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Deputy to the Commander

Research, Development and Acquisition

Bringing Technology to Our Profession of Arms

Last fall, the Chief of Staff of the Army published a white paper titled "The Profession of Arms" and called for an Army-wide evaluation of what it means to be a part of the profession, and the values and traits we must exhibit as members of the Profession of Arms. As Army leaders expand their examination of the profession, they are also looking at how Department of the Army Civilians fit into that equation. What do our Civilians bring to the fight, and in what context are they considered "professionals" or members of the Profession of Arms?

Because of the large Civilian workforce we have at USASMDC/ARSTRAT, the command is taking a leadership role in the Army review of the Civilian element of the profession. The Future Warfare Center has the lead for the command and has already designed a process to further examine the Civilian element. We look forward to participating over the coming months in that process and helping the Army frame our Civilian contribution to the profession.

Every day at USASMDC/ARSTRAT, our Civilians provide subject-matter expertise across all three elements of the command – operations, capability development, and materiel development. They provide corporate knowledge in support of our three core tasks: providing trained and ready Space and Missile Defense forces and capabilities; building future Space and Missile Defense forces; and researching, testing, and integrating Space, Missile Defense, directed energy, and related technologies. As you read the rest of this journal, you'll see different articles focusing on those three core tasks. I'd like to briefly mention some of the activities we're doing in support of our third core task: researching, testing, and integrating Space, Missile Defense, directed energy, and related technologies.

Since the last Army Space Journal was published, we've had a number of key technology developments that support our Army and Joint Warfighter to proactively connect our technology development to the combatant commands and the Army Warfighter community. Some promising technologies are being developed out of our Technology Center, supported by experts across the command. As these technologies mature and are field-integrated and tested, we will see the true value of their potential support to the ground Warfighter.

Space and Missile Defense Command–Operational Nanosatellite Effect (SMDC-ONE). To achieve enhanced Space-based capabilities for the Warfighter, SMDC's Technology Center is developing nanosatellite technology. The Space and Missile Defense Command – Operational Nanosatellite Effect is an initiative to meet Army and combatant command Space-related operational needs via the use of nanosatellites. In December 2010, NASA launched the first of the Army's eight nine-pound satellites and demonstrated the technology feasibility of these small satellites for military use. The event marked the first launch of an Army-designed and manufactured satellite in more than 50 years.

The primary objective of the SMDC-ONE demonstration was to receive data from a ground transmitter and relay that data to a ground station. The 35 day test was very successful and offers evidence that the means may be available to provide the Army – the largest user of Space data – with the ability to augment communications to Soldiers and Joint Warfighters in remote locations. Additionally, the operations for these nanosatellites includes minimal infrastructure to maintain the communications capability. The SMDC-ONE project team currently is working toward a Joint Capability Technology Demonstration (JCTD) that will integrate the SMDC-ONE satellites into an operational environment, with the potential for residual operations. If the JCTD is approved, the team will focus on the demonstration for fiscal years 2012-13.

Kestrel Eye. Kestrel Eye is a DoD endeavor to manufacture a small imaging satellite to provide near real-time, medium-resolution imagery to the tactical Warfighter. Since its manufacturing costs will be relatively inexpensive, Kestrel Eye may have the ability to be robustly deployed into orbit, and provide imagery to tactical forces at a high rate of frequency. The satellite is designed for operational theater command capabilities, providing dedicated Space-based support to the tactical commander. Kestrel Eye is scheduled for initial launch in 2012.

Vertical/Horizontal Integration of Space Technologies and Applications. We are progressing successfully in a technology demonstration to integrate Space-based data into ground forces at the tactical level. The Vertical/Horizontal Integration of Space Technologies and Applications (VISTA) provides the capability to distribute relevant Space-developed products and services to all levels of Army battle command – from corps and theater needs to the specific needs of individual Warfighters. The capability to identify what specific pieces of Space-based information are relevant to individual Warfighters is a key component of VISTA's support capability.

Providing Space capabilities to the Warfighter is essential, but equally important is developing new technologies that can provide combatant commands with options for offensive operations, should deterrence fail. USASMDC/ARSTRAT is supporting U.S. Strategic Command (USSTRATCOM) in a risk reduction effort for a conventional prompt global strike capability.

Advanced Hypersonic Weapon. The objective of the Advanced Hypersonic Weapon (AHW) is to provide a transformational capability on the order of 6,000-kilometer range with 35 minutes time-of-flight and ten-meter accuracy or better. USASMDC/ARSTRAT is working on the Advanced Hypersonic Weapon-Technology Demonstration with the U.S. Air Force Space and Missile Center. The two services are deliberating how certain AHW technologies might fit into the Air Force's Prompt Global Strike program, which aims to field a next-generation weapon capable of striking fleeting targets around the globe faster than today's munitions. This effort is in support of USSTRATCOM's operational needs.

The Department of Defense Quadrennial Defense Review Report of 2006 highlights the need for "prompt and high-volume global strike" capability to deter aggression and provide a broader range of conventional options to the President, if deterrence fails. In March 2006, the commander of U.S. Strategic Command testified before the Subcommittee on Strategic Forces of the Senate Committee on Armed Services that in situations where U.S. general-purpose forces are not in a position to respond rapidly to dangerous threats to the United States, the President may require USSTRATCOM to interdict such fleeting targets at global range. The Department of Defense is conducting an analysis of alternatives for prompt global strike capabilities in the near, mid, and long term. USASMDC/ARSTRAT is supporting USSTRATCOM in its Analysis of Alternatives for a Prompt Global Strike conventional weapon delivery vehicle, by cooperatively developing an alternative prompt delivery vehicle called the Advanced Hypersonic Weapon. This technology development effort serves as a viable strategy to broaden research and development and reduce risk to the Prompt Global Strike program. AHW's next milestone is the first flight test, scheduled for fourth quarter 2011.

These technology initiatives can't succeed without a combined team of professionals across the command and across the Department of Defense. Our Civilian professionals work hand in hand with our active and reserve components and contractor teams to deliver and field new capabilities to our Army and Joint Warfighters. Some of those Civilians do a lot of work in the background, often receiving little visibility for our successful technology initiatives – that group is our amazing support team of contracting and acquisition specialists and budget and program analysts. They assist our technical and test managers, engineers and scientists in executing the numerous technology programs under way at USASMDC/ARSTRAT.

Lastly, I want to take this opportunity to recognize some of our Civilian professionals. LTG Richard P. Formica recently nominated the Long Endurance Multi-Intelligence Vehicle (LEMV) Source Selection Team for one of the 2011 Army Acquisition Excellence Awards. Their commitment to excellence resulted in a rapid acquisition for the LEMV project. As our commanding general's nomination memo stated, it was "particularly exceptional in that it required coordination, collaboration, and direct participation from a broad range of agencies furnishing collective expertise." We wish them the best of luck in the Army's competition later this year. Hooah!

The Sun Never Sets on USASMDC/ ARSTRAT