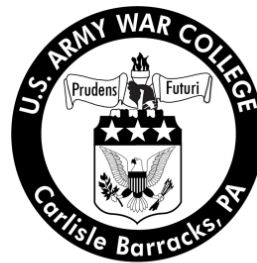


# Strategy Research Project

## U.S. Army Space Operational Narrative

by

Lieutenant Colonel J. Dave Price  
United States Army



United States Army War College  
Class of 2012

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USAWC STRATEGY RESEARCH PROJECT

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## **ABSTRACT**

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The U.S. Army Space Operational Narrative (SON) has not yet been written. The SON builds on the Army Space Strategy. This strategy, coupled with national space strategy, can be summed up in the Space strategic narrative (SSN) or guidance. This paper presented the SON as a product of the SSN. The SON describes how strategic guidance drives change or evolution in space operational strategy, Army space missions, visions, goals and objectives, leadership, FA 40 and Army proponentcy. This effort reviews the SSN and develops one approach to the SON within the current Department of Defense (DOD) framework.





## U.S. ARMY SPACE OPERATIONAL NARRATIVE

Only those who will risk going too far can possibly find out how far one can go.

— T. S. Eliot

Strategy is about making choices and accepting risk. Risk must be understood, measured, acceptable, but more importantly, taken to improve a community. The Army Space community will need to continue to assess and make tough choices in order to deliver on a U.S. Army Space Operational Narrative (SON). This paper provides a venue for understanding these choices and making recommendations.

The U.S. Army Space Operational Narrative (SON) has not yet been written. This paper explores the space environment and predicts a SON as a result of national and Army space strategy. This strategy can be summed as the space strategic narrative (SSN). The SON describes how the SSN drives the evolution in space, operational strategy, Army space missions, visions, goals and objectives, leadership and specifically the Army space officer branch. This paper further explores the vision and strategy for functional area (FA 40) space operations officers. The SON is a 'story board' for Army space professionals to follow.

U.S. Army space operations extend from the tactical to the strategic level, and the SON is focused in between. The tactical level described as brigade level and below, will not be fully considered herein. There is operational overlap with strategic and tactical planes. The Army stations Soldiers (including FA 40) globally who provide space support and space enhancement in every major Joint and Army organization. The lead for Army space is the Department of the Army (DA G3/5/7) with functional proponentcy

and operational responsibilities delegated to the Commanding General of Space and Missile Defense Command and Army Forces Strategic Command (USASMDC/ARSTRAT). The responsibility to determine the vision, objectives, and endstate of these forces and the FA 40 branch resides with this multi-component command.

The SON is an in-work concept due to constant growth and change. Particular takeaways are (1) the focus of Army space forces must evolve beyond traditional space functions and comparable operational tasks and missions, (2) proper operational oversight should be developed to provide the optimal path and growth for Army space forces, (3) space officers must grow vertically into more senior positions of influence and command, (4) tough choices will be made to grow the space field and domain influence, and (5) the space domain influence is growing on the conventional Army, so management of the SON is more critical than ever. The SON is derived from national security and national security space strategy, guidance, and doctrine.

### Strategic Direction and the SSN

Strategic direction is the sum of all of national, DOD, and Joint policy and doctrine generally understood by the majority space stakeholders. The national security strategic direction starts with the National Security Strategy (NSS),<sup>1</sup> the National Defense Strategy (NDS)<sup>2</sup> and the National Military Strategy (NMS).<sup>3</sup> There are other sources such as presidential directives, the Quadrennial Defense Review (QDR), other executive input, and related defense and joint publications that sharpen the strategic narrative. The SSN is derived from these key United States government (USG) documents but is primarily formulated from space policy such as the National Space Policy (NSP),<sup>4</sup> the National Security Space Strategy (NSSS),<sup>5</sup> and in the Army Strategic

Space Plan (ASSP).<sup>6</sup> Figure 1 is a picture depicting where national security and space policy meets the operational level strategy and narrative.

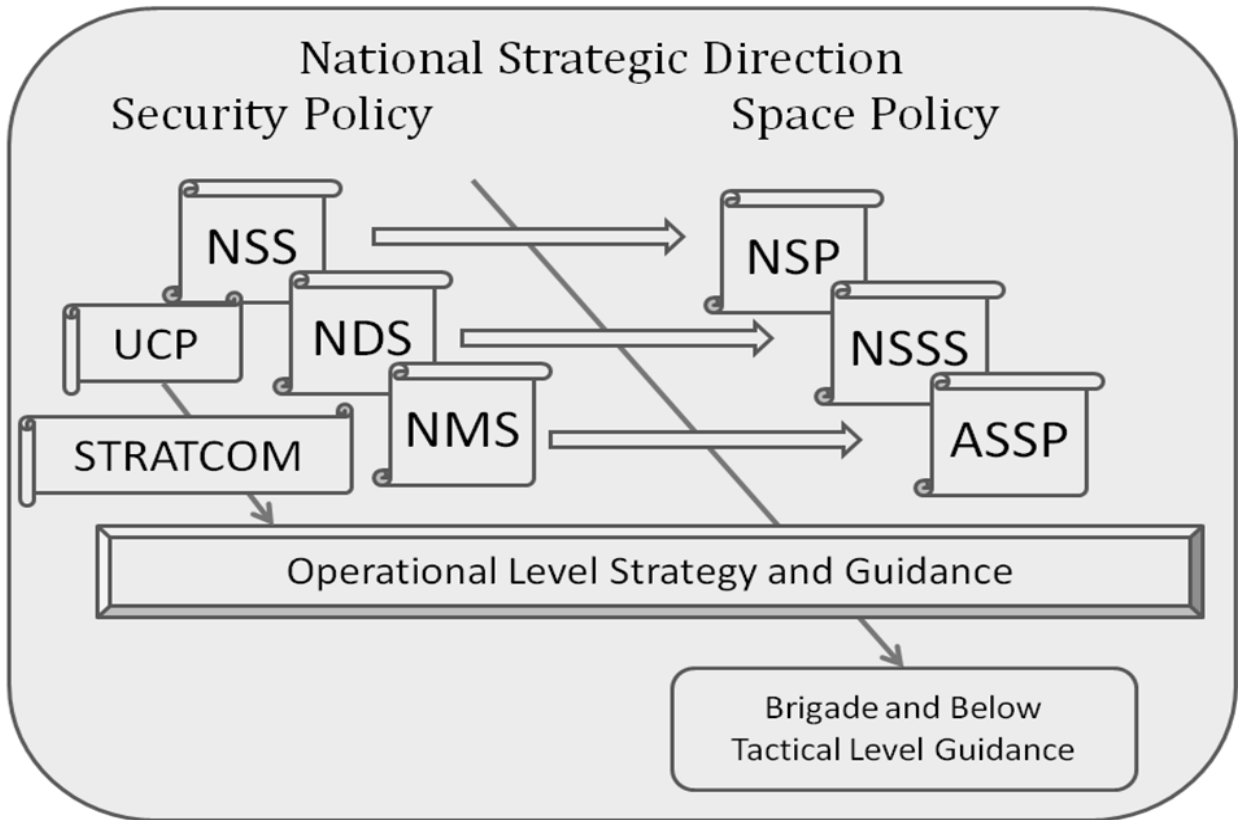


Figure 1: Strategic Direction Path

The SSN is threaded in the four basic pillars of U.S. national interest presented in the NSS. These interests include the pursuit of security, prosperity, values, and international order which can best be advanced by promoting peace and security through collaboration with strong partner nations.<sup>7</sup> U.S. vital interests and concepts are frequently reinforced throughout the SSN. President Barack Obama stated, “The American people are idealists, but they also want their leaders to be realistic.”<sup>8</sup> The American people expects the Department of Defense (DOD) to act prudently, economically and efficiently, but above all else, realistically.

The NDS further defines the strategic environment and framework but the 2010 Quadrennial Defense Review (QDR) and recent Defense Strategy for the 21st Century (DS21) may be more applicable to the SSN but often reinforces ideas from the NDS. The NDS specifies that the U.S. must secure strategic access and retain freedom of action in all domains that goods can be moved through including space. Emerging threats in space and cyberspace present particular vulnerabilities, challenges and risks.<sup>9</sup> In the QDR, there are 88 references to space and cyberspace. Here are some of the main ideas that sharpen the strategic narrative.

The central ideas include (1) assure access to space and the use of robust space assets, (2) assure access to cyberspace and improve cyberspace capabilities to counter threats, (3) understand, deter, and defeat future adversaries who will likely possess sophisticated capabilities designed to contest or deny command of the air, sea, space, and cyberspace domains, (4) monitor and protect critical DOD infrastructure, including in space and cyberspace, (5) develop the air-sea battle concept across all domains, and (6) increase SSA and protection of these valuable assets.<sup>10</sup>

The DS21 reinforces ideas entrenched in both the QDR and NMS; and the DS21 adds other themes to the SSN. This includes rebalancing military power to the Asia-Pacific realm, defending a rules based international order which allows for the peaceful rise of powers, continuing to lead in global efforts, strengthening the norms of responsible behavior, and assuring access to the global commons especially in anti-access/area denial domains (A2AD).<sup>11</sup>

The NMS describes the absolute necessity of space. Explicitly, the NMS states that space and cyberspace enable effective global war-fighting in the other domains, and have emerged as warfighting domains in their own right. The U.S. will support whole-of-nation approaches to establishing and promoting space norms, enhancing space situational awareness, and fostering greater transparency and information

sharing. They will work with allies and partners to enhance space capabilities enabling coalitions and improving space architecture resiliency. They will train for power projection operations in space-degraded environments that minimize the incentives to attack space capabilities, and will maintain a range of options to deter or punish such activities.<sup>12</sup> Embedded in the NMS are key, essential, and implied operational tasks for all Services and they are reverberated in the NSP, NSSS, and the ASSP.

The U.S. will continue to see increased risk and delays on replacement systems with their surveillance networks and continued deferral on key programs that aren't in a "must decide" state.<sup>13</sup> The NSP states that the sustainability, stability, and free access to space is vital and purposeful interference with space systems will be considered an infringement of a nation's rights. Key national objectives include expanding international cooperation where mutually beneficial; strengthening stability in space; and increasing the resilience of mission essential functions in space. DOD is specifically tasked to deter, defend, and if necessary defeat efforts to interfere with U.S. and allied space systems.<sup>14</sup>

The inaugural NSSS addressed much needed strategic space objectives which included a strengthening of safety, stability and security in space, maintaining and enhancing the advantages afforded to the U.S. by space, and energizing the space industrial base. There were five strategic approaches to achieve these objectives: (1) promote responsible, peaceful, and safe use of space; (2) provide improved U.S. space capabilities; (3) partner with responsible nations, international organizations, and commercial firms; (4) prevent and deter aggression against space infrastructure and; (5) prepare to defeat attacks and to operate in a degraded environment. The U.S. will have

to lead in building coalitions of like-minded space-faring nations, work with international institutions, and explore the development of combined space doctrine.<sup>15</sup>

### Other Service Narratives

It is essential to understand how the Army fits into developing, maintaining, and sustaining space power as a subset of military power. All Services provide operational space guidance and have distinct but overlapping missions and requirements in space. The Army is the greatest consumer of space capability, but it is not the largest provider. Space is just as crucial to the air and naval services as it is to the Army.

The Secretary of the Air Force serves as the DOD Executive Agent for Space (EA4S). The EA4S staff supports planning, program assessment, architecture development, and related activities to integrate DOD, civil, commercial, and Intelligence Community (IC) space capabilities. The EA4S staff also serves as the secretariat for the Defense Space Council and is the principal advisor to the Secretary and the Under Secretary of the Air Force on space issues including policy and strategy formulation, international engagement, industrial base support, and commercial partnerships.<sup>16</sup> The jointly manned EA4S staff can help to guarantee a Joint approach and equitable representation in the formulation of policy and strategy among stakeholders in the Joint Capabilities Integration Development System (JCIDS) and processes.

Air Force Space Command (AFSPACE) is perhaps the largest stakeholder and power broker in the space community. This headquarters is the AF Service component command to United States Strategic Command (USSTRATCOM). The AFSPACE Commander stated in his strategic plan that resources are constrained, acquisition remains a problem, and the defense industrial base has declined.<sup>17</sup> The talent pool in the space and defense industry is shrinking and its ability to provide and build space

capability is limited. Requirements on the industrial base have withered together with decreased dollars contributed to space acquisition, launch and on-orbit support. DOD expenditures in all space programs have been reduced and with it, so has the space expertise. The U.S. will have a difficult time restarting space industry when these capabilities are most needed. Two AFSPACE priorities are to modernize space inventories and to recapture and reengineer excellence and capability.<sup>18</sup> The AF narrative and perspective is that they are responsible for all things space above the horizon and are a key stakeholder in all space capability below the horizon. There are many areas that the AF and the Army overlap in space support, space control, and space force enhancement in support of Unified Action.

The Navy Space Strategy “accepts that joint and commercial space systems serve as critical elements within the Navy kill chain”<sup>19</sup> but mostly leaves life cycle management to the Air Force and DOD in general. One of the five major goals of the Navy strategy is to mitigate the impact of the risk adversaries pose to the critical space systems that the Navy depends upon.<sup>20</sup> The Navy has the goal of exploiting current and future space capability and placing minimal resources and efforts into developing greater capability. The Navy has withdrawn redundant resourcing in areas where other Services have led in the space domain, especially in operational and tactical areas.

The Army has the second largest budget and commitment to space after the AF. The operational budget for the AF was over \$11 billion in 2011, with the Army committing nearly \$1 billion, and the Navy which approximates \$100 million. The Army conducts a major part of coordination, programming, and space related guidance through its Army Space Council (ASC) comprised of senior Army general staff officers

from the Army staff and USASMDC/ARSTRAT. One of the four Army broad space objectives is to provide space and space control capabilities into the operating force that are seamless and responsive.<sup>21</sup> The Army relies on DOD and the Air Force to protect space systems and prevent interruptions to critical national security space capability provided Joint and land component force commanders.

### The Joint Space Perspective

USSTRATCOM is the functional combatant command (FCC) which has the worldwide responsibility for multiple strategic operations including space, missile defense operations such as the Integrated Tactical Warning/Attack Assessment (ITWAA) of space assets, advocating for space capabilities, and conducting Joint space operations. This responsibility is derived from the Unified Command Plan (UCP) signed by the President of the United States for all pillars of space, which are space force enhancement (support to the warfighter), space support (satellite launches and satellite control), space force application, and space control.<sup>22</sup> Space control includes offensive and defensive space control activities and SSA. USSTRATCOM conducts theater campaign and security cooperation planning for space activities and supports geographical combatant commanders (GCC) when and where directed.<sup>23</sup>

USSTRATCOM leads Joint force integration of space in all the warfighting functions and advocates for all Joint space capabilities and forces. USSTRATCOM and its Joint Functional Component Command for Space (JFCC Space) conduct the bulk of space protection, prevention, and SSA for the U.S. and its allies.<sup>24</sup> USSTRATCOM must demonstrate that the capability of preventing varying degrees of attacks, protecting assets, and negating attacks remains a priority. To protect its national interests, the U.S. will need to gain and maintain space superiority (SS). SSA is the key to obtaining SS.



Space is only one operational domain but understanding this element of the operational environment (OE) is becoming increasingly critical to U.S. national interests.

Known in DOD circles as the 3 'C's, space is increasingly congested, competitive, and contested. With over 22,000 track-able objects in space and thousands more not in surveillance, space is overcrowded. USSTRATCOM was tasked to conduct combined operations with key partners for 180 days. JFCC Space and its Joint Space Operations Center must determine what efficiencies could be had in critical space missions and areas worldwide, how to develop a tiered construct to share space data and services with other nations and commercial partners; and how to develop a plan for establishing combined operations with key partners. This experiment began in February 2012 and the results are yet to be determined. Nevertheless, this is a big step in the right direction in creating partnerships and efficiencies in space capabilities and space awareness.<sup>25</sup>

The U.S. military space budget approximates over \$22 billion in 2012 in all phases of space and includes the Service budgets and may include another \$10 billion for the National Reconnaissance Office, a key DOD space agency.<sup>26</sup> As budgets shrink, U.S. space capability will most likely decline and a higher workload will be placed on every space system. Nevertheless, the ability to monitor, detect, characterize, geo-locate, prevent, and protect these space assets will be even more critical in the life cycle management of these systems. This decrease in capability will require an increased vigilance to protect high value and low density national security capability.

Partnering with allies and other nations is paramount in delivering space superiority and securing U.S. national interests in or through space. Upgrading space

systems, working on future technologies, sharing technologies with partners, and developing a plan to integrate this network across partner capabilities is the only efficient use of this national treasure. Sharing SSA operational and intelligence through greater transparency with U.S. allies and partners will enhance shared and global security in the space domain.

Summarizing the SSN, there are a number of challenges to address in the SON to close Army space gaps while meeting national level interests and demands. The SSN captures resourcing, manning, occupying, and developing the space domain, creating efficiencies and partnership capacity, maintaining capabilities, and developing prevention and protection activities. All these efforts require 'boots on the ground' throughout ROMO to provide, employ, plan, and coordinate space based capability. Translating these elements into the SON will be the real effort.

The SSN discussion primarily culminates in the Defense Space Council (DSC), which is one of the DOD institutional space ways of discussing the space means. The SON in fact begins where the Army Space Council (ASC) takes on the Army part of the DSC agenda items and discusses the impacts of the strategic narrative on the rest of the Army.<sup>27</sup> The ASC will provide a forum for planning, coordinating, and resolving space related issues and activities. AR 900-1 designates the Commander, USASMDC/ARSTRAT as the proponent for Army space and space related capabilities; this position serves as the coordination point for Army space cadre, enabler proponents and career field life cycle management.<sup>28</sup>

#### Army Space Operational Narrative

The Undersecretary of the Army published an implementation directive on November 14th, 2011 directing tasks from the ASSP to be conducted by

USASMDC/ARSTRAT; Training and Doctrine Command (TRADOC) Combined Arms Center (CAC); TRADOC Army Capabilities Integration Center; and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.<sup>29</sup> Implementing these tasks is a huge step in developing the SON. The Commander, USASMDC/ARSTRAT, is a key member and should lead in exploring the SON. USASMDC/ARSTRAT will organize, train, and equip Army space forces as the Army service component command (ASCC) for USSTRATCOM and major subordinate command of HQDA, but this task comes with other proponent obligations. The ASSP envisions assured access and relevant space enabled capabilities to ensure Army operational and generating forces can operate across the ROMO.<sup>30</sup>

The SON is inclusive of people, equipment, and missions and calls for both realism and vision. Manning the force will have to be considered by the capabilities the Army is providing, provides, and should provide (vision), and by what equipment inventory, constraints, and capability gaps in the organization. This validates what space forces the Army needs during the next Total Army Analysis 2014-2018 deliberations on enablers. The SON should support the SSN but not significantly overlap in other Service capabilities and missions. The process and the endstate are debatable but the debate is required.

Advancing Army capabilities can be accomplished through predicting the outcomes (futuring) of decision making inside an organization. Futuring will identify worse case, most probable or alternative courses of actions in the environment with likely inputs by stakeholders. Understanding potential outcomes will arm an organization on how it may conform, act or mature to be ready for the outlook. This is accomplished

by detecting scientific, technical, economic, social, and political-military trends and events important to the institution, and defining the potential threats, opportunities, or changes for the institution implied by those trends and events.<sup>31</sup> Futuring identifies reasonable gaps which may be closed using quantitative and qualitative analyses.

The SON begins with a sound vision and philosophy with an acceptable end state. Army leadership must make tough decisions and predict outcomes; it must hold up moral and ethical values, all the while being a good steward of resources within the space community. It must be imaginative, predictive, lasting, and foster a learning environment and culture. USASMDC/ARSTRAT must actively shape its environment with inventive people as well as maintain its sharp technical and tactical edge. The command must create efficiencies to survive and remain effective to meet the needs of the Joint and Army communities, but more importantly, to meet the needs of the American people.

### Army Space Vision

The Army space vision should be concise while providing clarity to guide collective Army actions, investments, and present an end state that anticipates Army missions in an uncertain future. Elements of such a vision provide for unfettered global access to space; space enabled capabilities, forces and operations that optimize the effectiveness of Soldiers to accomplish ROMO in an era of persistent conflict, space enabled capabilities that enable joint, interagency, intergovernmental and multi-national (JIIM) partners to see with clarity; communicate with certainty; navigate with accuracy; operate with assurance; and mitigate vulnerabilities and the impacts posed by threats to space enabled capabilities.<sup>32</sup> Understanding the mission of the organization is the first step in developing a strategy and philosophy.<sup>33</sup>

The SON vision will inspire Army space forces to accomplish specific objectives and take steps toward a broader end state. This vision should be specific to the space cadre and forces and influence the development, acquisition, and CONOPS of future space systems to achieve responsive access and effects for future land forces. The objectives and goals of Army space and USASMDC/ARSTRAT should orient on the core missions to include space support and integration to support the ROMO. The vision and SON will address recruiting and developing versatile, adaptive and innovative space professionals; exploiting and delivering responsive, tailored and integrated space-enabled capabilities to Army units and individual soldiers; effectively synchronizing combat, materiel, and development efforts; advocating for required but affordable space capabilities and the Army's requirements to shape acquisitions; and in identifying and pursuing high payoff technologies and solutions, all within a restrained and more effective acquisition process.<sup>34</sup>

A recent USASMDC/ARSTRAT command vision foresaw a command that would “provide dominant space and missile defense capabilities for the Army and to plan for and integrate Army capabilities in support of USSTRATCOM and Combatant Commanders (CCDRS).”<sup>35</sup> Another vision spells out the following:

USASMDC/ARSTRAT – a diverse, complex, and global command that provides critical capabilities to our Army, USSTRATCOM, and CCDRS; in synch with JFCC Integrated Missile Defense, one command, split based, multi-component, diverse constituencies, dispersed locations; talented work force of Soldiers, Civilians, contractors; public servants; the Army’s specified proponent for space, high altitude, and global missile defense.<sup>36</sup>

The first vision is an ideal state of dominant space and missile defense. USASMDC/ARSTRAT does provide premier space and missile defense worldwide. This ‘premier’ service might be considered leading edge or even state of art. However,

dominancy is winning in every scenario throughout the entire space domain. This stated objective is not unheard of in U.S. policy and doctrine. The U.S. often predicts dominance in the air, sea, and on land warfare. However, space and cyberspace are domains where domination may be impossible, and may be a vision that the U.S. cannot afford. Providing superior and unparalleled near freedom of action in space may be more attainable.

The second vision describes USASMDC/ARSTRAT contributions and challenges of the command which has diverse and complicated mission sets expanding over the entire range of space activities. The command has achieved a high degree of success in space and missile defense, and would like the same opportunity in high altitude (HA) missions. The vision and narrative should describe future success in all three mission areas. The narrative should also provide a clear way ahead for FA 40 officers and the branch in general. Neither vision discusses the development of developing the FA 40 or the branch. A broader vision will be predictive of the space environment in 2018-2028 in accordance with the ASOWP.

#### Army Officer Proponent

FA 40 needs to maintain and sustain a strategic understanding for the ROMO. Army officer proponenty affects the FA 40 directly. The Army might consider developing a strategic operations officer (SOO). The FA 40 roles and expertise overlaps other functional areas while technical demands are often placed on the FA 40 by commanders. It is important to analyze missions and requirements in functional areas and combine strengths wherever possible. There will be a time when conventional warfare occurs in space and cyberspace domains. It will be negligent if the Army does

not develop expertise to help manage these future conflicts and help manage these outcomes.

A day without space is a discussion of what might happen if space capabilities are not available due to conflict in space or a degradation of space assets. Operating in the anti-access and area denial (A2AD) realm requires expertise that needs to be incorporated into the tool kit of the FA 40 or the SOO, but this capability must be built and maintained. The U.S. must train for this eventuality. The officer corps comprises of primarily three active competitive categories (ACC) or divisions primarily due to OPMS XXI (Officer Personnel Management System).<sup>37</sup> The ACC is made up of maneuver, fire, and effects (MFE), the operational support (OS), and the functional support division (FSD); it is further divided into many more specialties or functional areas.<sup>38</sup>

There are a few functional areas that could be joined to create a SOO. The logistics branch consists of multiple specialties but is managed as a branch. This strategic operations branch could be created and contain a few specialties that will train to the same baseline, and then develop in expertise. Periodically over the life cycle of these officers, they will work, train, and be educated together. Branches that might fit into this strategic category are FA 30 or information operations responsible for the integration of computer network operations, military deception, operations security, and other effects, FA 40 space officers, FA 29 electronic warfare, and possibly a new cyberspace officer. Cyberspace billets are currently filled primarily with military intelligence and signal branches.<sup>39</sup>

Specifically, SOO should be adept in strategic, special, and technical operations and will have competencies in space, EW, IO, and cyberspace capabilities and

missions. A SOO may be inclusive of special technical operational (STO) demands which are largely being placed on the FA 40 in the field today. To affirm, STO has been assigned to the FA 29 field but may be better suited for SOO. Commanders task organize to meet mission requirements and the FA 40 has the requisite security clearances to perform special and technical missions for each command. While this is a good observation of space officers, it is not enough to build or sustain growth.

#### Army Space Proponent (PDO)

The FA 40 PDO conducts talent management, evolves and sustains the branch mission area, and builds the framework to remain viable. The PDO works with the FA 40 Army Human Resource Command (HRC) team but is responsible for building requirements. There is an assignments process and a deliberate plan to take the best qualified officers available and match to available positions. To nest this with the SSN, the FA 40 should be more deeply integrated into strategic and operational assignments. This all begins with a vision and key objectives identified by the PDO.

The PDO should envision skill sets that are broad enough to allow for the maturation of the branch. The PDO vision is in providing trained and ready Army Space Cadre but the objective will also be to predict the needs of the Army and DOD as a whole and develop space officers for these challenges.<sup>40</sup> The goal for the FA 40 has been to normalize space for the rest of the Army. The FA 40 serves in all commands, including shaping and broadening assignments. Shaping occurs when space officers serve on Army or component staffs, other Service staffs or in JIIM positions which creates a greater impact on the emerging space environment. Army space officers may need to be assigned in more JIIM positions to understand and influence the global space spectrum. Broadening is what the officer receives in the process and supplies



JIIM (partners) from serving in these shaping assignments. Operational assignments often include space jobs at corps, division, brigade, battalion, and below organizations in direct support of all levels of joint and Army commands. The goal of normalizing space has mostly been accomplished.<sup>41</sup>

Primarily, the FA 40 PDO goal in DA Pamphlet 600-3 should match the goals of the ASSP.<sup>42</sup> The ASSP goals are (1) seamlessly integrate, deliver, and employ space-enabled equipment and capabilities in support of land warfighter needs, (2) inform and influence the design and development of space-based capabilities and services; and (3) drive national-level interoperability and ensure Joint warfighter interdependency.<sup>43</sup> Additionally, the space officer needs to be able to recognize emerging threats and project space and technically based outcomes, capabilities, and support in volatile, uncertain, complex and ambiguous (VUCA) environments throughout ROMO. Lastly, the NMS states that space Joint forces will “pursue resilient architectures, space situational awareness, provide options for self-defense and reconstitution, maintain symmetric and asymmetric capabilities to deter adversaries, and train for operations in space-degraded environments.”<sup>44</sup>

An article in the Army Space Journal (ASJ) was written by a team of space officers in theater at the drawdown of Operation New Dawn (OND). This article emphasized the need to develop the training and capabilities to successfully operate in a denied, degraded, and disrupted (3D) space environment.<sup>45</sup> The FA 40 must evolve into key action officers in the emerging space and cyberspace domains. The article further described keeping space forces in a status quo, incrementally increasing missions and personnel and or merging with other functional groups. Furthermore,

space has contributed significantly to finding, fixing and killing the enemy and in security and stability operations. This momentum in supporting operations must not be lost and deserves to be spiraled. The ASSP-I and ASOWP addresses some of these gaps.

### Senior Space Leadership

The latest Joint and Army publications speak to the importance of the knowledge and the ability to operate in space and cyberspace. Nonetheless there are no general officers commanding or operating from the two to four star levels who came from these branches. While the OPMS XXI design attempted to separate command from technical and functional fields, command has nominally been the ascension path to general officer rank. The development of senior level space and cyberspace expertise at the highest levels is a must for the Army. Both ARCYBERCOM and USASMDC/ARSTRAT commands are key positions filled by MFE officers and are two places where space and cyberspace general officers could be serving today. DS21 also reflects the deepening interest and respect for these fields as top ten primary missions of the U.S. Armed Forces.<sup>46</sup>

In the Army, 47 of the 62 (three and four star) billets are currently filled by MFE officers with the majority from infantry and armor (31). The FA, AD, and EN branches will round out the top five.<sup>47</sup> Half of the Army branches are not represented at the three-four star level. Of the nearly 135 two star billets, there are 40 IN and AR officers, and 75 major generals are in six of 34 branches. At the two star-level, until recently there were 10 branches not represented at all including space and cyberspace.<sup>48</sup>

As threats continue to emerge in space and cyberspace, it appears critical to include these functional and complex fields of experts in more senior positions. The Army space narrative is not written by senior space officers, but by Army officers

servicing in space or cyberspace senior positions. There will be a higher chance of moving the branch and SON forward when space officers are serving at higher levels of command and influence.

### Army Space Missions and Growth

Space has become more main stream in the last 10 years to the warfighter. USASMDC/ARSTRAT is responsible for providing world class space force enhancement, space support (satellite control), and space control. USASMDC/ARSTRAT must continue to advocate and present Army space special technical capabilities to the warfighter. USASMDC/ARSTRAT must meet the growing demands the field requires and remain flexible to respond to emerging missions. USASMDC/ARSTRAT must remain agile in building and providing teams when and where needed with high demand, low density assets, all the while reducing overhead in the organization and streamlining staffs, efforts, and resources under the DOD strategic framework and SSN.

USASMDC/ARSTRAT can assist in identifying and use specific venues to express and deliver a strategic communication message and SON. That plan can be managed in the ASC and recurring communications with key Army and Joint space community stakeholders. The vision of the Army space proponent and FA 40 branch should be nested with Army Leader Development Strategy and the Army's Capstone Concept. "There is a void in opportunities to hear from combined arms forces on what's working and understanding what their most urgent operational needs with this type of active engagement."<sup>49</sup>

The FA 40 career field may be at risk unless the space community and leaders can explain and develop its operational significance. As the Army draws down to

490,000, there will be decreases in Army enablers of 10,000 to 15,000. FA 40 growth has recently occurred in the Captain and Major ranks. Regardless the greatest impact on the SSN will be, in example, in the GCC, FCC and subordinate commands like CYBERCOM and Joint Information Operations Warfare Center (JIOWC), AFSPAC and Space and Missile Command (SMC), the EA4S, the National Reconnaissance Office (NRO), National Air and Space and Intelligence Center (NASIC), but specifically in the Joint and Army staffs where budget battles are fought every day. This reduction may require more lieutenant colonel and colonel positions to fill these JIIM opportunities effectively. Visions and strategies for space must be connected, feasible, and executable with fewer resources than available today.

The focus Army tactical space support forces needs to evolve as well. There is increased utility in collaborating with special operating and tactical forces; providing applications and products that can be delivered in the near term from existing space capabilities (e.g. OPIR for battle space awareness); developing regional alignments for space forces to more deeply understand and address the unique challenges for the different COCOMs; and working with collation partners to leverage their space capabilities to the maximum extent.<sup>50</sup>

### Conclusions and Recommendations

The SON is complicated, but should be consistent with and driven by the SSN. Army space must be predictive in shaping and understanding the needs of theater and combatant commanders. As the nation, DOD, and the Army invest less in overall space capability, there must be a corresponding increase in space surveillance, protection assets, and human capital. The U.S. must prioritize and implement complimentary U.S. space and allied capabilities to assure access to this annual multi-billion investment into the national security space network. The SON requires a magnanimous vision. Army space will have to continue to work on maturing leadership, missions, billets and

complimentary capabilities and capacity. At a minimum, SMDC/ARSRAT and the PDO could work to determine if SOO is a viable career field at this point.<sup>51</sup>

SOO officers can be trained separately but work together on staffs to achieve and provide enhanced and combined strategic effects to the commander. The savings in billets might be better used for senior positions in the Army and Joint force. Force structure pressures will be tremendous so Army space must find ways to work with other stakeholders for the Army. Combining technical fields and better alignment of positions may create a larger strategic officer pool from which to grow space and cyberspace general officers.

The SON has not been written but the narrative and associated forces and profession must mature and remain a viable and robust component of the total Joint warfighting capability which the U.S. deserves. The SON is obliged to include operational strategy, vision, objectives, goals, leadership, mentorship and a designed military Army space endstate. USASMDC/ARSTRAT has the preponderance of inputs to match expectations of the branch and Army space forces in concert with the rest of DOD space and provide for the strategic and operational way ahead to create energy in all key areas. The time for a holistic review of the entire space narrative is now.

## Endnotes

<sup>1</sup> Barack Obama, *National Security Strategy* (Washington, DC: The White House, May 2010), 1.

<sup>2</sup> Robert M. Gates, *National Defense Strategy* (Washington, DC: The Pentagon, June 2008), 1.

<sup>3</sup> M. G. Mullen, *National Military Strategy of the United States* (Washington, DC: The Pentagon, 8 February 2011), 1.

- <sup>4</sup> Barack Obama, *National Space Policy* (Washington, DC: The White House, May 2010), 1.
- <sup>5</sup> Robert M. Gates and James R. Clapper, *National Security Space Strategy* (Washington, DC: The Pentagon, January 2011), 1.
- <sup>6</sup> John M. McHugh and Martin E. Dempsey, *Army Strategic Space Plan* (Washington, DC: The Pentagon, 2011), 1.
- <sup>7</sup> Obama, *National Security Strategy*, 7.
- <sup>8</sup> Bob Woodward, *Obama's Wars* (New York: Simon & Schuster, 2010), 307.
- <sup>9</sup> Gates, *National Defense Strategy*, 1, 22-23.
- <sup>10</sup> Robert M. Gates, *Quadrennial Defense Review Report* (Washington, DC: The Pentagon, February 2010), 4, 10, 14-15, 22-31, 114-115.
- <sup>11</sup> Leon E. Panetta, *Sustaining U.S. Global Leadership: Priorities for 21<sup>st</sup> Century Defense* (Washington, DC: The Pentagon, January 5, 2012), 2-5, 8.
- <sup>12</sup> Mullen, *National Military Strategy*, 9-10.
- <sup>13</sup> Jeffrey A. Farnsworth, (COL, USA, OSD) email message to author, November 10, 2011.
- <sup>14</sup> Jeffrey A. Farnsworth, *Space Power: A Strategic Assessment and a Way Forward*, Strategy Research Project (Carlisle Barracks, PA: U.S. Army War College, March 29, 2007), 2.
- <sup>15</sup> Gates, *National Security Space Strategy*, 4-9.
- <sup>16</sup> *Under Secretary of the Air Force (Space Programs) Home Page*, <http://www.safsp.hq.af.mil/> (accessed 24 February 2012).
- <sup>17</sup> C. Robert Kehler, *2009-2010 Air Force Space Command Strategic Plan* (Colorado Springs, CO: USAF Space Command HQ, November 2009), 5.
- <sup>18</sup> *Ibid.*, 7.
- <sup>19</sup> P.M. Walsh, *Navy Space Strategy* (Washington, DC: The Pentagon, August 2008), 1.
- <sup>20</sup> *Ibid.*, 2-3.
- <sup>21</sup> U.S. Department of the Army, *Army Space Activities: DA Space Policy*, Army Regulation 900-1, (Washington, DC: U.S. Department of the Army, 23 January 2009), 6.
- <sup>22</sup> U.S. Joint Chiefs of Staff, *Space Operations*, Joint Publication 3-14, (Washington, DC: U.S. Joint Staff, January 6, 2009), II-5.
- <sup>23</sup> Barack Obama, *Unified Command Plan*, (Washington, D.C.: The White House, 6 April 2011), 27-28.

<sup>24</sup> Gregory Schulte, "The Final Frontier", *Foreign Policy*, February 9, 2011 [http://www.foreignpolicy.com/articles/2011/02/09/the\\_final\\_frontier](http://www.foreignpolicy.com/articles/2011/02/09/the_final_frontier) (accessed December 10, 2011).

<sup>25</sup> Robert M. Gates, *National Security Space Strategy DOD Near-Term Tasks* (Washington, DC: The Pentagon, 9 April 2011), 1.

<sup>26</sup> Molly Bernhart Walker, "NRO Budget Justification Sheds Light on its Projects," 8 June 2010, linked to *The Fierce Government Home Page*, <http://www.fiercegovernmentit.com/story/nro-budget-justification-sheds-light-it-projects/2011-06-08> (accessed 10 March 2012).

<sup>27</sup> U.S. Department of the Army, *DA Space Policy*, 5.

<sup>28</sup> Ibid.

<sup>29</sup> Joseph W. Westphal, *Army Strategic Space Plan Implementation Memorandum*, (Washington, DC: The Pentagon, 14 November 2011), 1.

<sup>30</sup> John M. McHugh and Martin E. Dempsey, *Army Strategic Space Plan* (Washington, DC: The Pentagon, 2011), 2.

<sup>31</sup> James L. Morrison, *Environmental Scanning*, <http://horizon.unc.edu/courses/papers/environscan/> (accessed October 12, 2011).

<sup>32</sup> Steve Ferrell (BG, USA, Retired), email message to author, 7 November 2010.

<sup>33</sup> In accordance with the *1<sup>st</sup> Space Brigade Basic Standards Pamphlet No 001-1* (2010), the mission of USASMDC/ARSTRAT is: conducts space and missile defense operations and provides planning, integration, control and coordination of Army [space] forces and capabilities in support of USSTRATCOM missions, and serves as the specified proponent for space, high altitude and ground-based midcourse defense. The command has other missions and responsibilities including research and technological development in accordance with Title 10 U.S.C.

<sup>34</sup> Steve Ferrell (BG, USA, Retired), email message to author, 7 November 2010.

<sup>35</sup> Kevin T. Campbell, *USAUSASMDC/ARSTRAT Vision, Guidance, and Objectives* (Huntsville, AL: SMDC HQ, 2 July 2009), 1.

<sup>36</sup> Richard Formica, *USASMDC/ARSTRAT Vision* (Huntsville, AL: SMDC HQ, Jan 2011).

<sup>37</sup> U.S. Department of the Army, *Commissioned Officer Professional Development and Career Management*, Army Pamphlet 600-3 (Washington, DC: U.S. Department of the Army, 1 February 2010), 3.

<sup>38</sup> MFE incorporates maneuver (infantry, armor, aviation), maneuver support (engineers, chemical, and military police), fires (air defense and field artillery), special forces (SF, civil affairs, military information support), and two other functional areas (information operations (IO)

and public affairs (PA)). FSD includes all logistics and acquisition fields. Finally, OS is constructed of all the remaining branches and functional areas, including the FA 40.

<sup>39</sup> U.S. Joint Chiefs of Staff, *Information Operations*, Joint Publication 3-13, (Washington, DC: U.S. Joint Staff, February 13, 2006), II-1.

<sup>40</sup> Michael Connolly (COL, Retired, Director Space PDO) email message to author, 7 February, 2011.

<sup>41</sup> U.S. Department of the Army, *Commissioned Officer Professional Development and Career Management*, 235.

<sup>42</sup> Michael Connolly (COL, Retired, Director Space PDO) email message to author, 7 February, 2011.

<sup>43</sup> McHugh, *Army Strategic Space Plan*, 7.

<sup>44</sup> Mullen, *National Military Strategy*, 21.

<sup>45</sup> Kurt Story (et al), "Operation New Dawn Ends, Army Tactical and Operational Forces meet Crossroads," *Army Space Journal* (Fall Edition 2011): 20.

<sup>46</sup> Panetta, *Sustaining U.S. Global Leadership*, 5.

<sup>47</sup> *General Officer Management Office Home Page*, secure Army website and CAC required, (accessed February 2, 2012).

<sup>48</sup> "General Officer Announcement," July 27, 2011, linked from *the General Officer Management Office Home Page* [secure Army website; CAC required] (accessed February 2, 2012). The first FA 30 (IO) was recently nominated for promotion to Major General.

<sup>49</sup> Steve Ferrell (BG, USA, Retired), email message to author, 7 November 2010.

<sup>50</sup> Ibid.

<sup>51</sup> This SOO team could be implemented in division, corps and theater/Army staffs that reflect this new strategy and investment in strategic officers. In example, at the theater Army level, a G3 division could be organized to provide and integrate space, cyberspace, electronic warfare, other IO, special technical, ACCM, and special access program capability to the commander. As USASMDC/ARSTRAT continues to pursue the high altitude (HA) mission area, there might be advantages to working with the cyberspace and EW teams.