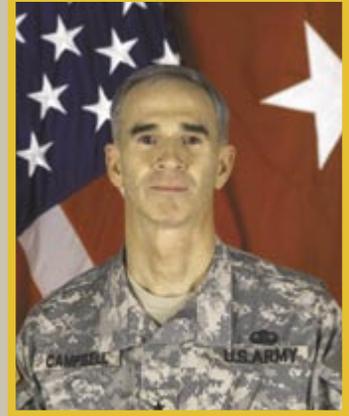


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New Capabilities On the Horizon

Welcome to the spring edition of the Army Space Journal. I believe you will find the array of articles that deal with the topic of “Hot New Space Concepts” very informative.

This issue, the authors provide interesting perspectives on what is new on the topic of Army Space, such as the article about “SPOC” (SPace Operations Common operational picture) by MAJ William Moncrief, an FA40 who is the 8th Army deputy Space support officer. BG Kurt Story, deputy commanding general for operations, discusses processes that bring “Hot New Space Concepts” to the front such as the Joint Concept Test Demonstration process. There are more articles that touch on other aspects of Army Space. I encourage you to read and share a copy of, The Army Space Journal.

Two topics that I would like to briefly address are new capabilities – SMDC-ONE and WGS. One has gone from an idea to a reality within 12 months, and the other is increasing our communications capability tenfold.

SMDC-ONE (Orbital Nano-satellite Effects)

In April, USASMD/ARSTRAT will take delivery of eight Nano-satellites for a technology demonstration. It has been almost 50 years since the Army last developed a communications satellite – Courier 1B was launched into Space, Oct. 4, 1960.

The Army has again developed communications satellites, albeit much smaller. We believe these low-cost Nano-satellites can satisfy Warfighter needs for Beyond Line-of-Sight (BLOS) communica-

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“ I encourage you to provide comments about the articles to the editor and to submit your own articles about Space topics that may be of interest to the community. This is your magazine – use it. ”

itions as well as other requirements. Given the Army’s dependence upon Space-based assets to carry out its missions, it is critical that we take steps to assure the Army’s access to Space-based communications, data and sensors.

USASMDC/ARSTRAT and our industry partners have been hard at work for the past 12 months developing and building the Nano-satellite Space vehicles.

Wideband Global SATCOM

We are taking a giant step forward in reducing one capability gap – communications – as the Wideband Global SATCOM (WGS) constellation of satellites come on line. WGS provides a tremendous new capability to Warfighters.

The Army Space Master Plan states that, “the largest gap in Space capabilities, and the greatest potential risk to ground operations, is limited high-throughput, protected military satellite communications.” Our reliance on SATCOM has increased significantly since Operation Desert Storm. To put things into perspective: during Operation Desert Storm, deployed forces used about 47 megabits per second; Operation Iraqi Freedom and Operation Enduring Freedom use about 5.5 gigabits per second – more than 50 times greater. What’s driving the change? Some of the demand is being driven by applications familiar to the young Soldier such as e-mail, chat, and video teleconferencing albeit in a military setting. Demand is also driven by collecting Intelligence, Surveillance, Reconnaissance information with an increasing number of systems and sources. The use of full-motion or video imagery, and

the exchange of complex graphics to facilitate common understanding of the battlespace also increases demand.

Employment of collaborative planning tools between dispersed headquarters and the increasing use of joint force tracking devices which facilitate the coordination of maneuver and the reduction of fratricide come with a high communications tax.

The second WGS satellite was launched in April and marks the beginning of a new era in SATCOM support for the Warfighter. The WGS system provides a 10-fold increase in satellite capacity to the Warfighter. Just one WGS satellite is comparable to the entire Defense Satellite Communication System (DSCS) constellation; preliminary tests have demonstrated extraordinarily high data rates. To put the data rates into context: You could download approximately 4,000 novels in one second – astronomical capacity.

SMDC-ONE and WGS are two new capabilities that I believe will provide Warfighters an advantage on the battlefield.

Lastly, the Army Space Journal is your publication. The Soldiers and Civilians of USASMDC/ARSTRAT continue to work hard to provide the Army dominant Space and Missile Defense capabilities, but we need your input as well. Let us know what works or doesn’t work in the realm of Space-based technology. I encourage you to provide comments about the articles to the editor and to submit your own articles about Space topics that may be of interest to the community. This is your magazine – use it.

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