,"* and I believe this year's theme is becoming more and more relevant when discussing combat operations within the Army.

Since the mid 1990s, when Force XXI Battle Command Brigade and Below (FBCB2) was first fielded, our Soldiers have come to greatly appreciate and value the enhanced situational awareness that Space provides. For the Soldiers and NCOs at the tip-of-the-spear, common ground about Space translates to enhancing their ability to shoot, move, and communicate in combat. What they often do not understand is how Space "fits."

Friendly Force Tracking won't work without GPS. The same is true for precision-guided rockets, bombs, and munitions. Beyond line-of-sight communications is extremely difficult to achieve without satellite communications systems. Up-to-date imagery of areas of operation and enemy movements on the battlefield are much more difficult to obtain without support from Space-enabled systems.

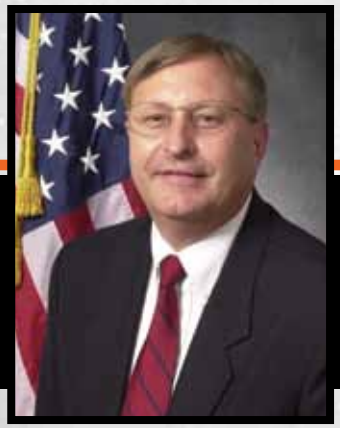
So, I think one of the challenges for the members of the Army Space Cadre is to determine how we should go about educating the everyday Soldier on the value of Space. How do we bring them onto the "common ground of Space?"

I also challenge our Soldiers and Noncommissioned Officers to focus upon how being a "Space Professional," a member of the Army's Space Cadre, fits within the Profession of Arms. We've spent most of the year examining what it means to be a professional Soldier. As you interact during round-table discussions and as you listen to the reports and updates, I urge you to consider the roles and responsibilities of the Soldier and NCO in the Army Space force and how they contribute to the Profession of Arms.

Sincerely,

Larry S. Turner
CSM, U.S. Army
Command Sergeant Major

The Sun Never Sets on USASMDC/ ARSTRAT



Steven L. Messervy

Deputy to the Commanding General
USASMDC/ARSTRAT

To the Space Cadre Symposium Attendees:

Welcome to the 2011 U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) Space Cadre Symposium. This year's gathering of the Army's best and brightest Space Cadre – active duty, reserve component, and Civilians – promises to be a great investment of your time and the Army's resources.

Your presence here shows not only your own desire to develop professionally, but also your organization's commitment to build upon your expertise and bring back shared insights from senior leaders and the Army's Space Cadre. This year's symposium supports the Army's deeper examination of the Profession of Arms, and will include insights into what our Army Space professionals do in support of our Army mission. Additionally, you'll get the opportunity to explore **"The Common Ground of Space,"** through the perspectives offered by representatives from the Reserve Component and the Combatant Command Army Service Components.

This annual gathering gives us all the opportunity to integrate across the command and seek a common objective – to ensure our Soldiers achieve mission success that is enabled by a well-trained Space Cadre and assured access to Space-based capabilities.

Lastly, please help us improve future forums. We need your thoughts and recommendations to help next year's professional development forum exceed this year's success!

Sincerely,

Steven L. Messervy
Senior Executive Service, U.S. Army
Deputy to the Commanding General

The Sun Never Sets on USASMDC/ ARSTRAT

COL Timothy R. Coffin

Deputy Commander for Operations
USASMDC/ARSTRAT

Dear Space Cadre Colleagues:

Welcome to the 2011 Army Space Cadre Symposium. This event is the premier gathering for Army Space professionals. During the week we will learn from, share with, and get to know experts and specialists from inside and outside the Army Space community – including academia, industry, and the other military services.

Our command's Soldiers, Civilians, and Contractors stand on **The Common Ground of Space** – this year's symposium theme. The expression "common ground" means everyone has a similar purpose: to deliver Space capabilities! To do so we must bring together many different disciplines which call on our community to develop, assess, train and indoctrinate on, and employ Space and Missile Defense assets and capabilities to protect U.S. national security and aid the defense of our friends and allies. Make the idea and spirit of common ground a big part of how you think about and exercise cooperation and coordination in the military Space arena.

The theme describes only a portion of what is taking place. I also look forward to the:

- Round table discussions for officers, Civilians, and enlisted members of the Space Cadre,
- Many high-level reports and updates,
- Networking, making and renewing friendships

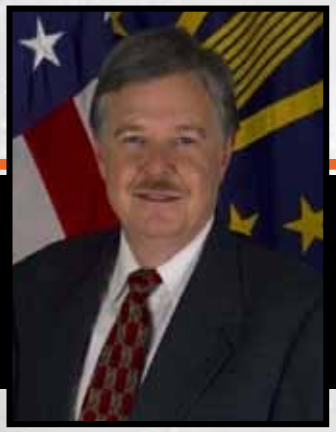
Also, we will continue the discussion of the Profession of Arms. The Secretary of the Army and the previous Chief of Staff dedicated 2011 to a yearlong examination of what it means to be a professional in a time of persistent conflict. Each of us has a responsibility to lead and teach the Profession of Arms, and you will see some of that here at the symposium. The Profession of Arms is a set of principles to keep in mind and live by throughout your career.

Again, welcome to the symposium and to Colorado Springs. Enjoy your time together, be safe, and take away lots of valuable knowledge and lasting relationships.

Sincerely,

Timothy R. Coffin
Colonel, U.S. Army
Deputy Commander for Operations

The Sun Never Sets on USASMDC/ ARSTRAT



Larry Burger

Director
USASMDC/ARSTRAT Future Warfare Center

Attendees:

Welcome to this year's Army Space Cadre Symposium hosted by the Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT), the Army's specified proponent for Space and Missile Defense.

The Future Warfare Center (FWC) is SMDC/ARSTRAT's agent responsible for ensuring SMDC's second core task – to build future Space and Missile Defense forces – the command's capability development function. Our mission is to develop and integrate innovative DOTMLPF Capabilities for Army and Joint Space, Missile Defense, and High Altitude.

We follow the Army and TRADOC's processes in building future Space forces; primarily using the DOTMLPF construct. We developed Space and Ground Based Midcourse Defense Operations doctrine and Tactics, Techniques, and Procedures; and informed the Army's Operating Concept in accordance with TRADOC direction. We are responsible for developing operational organizations and the force structure for Space and Missile forces, which include both 1st Space and 100th Missile Defense Brigades.

We train and educate the Army's Space professionals, military and Civilian. And we teach Space operations at leader courses at the Command and General Staff College, West Point, and the various branch Centers of Excellence. We are expanding our use of Mobile Training Teams, to help infuse Space into the curriculum and mind set of all Warfighters.

We are the Army's proponent for developing requirements for Space, High Altitude, and Missile Defense Capabilities.

Many of you have already completed, are currently attending, or will attend various FWC Directorate of Training and Doctrine training courses, such as the Space Operations Officer (FA40) Qualification Course (SOOQC).

I look forward to efforts in the future to help us bring Space to the Warfighter and wish you the very best in your careers.

Sincerely,

Laurence H. Burger
Senior Executive Service, U.S. Army
Director, Future Warfare Center

The Sun Never Sets on USASMDC/ ARSTRAT

Debra G. Wymer

Director
Technical Center

To the esteemed members of the Space Cadre and other symposium attendees:

I am honored to welcome you to the 2011 Army Space Cadre Symposium hosted by LTG Formica, as the Army's proponent for Space and high altitude capability, and executed by the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT).

This year's theme, **The Common Ground of Space**, will encourage members of the Army Space Cadre to unite under the idea that Space serves a common ground, rather than a specific entity, throughout the Department of Defense. Although the Army is the largest user of Space-based capabilities within the Department of Defense, it is important to understand that our sister services are simultaneously providing and using the same capabilities. Together, we form a tightly knit community focused on maximizing the support we can provide to the Warfighter.

As we work to increase the understanding and role of the Army Space Cadre, this annual symposium serves as a forum where military and Civilian members may come together to acquire and share information about new innovations in the Space community. The symposium also provides an unparalleled opportunity for continued education and professional development for individuals.

As Director of the Technical Center at USASMDC/ARSTRAT, I am very pleased to announce that I have been asked to take on a larger role in the functions of the Army Space Cadre as a voting member of the Academic Advisory Board. In this position, I will work to ensure that the academic work being accomplished by scientists and engineers melds well with the knowledge being gained through industry partnerships while meeting the long-term goals of the Army's Space community.

I am looking forward to working more closely with each and every one of you as we move into the future and continue to take positive steps toward achieving the successes that have long supported our Army's role in Space. I want to thank you for your service and commitment to the Army Space Cadre and for taking the time to attend this symposium. Your active participation will help build a stronger USASMDC/ARSTRAT and U.S. Army.

Sincerely,

Debra G. Wymer
Senior Executive Service, U.S. Army
Director, Technical Center

The Sun Never Sets on USASMDC/ ARSTRAT

Michael C. Connolly

Director
Army Space Personnel Development Office

Attendees:

Welcome to the 2011 Army Space Cadre Symposium and thank you for taking the time to attend. This year's event will provide you a great opportunity to hear and share what is new in the Army's Space community. Our goal is to provide you with a forum for the continuing education and professional development of all Army Space Cadre members.

Previously, these now annual events focused solely on Functional Area 40 (FA40) Space Operations Officers; however, we have slowly transitioned to encompassing all categories of the Army's Space Cadre. This year's theme, **The Common Ground of Space,** provides a broad insight to all members of the Army Space Cadre and will help us jointly support the service men and women serving in all the military branches, who rely on Space-based capabilities to move, shoot, and communicate.

We want to acknowledge the positive contributions that are made every day by the military and Civilian members of the Space Cadre. Although the 300 FA40 Space Operations Officers form the core of the Cadre, we have also identified over 300 Civilian Space professionals who work Space issues every day along with another 1,745 individuals working in Space Cadre coded billets. Each and every one is equally important in supporting our Army's role in Space. The individuals presenting this year highlight the commonality of Space throughout the Department of Defense. Representing multiple services and agencies, they magnify the strength of the community and symbolize what is in the realm of possibility through a common goal of supporting the Warfighter. It is our intent that the Army Space Cadre be inclusive of all Soldiers and Department of the Army Civilians who have the experience, training, and education to contribute to providing Space-related capabilities.

As we execute this year's symposium, we have already begun the initial plans for our 2012 symposium. We will continue to host these annual events in Colorado Springs and it is our desire to improve each year. If you have ideas or suggestions on how we can improve, please let us know during this symposium.

Thank you again for taking the time to learn and grow with us.

Sincerely,

Michael C. Connolly
Director, Army Space Personnel
Development Office

The Sun Never Sets on USASMDC/ ARSTRAT

2011 ARMY SPACE CADRE SYMPOSIUM

AGENDA

The following pages include a breakdown of the Symposium's times, briefings and events. Please use this as a guide so that no necessary information is missed.

Day 1 – Monday, 1 August 2011 – Evening Event

Location: Holiday Inn, 1855 Aeroplaza Dr.

TIME	BRIEF / EVENT	BRIEFER
0700-1700	Travel INDIVIDUAL	
1630-1800	CG's Senior Leader Forum By invitation only, O6/GS15	LTG Richard Formica ACUs/Business Casual
1800-2030	Ice Breaker HOTEL CASUAL ATTIRE	

Day 2 – Tuesday, 2 August 2011 – Profession of Arms

Location: Scitor Corp., 745 Space Center Dr.

TIME	BRIEF / EVENT	BRIEFER
0730-0800	Check-in INDIVIDUAL	
0800-0815	Security Information	SCITOR Representative
	Administrative Announcements	Mr. Jerry Pepin, ASPDO
0815-0945	Key Note Speaker	LTG Richard Formica
0945-1030	DCO Remarks	COL Timothy Coffin
1030-1045	Break	
1045-1115	Contributions of Space Enablers	SGM John Mattie
1115-1130	Profession of Arms	Center for Army Profession and Ethics (CAPE) Video Introduction by COL Coffin
1130-1300	Lunch INDIVIDUAL	

	Officer Round Table at SCITOR -DURANGO ROOM-	Civilian Round Table at SCITOR -TELLURIDE ROOM-	Enlisted Round Table at Building 3 -TRAINING ROOMS-
1300-1630	Lead – COL Coffin	Lead – Mr. Carrithers	Lead – SGM Mattie
	Topics to include: The Army Professional (Individual) The Profession (Unit/Organization) Professional Military Education/Doctrine Policies/Programs		

Day 3 – Wednesday, 3 August 2011 – Space Policy / Governance

Location: Scitor Corp., 745 Space Center Dr.

TIME	BRIEF / EVENT	BRIEFER
0730-0800	Check-in INDIVIDUAL	
0800-0900	DoD Space Governance Issues	Guest Speaker; Mr. Richard McKinney, Deputy Undersecretary of the AF for Space
0900-1000	Space and Intelligence (OSD)	Guest Speaker; Brig Gen Teresa A.H. Djuric, USAF,OSD/AT&L
1000-1015	Break	
1015-1115	Space Policy Implementation – Opportunities and Challenges	COL Jeffery Farnsworth, OSD
1115-1200	The Army Space Strategy	MAJ Chris Ortiona, HQDA DCS G-3/5/7
1200-1330	Lunch INDIVIDUAL	
1330-1415	Army Reserve Issues	COL Michael Healy, Senior Reserve Advisor, USASMDC/ARSTRAT
1415-1500	Army National Guard Issues	BG Robert Enzenauer, Assistant Adjutant General, Space and Missile Defense, Colorado Army National Guard LTC Jesse Morehouse, Commander, 117th Space Battalion
1500-1515	Break	
1515-1600	Why Every FA40 Needs to Know About Space Weather	Dr. Michael Kelly, Johns Hopkins University
1600-1645	Defense Spectrum Office Support to Army Space	LTC Craig Roseberry, Joint Spectrum Center

Day 4 – Thursday, 4 August 2011 – Providing Capabilities

Location: Scitor Corp., 745 Space Center Dr.

TIME	BRIEF / EVENT	BRIEFER
0730-0800	Check-in INDIVIDUAL	
0800-0900	USARCENT Tactical Space Issues	COL Thomas James, Chief, Space Support Element ARCENT
0900-1000	Providing Capabilities to the Warfighter (TS-SCI)	COL Eric Henderson, Commander 1st Space Brigade

1000-1015	Break LET PEOPLE W/O CLEARANCES IN	
1015-1100	Senior Army Leader: User of Army Space Products	BG Kurt Story, Director, J33 USF-I
1100-1145	USAREUR Tactical Space Issues	COL Robert "Buff" Bruce, Chief, Space Support Element AREUR
1145-1315	Lunch INDIVIDUAL	
***	Brown Bag Lunch – Naval Postgraduate School at The Sporting News Grill	MAJ(P) Jonathan "Scott" Matey, FA40 Faculty Member, Space Systems Academic Group (SSAG), Naval Postgraduate School
1315-1400	USARPAC Tactical Space Issues	LTC Shelley Volkwein, Chief, Space Support Element ARPAC
1400-1445	USARNORTH Tactical Space Issues	MAJ Bryan Juntunen, Space Support Element ARNORTH
1445-1500	Break	
1500-1630	FWC Campaign of Learning and Capability Development and Training and Leader Development	COL Jim Pruneski, Director, DCD Mr. Dave Carrithers, Director, Battle Lab Mr. Terry Nelson, Director, DOTD

Day 5 – Friday, 5 August 2011 – Tactical Space

Location: Scitor Corp., 745 Space Center Dr.

TIME	BRIEF / EVENT	BRIEFER
0730-0800	Check-in INDIVIDUAL	
0800-0845	Profession of Arms Out brief	Mr. Dave Carrithers, Director, Battle Lab
0845-0945	Responsive Space Technology Initiatives	Mr. John London, Responsive Space Tech Division, Space & CyberSpace Technology Directorate, Technology Center, USASMDC/ARSTRAT
0945-1030	Operationally Responsive Space (ORS) Tier 1 Playbook	LtCol Robert Terselic, USMC, ORS, Chief, Tier I Division
1030-1115	NAVWAR Update	MAJ Donald Brooks, Chief, Warfighter Capabilities Branch
1115-1200	Open Discussion/Closing Remarks	COL Timothy Coffin
1200-1300	Check-out INDIVIDUAL	
TBD	Travel to Airport INDIVIDUAL	

NATIONAL SPACE POLICY

BY MICHAEL L. HOWARD, ASJ EDITOR-IN-CHIEF

At the 2010 Space Cadre Symposium, Peter Marquez agreed to sit down with the Army Space Journal and discuss the new Space Policy for the White House's National Security Council. Here are some highlights from the interview.

This article features highlights from a full length interview printed in the 2010 Fall / Winter edition of the Army Space Journal.

My first question has to do with transparency and partnership. Those are two key words in the new Space Policy. What impacts do you see those bringing to the military Space community?

MARQUEZ From the first standpoint, there won't be much of a change because the military knows how to do coalition type activities and knows how to work internationally. They do it far better than anybody else, better than any other agency with probably the exception of NASA. So there's already the awareness there in the Department of Defense amongst the Army, the Air Force, the Navy and the Marines as to how you conduct things in an international way.

What we'll probably be seeing as new things, though, is a sharing of capability. We'll be transitioning to trying to provide greater capability and information to our allies who are in the foxhole with us and, at the same time, developing measures to leverage the capabilities that our allies have – and to bring those to bear in the fight as well. At some points, we have a one-way mirror where we provide data – and sometimes not all the data we possibly could be providing – but we don't get anything in return. We have allies and partners who are very willing to bring capability to bear in the fight, so part of the real struggle in the midterm is going to be finding how to integrate those capabilities into our current architecture.

There's also an emphasis on mission assurance and resilience. Does this call for the United States to do anything differently than we've been doing in the past?

MARQUEZ Absolutely – it's a broadening of the responsibility. What we have been doing previously is trying to protect our Space systems. What mission assurance and resilience is talking about is in addition to protecting those critical Space systems, developing relationships, techniques, tactics, procedures, other capabilities so that if those critical Space enabled missions are disrupted or degraded through either a natural event or hostile event – or just by an accident – we have the capacity in place to continue those mission essential or critical functions either in a complete way or in some sort of a degraded fashion, so we don't lose capability wholesale.

We haven't really taken that holistic look of backing up Space capabilities through other medium, whether it's undersea cables or high-altitude airships, or cyber, or whatever. That's what we're looking at now is from a more holistic standpoint.

How does this link to the importance and the policy placed upon the commercial industrial base?

MARQUEZ That's a very obvious linkage. The industrial base provides a lot of Space capability, but a lot of our commercial companies are also providers of capability in other areas. They may have very good ideas as to how we can assure missions using capabilities that they provide, and they also have a good reach into international communities and international commercial companies as to the other capabilities that are available. So, I think we will be leveraging the commercial community quite a bit with resilience and mission assurance.

Is that somewhat because of technological developments that have happened so rapidly in the last few years?

MARQUEZ That's one of the reasons why. The ubiquity of capability that Space provides, whether you've got GPS on your smart phone or whether you're pulling down data in some remote location, all those things are enabled by Space and everybody now is critically dependent on those capabilities. So we're going to have to work with other people to maintain those capabilities. People 50 years ago knew nothing about Space. Fifty years later, the entire world is using Space capability.

The new policy emphasizes international cooperation. What does the administration envision in terms of international cooperation in the military use of Space?

MARQUEZ For the military use of Space, what we're trying to do is create a stable, standardized view of Space and a standard set of understandings as to how a responsible nation is suppose to act in Space. How that applies to the military is if we know how people are suppose to operate in Space it makes it somewhat easier for us to develop capabilities to know when there's a hostile act going on in Space. It makes it easier for us to respond to those hostile acts. So we're trying to set up the environment that allows us to strengthen our national security but also create a stable regime for the rest of the international community to utilize.

Is there any concern that the emphasis on the cooperation will renew the debate on de-weaponizing Space?

MARQUEZ It will. It already has. We've heard from several people asking, "Does this new policy mean that we're signing up to an arms control treaty?" The short answer is "no." There is nothing on the table now that we see is a viable arms control treaty about preventing weapons or whatever else , but the policy very clearly states with regard to those types of activities two very specific things. What it says the U.S. will actively pursue transparency and confidence building measures, but we will consider arms control agreements as long as those arms control agreements are equitable, verifiable and – equally important – enhancing to the national security of the U.S. and its allies.

There's one arms control treaty that's on the table right now from the Russians and the Chinese, and we maintain our position which is the same position before this policy was put out, that their arms control treaty is a non-starter for the U.S. because it fails the verification standard.

Can you provide a little more detail as to the areas we might be looking at for cooperating in national security Space?

MARQUEZ There are things we're doing on ISR now. So growing that capability is one of the first areas – making sure that we have good data transfer is an important thing so solidifying an already nascent intelligence, surveillance and reconnaissance capacity and growing that capacity is probably one of the key low hanging fruit. Another one is Space situational awareness. You know we have a tremendous amount of capability on the ground and we also have allies that are developing a Space situational awareness capability.

We're going to need additional sensors and additional data to create a more robust complete picture of what's in the Space environment. Heretofore, we've given that data away for free to other nations so we want to work with other nations to put their data in with ours to push it back out again as a free public service, so we'll be looking at other nations to help us with that. Those are the first probably two we'll focus on. There are many others. There's an entire paragraph dedicated to international Space policy to areas for potential international cooperation. It's almost literally a laundry list of things for international cooperation, so we have a lot to do.

This article features highlights from a full length interview printed in the 2010 Fall / Winter edition of the Army Space Journal.

All the military services use Space, some in similar ways and some in different ways.

SPACE COORDINATING AUTHORITY

BY MICHAEL L. HOWARD, ASJ EDITOR-IN-CHIEF

Rear Admiral Sandy Daniels agreed to sit down with the Army Space Journal to speak about the joint nature of the military Space business after her presentation at the 2010 Space Cadre Symposium in Colorado Springs, Colo. Highlights from her interview follow.

My first question is what specifically does it mean that Space is inherently "joint" in the military context?

DANIELS Well, I think joint is a two-fold concept when you look at the user perspective. There are many Space users: All the military services use Space, some in similar ways and some in different ways. That means that all the joint requirements need to be accounted for while each service brings something unique to the table when either creating those capabilities or in how they creatively use what's up there. So, we learn a lot from each other as we try to solve service-unique problems in a joint environment.

Following up on that, how does the unique history that military services each independently possess in Space beginnings contribute to this joint characteristic?

2010 Q&A

with REAR ADMIRAL SANDY DANIELS

DANIELS Our history in the beginning of the Space age points to each service having sometimes similar and sometimes unique problems to solve. What are the operational issues that the Army would have that might be different than, say, the Air Force or Navy? I know the Navy the best, so I can talk to that a little bit. Distributing command and control: You know, you're onboard ships so you're naturally very focused on communication and navigation, but also that interest in navigation ties in to solving the question of how to launch a missile from a submarine. Likewise, the Army's perspective is going to be different because you have much smaller units and different issues, so the user equipment requirements are going to be different than, say, a larger ground-based organization that would be centrally located.

There are also the interagency and commercial aspects of the discussion. How do these various stakeholders impact the overall environment that the military Space professional must operate within?

DANIELS First, there's recognition that all Space is not DoD as you pointed out. It includes the national intelligence community and the commercial aspect. At JFCC Space, one of the ways we address that is: Number one, we have a very close working relationship with the National Reconnaissance Office. … The relationship between us and the NRO has gotten closer and closer as we try to oversee and do our duty as far as those capabilities. We also have liaisons from NGA (National Geospatial Intelligence Agency), from NSA (National Security Agency), from NASIC (National Air and Space Intelligence Center) and that's one of the ways we can link into those intelligence communities. We're looking at how we do a better job in the interagency, so for things like EMIs (Emergency Management Issues) and other things recognizing that that's almost kind of like a JIATF (Joint Inter-Agency Task Force) like structure. How do integrate that into your planning processes and the commercial side. As far as remote sensing the linkage is through NGA as well as some of the commercial SATCOM that works with the GSSC (Global SATCOM Support Center) in cyber for SATCOM issues. So, we're looking to improve that as we recognize that there's probably still work to be done.

When you talk about command and control aspects in SCA, is there some relationship between those?

DANIELS SCA speaks to the overall coordinating authority so they don't have command and control of anything. We have the command and control authority of the key Space assets, and so our job is to support the theater by exercising our command and control. The SCA in theater coordinates what they need: "I think I need a couple more GPS products. I need OPIR (Overhead Persistent Infrared) focused on X event. I need these other capabilities." But their job is not to point at the GPS squadron or the operations center and say to them to deliver this product. That's where we at JFCC Space come in and we do that on their behalf. We are the support team element in this case for the geographical SCA. We want them to tell us the effect they need and we will work with them and the appropriate elements to properly deliver what is needed.

What advice do you have for Army Space Cadre members in developing strategic thinking skills that will help them to be able to think as you said simultaneously tactical, operational and strategic levels in this complex Space and operational environment?

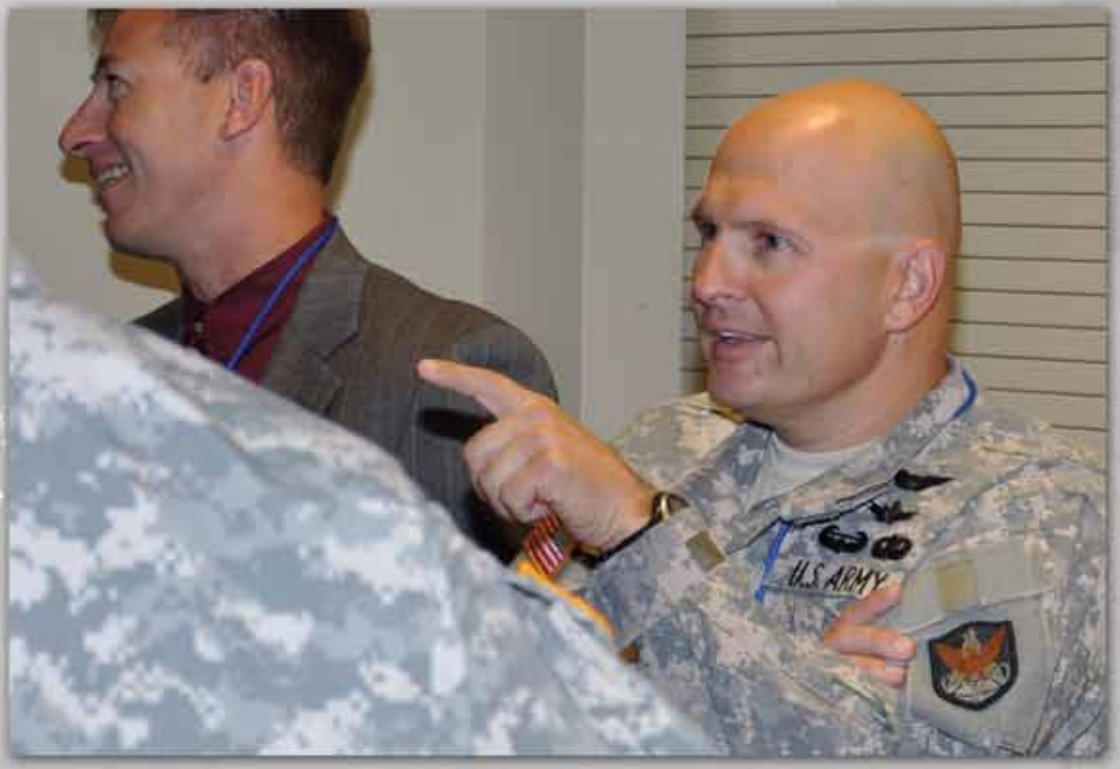
DANIELS I think part of it is making sure you broaden your particular education and training. So, it's one thing to learn the particular say instrument and devices or the equipment that you have to work, but then you start learning more about Space systems at large . The other is I think always trying to get into the head of your next level up of leadership. So I'm doing a particular job and I know how to do my particular job, but how well do I understand and can anticipate the question that the decision-maker, whatever that next level up is, is going to ask. And by anticipating, I can get ahead of the curve and make sure I provide that information or start thinking about where would I get that from or who would I have to collaborate with.

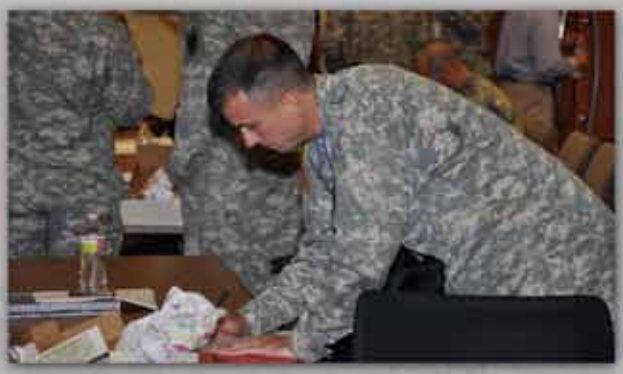
Talking about command and control relationships, how does JFCC Space ensure that Space-based capabilities, under its operational/tactical control are tactically/operationally responsive to the needs of Army ground commanders?

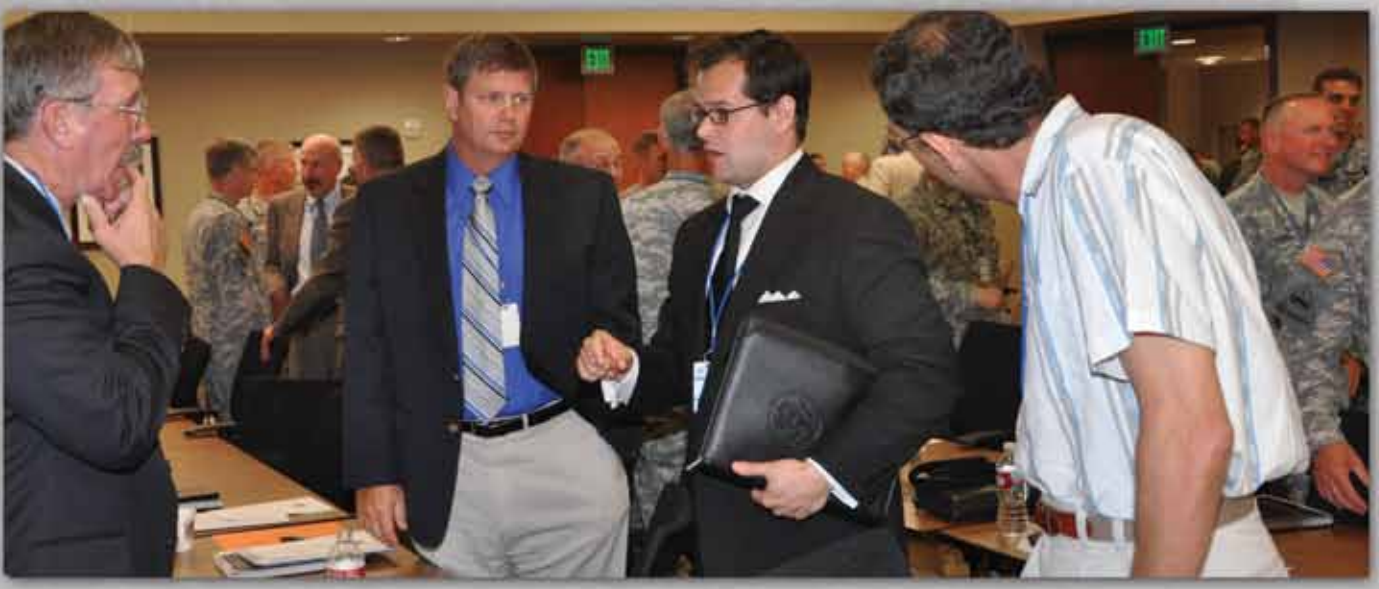
DANIELS Well part of what we do again, we get the theater request from the COCOMs, from whoever, however that gets piped up, and we fold those that need to be folded into what we call the Joint Space Tasking Order (JSTO), and so that's how we do C2 (command and control) of the systems and capabilities that we have OPCON (operational control) take of, and so that builds into our process , into that JSTO cycle, which is a seven day cycle, to where okay we have a launch coming up, we may have a particular operation we're supporting in whichever theater it is. Exercise we're providing support to and those priorities then are laid out so that all of the different components can look at that and go okay I don't go into my radar maintenance here, I wait until something else happens, or oops, here's how I need to focus my OPIR and this is the priority I have to meet, and so that's kind of how we do that.

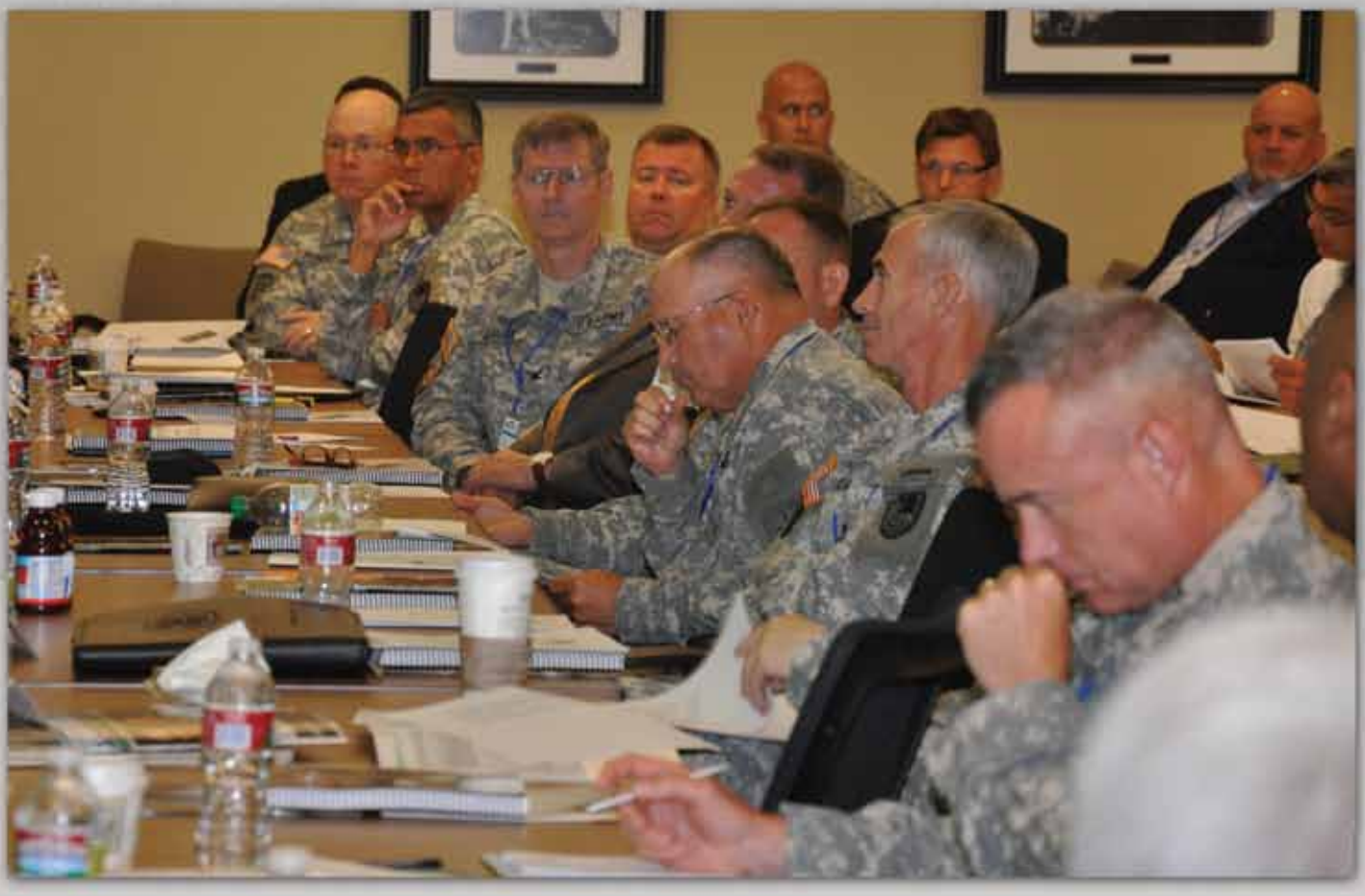
2010 Army Space Cadre Symposium

Attendees of the 2010 Space Cadre Symposium heard briefings focused on Sharpening Our Edge in Space. This year's theme is The Common Ground Of Space.









Command Impact

INFORMS from the top echelon to the boots on the ground about Army Space and Missile Defense issues.

EDUCATES Soldiers and Civilians to ensure each individual maintains readiness with the latest developments in Space and Missile Defense capabilities.

ENABLES Soldiers and counterparts Army-wide to utilize Space and Missile Defense tools to accomplish the mission with excellence.

PROVIDES a forum to disseminate professional knowledge about Space and Missile Defense operations.

ACTS as an access point to rally cadre members and to communicate about upcoming training events and opportunities.

PROMOTES partnerships with joint agencies through clear communication of the effectiveness of USASMDC/ARSTRAT operations, capabilities and materials.

Share your Story

The Army Space Journal is your magazine and without information provided from you, it is just some nicely designed pages. The purpose of this publication is defined in the items listed to the left. We desire to be the first thing people go to when they want Army Space or Missile Defense information. You, as Space or Missile Defense professionals, are the ones with your hands on the pulse of what is coming up and what is happening now. We encourage you to take a few moments to answer the questions on the next page, so that we can bring that knowledge to the forefront.

5 minute questionnaire

Submit your responses to the Editor in Chief
space.journal@us.army.mil

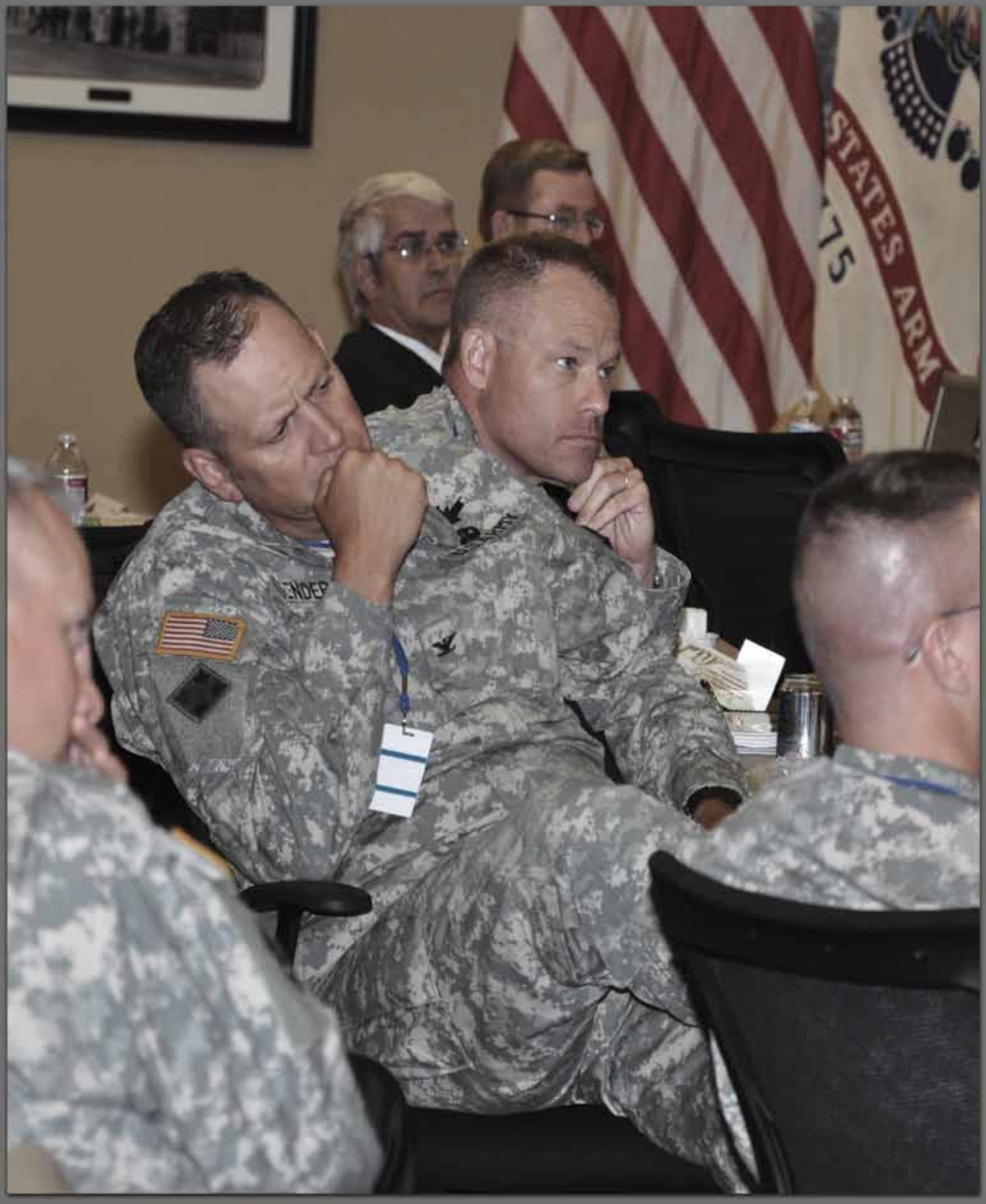
? If you were the editor of the Army Space Journal, what changes would you make?

? Which part of the magazine do you feel is most relevant to your career field?

? Which areas of Space and Missile Defense would you like to see more coverage of in the magazine?

? How do you think we can better tell the story of the Space and Missile Defense mission through the magazine?

? We're trying to better inform the broader audience of the Army Space Journal to include other agencies outside our immediate community. Can you think of article topics, knowledgeable Warfighters, or subject sections we could include in our coverage to accomplish this?



COL Eric Henderson and COL Greg Bowen listen intently to briefings given at the 2010 Army Space Cadre Symposium. The focus of last year's symposium was Sharpening our Edge in Space.