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SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES

STATEMENT OF
DR. DALE G. UHLER
ACQUISITION EXECUTIVE
UNITED STATES SPECIAL OPERATIONS COMMAND
BEFORE THE
SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES
ON
SCIENCE AND TECHNOLOGY STRATEGY
FOR
SPECIAL OPERATIONS

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Mr. Chairman and distinguished members of this subcommittee, I am Dale Uhler, Acquisition Executive for the United States Special Operations Command (USSOCOM). Thank you for the honor and privilege of providing you with a perspective on USSOCOM's Science and Technology (S&T) strategy.

INTRODUCTION

A real strength of USSOCOM is the Commander's acquisition authority, which is similar to that of the Military Departments (MILDEPs). Among the responsibilities assigned to the Commander, USSOCOM, under Title 10, Section 167, is that of developing and acquiring "special operations-peculiar" equipment. SO-peculiar equipment is based on technologies that enable our operators to become faster, stealthier, more precise, lethal, survivable, and sustainable. With exceptional support from Congress, the Secretary of Defense, MILDEPs, Defense Agencies, Other Government Agencies (OGAs), and our industry partners, these authorities have been instrumental in equipping today's world-class Special Operations Forces (SOF) team to perform a broad range of SOF missions.

We enhance those authorities through aggressive application of acquisition policy and guidance, organizational flexibility, and streamlined procedures that facilitate rapid response to

the needs of our Warfighters. USSOCOM is accustomed to and comfortable with change and has a tradition of “out of the box” transformational thinking.

A guiding principal of our acquisition policy has been to embrace and respond to change. Our system has been built to recognize not only the critical need to respond quickly, but also to adequately sustain the combat forces that protect us and our interests throughout the world. Our dialogue with and planned leveraging of other DoD developers’ efforts to integrate SOF requirements into new equipment, coupled with our willingness to take calculated fielding risks when necessary to improve our capabilities on the battlefield will continue to play a major role in our success. USSOCOM’s aim in pursuing technological transformation is to guarantee our forces remain relevant in any fight, and ensure we minimize risk to our Nation’s vital interests while providing reliable support to the overall Defense Strategy.

GLOBAL WAR ON TERRORISM /THE IMPACT OF TECHNOLOGY

As we develop the tools to conduct our expanded mission in the fight against terrorism, USSOCOM has transformed from the traditional train, organize, and equip mission to a capability to plan and execute the global war on terrorism (GWOT). Our near term objective is to continue to realign our requirements and programs to better address the war on terrorism mission. As such, we will be eliminating those legacy systems that do not support the GWOT and using the saved resources to invest in future capabilities. Our programs must be transformational, not merely a re-invention of what we are doing today, and USSOCOM must continue to invest in making our SOF more capable in all tactical environments. To this end, our Research and Development (R&D) activities are being refocused to exploit technologies in the following areas:

Individual As A Platform

The individual is the indispensable element of our force. We need to develop enhanced protection, armor, lightweight sustainment systems, night vision devices and better weaponry. The SOF Warrior must be able to manage his signature in all environments, and see the enemy regardless of concealment. We need to do this without increasing weight and complexity.

Power

Power sources have been, and continue to be, both a major problem and a critical need for SOF. One-third of the weight carried into combat is from batteries. SOF urgently needs power sources that are small, lightweight, and inexpensive while providing high power, long endurance, interchangeability, and multiple recharging features. These batteries/fuel cells must give off little or no signature and offer the SOF user an extended operating capability (months) without suffering degradation or requiring re-supply.

Sensors

We are pursuing a family of unmanned, semi-autonomous and/or autonomous systems (air, sea, land, and, in the future, space) ranging in size from tactical to micro and nano, which will use persistent intelligence and denied area access technologies to meet the needs of SOF operators. These systems must be simple to operate, possess a small manning and logistical footprint, and withstand the rigors of various climates and operating environments.

USSOCOM ACQUISITION

The nature of the GWOT forces a technology developer to move quickly to understand the operator's needs and to satisfy them with state of the art technology. To facilitate this process, our professional staff maintains constant liaison with our component commands and visits deployed forces to ensure that we understand the need in the context of the mission. Often,

prototype equipment is made available for user evaluation before designs are finalized. The use of concept-based experimentation and demonstrations to ensure that the product we are providing is, in fact, the best solution to an identified deficiency is an integral part of our approach to S&T development. This includes early hands-on prototype assessments conducted by uniformed SOF operators. These assessments typically provide invaluable feedback concerning factors such as weight, ergonomic design considerations, military utility, and the ease with which the system can be employed, learned, and sustained. Such feedback saves considerable expenditure of scarce resources by identifying problem areas at the prototype stage rather than during production. To accomplish this, the Command has a Special Operations R&D Support Element (SORSE) to assist in the development of new equipment. SORSE includes operators who are fully qualified in a wide variety of combat skills. As noted above, it is their early and expert involvement that allows us to streamline development and to produce fieldable equipment in minimum time.

We are often told that SOF items of personal equipment (helmets, boots, etc.) are in high demand by the other Services. In fact, we use service equipment to the maximum extent possible. When mission requirements dictate special gear, we first seek to modify the standard item and, if that is not possible, we turn to commercial vendors to meet the requirement. In all cases, we work closely with the MILDEPs to ensure that whatever we field is sustainable.

Special operations elements are deployed throughout the world as our first line of defense against the GWOT. Much of the legacy equipment we use to ensure a redundant mission capability is wearing out and we are now faced with the choice of modernizing or simply sustaining the current capability. To help us with the decision process, we are continually

seeking transformational options, those new equipment or equipment concepts that will truly enhance our capabilities and allow us to address new missions and execute existing tasks better.

USSOCOM is a highly professional organization in which training is a way of life. Maintaining the capabilities of deployed forces provides unique challenges, so we pursue technology to assist us with training sustainment. Recent advances in ruggedized language systems and computer-based training are being effectively used by our deployed forces, but more needs to be done in this area.

The core capabilities of SOF typically require leading-edge technologies to meet the requirements for rapid deployment, precise and decisive employment, and sustainment while operating far forward of conventional support structures.

The focus for USSOCOM's S&T investment strategy, therefore, is how to effectively apply and invest available resources to achieve those SOF-peculiar capabilities. Much of the basic and advanced research efforts behind our S&T program requirements are similar to those of the MILDEPs or OGAs. Therefore, cooperation and coordination with on-going MILDEP, Defense Agency, and OGA technology development programs plays an important role in USSOCOM's technology development strategy. We aggressively interact and coordinate with other S&T organizations. This includes participation in reviews, cooperative developments, collocated liaison personnel, Service advisors, and information sharing. We are putting in place new Memoranda of Agreement (MOAs) with the MILDEPs to further enable a mutual focus on key cooperative efforts and transitions. We are proud of the progress we have been able to make delivering advanced technology into the hands of the SOF operator, but we can and will do better. We could not have been, and will not be, successful without the continued support of the larger Research and Development (R&D) community.

As the opportunity presents itself, we suggest modifications to those R&D community projects of interest to encourage them to move in a direction that could also satisfy a SOF need. R&D efforts that are kept in-house are those that contribute most directly and specifically to SOF core tasks and that are least likely to be realized or supported by the MILDEPs, Defense Agencies, or OGAs. We highly value the close partnerships we currently enjoy with the MILDEP laboratories, Defense Advanced Research Project Agency (DARPA), Defense Agencies and other national laboratories, as well as academia and industry.

USSOCOM also strives to ensure that our materiel capability solutions are based on requirements identified by our SOF Warfighters in the field. Concurrent with the development and fielding of new equipment will be the development of changes in SOF doctrine based on that equipment, the development of training programs to ensure that our operators know how to use and maintain their equipment, and the initiation of sustainment programs to keep their equipment operational.

EXAMPLES/SUCSESSES

The USSOCOM Acquisition and Logistics Center (SOAL) exhibited exceptional adaptability in response to the demands of sustaining forces during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The Center has been responding to combat mission needs and urgent deployment acquisition requests from deployed and deploying units. Our efforts have resulted in the rapid fielding of numerous equipment items and systems to satisfy the requirements of SOF elements. The support of OSD and Congress, who provided supplemental resources, was the key to our ability to rapidly field those requirements without having to break other programs that are also important to USSOCOM mission accomplishment.

The Military Operations in Urban Terrain (MOUT) ACTD, a joint US Army/USMC/ USSOCOM program, identified the Pointer UAV system to satisfy a multi-Service requirement. Operator evaluations fed into an R&D cycle, and the developer made significant improvements to the Pointer system. The Pointer system continued to grow through the MOUT ACTD and a number of upgrades were made to the system to meet SOF requirements. A Combat Mission Needs Statement (CMNS) was received in December 2001 and initial deliveries began in March 2002. A second CMNS delivered 20 more systems into the hands of SOF operators in October 2002. The ACTD program office formed a cadre to train SOF operators in the tactical employment of the system concurrent with operational testing. The training cadre deployed to Afghanistan in November 2002 to conduct additional training, perform intermediate level repairs, and implement a software upgrade to the system. SOF user feedback on the Pointer system was used to refine later iterations of the Pointer system and assist the contractor in developing its successor, the Raven UAV. The Raven UAV leveraged all of the lessons learned through developing and fielding Pointer and packaged it in a system less than half the size of Pointer. The first Raven was delivered in May of 2003. In December 2003, a third CMNS was issued by USSOCOM, this time for the procurement of Raven systems. These systems are successful because of the constant user feedback that fed our R&D process over the last three years. The success of these systems also illustrates the inherent utility of the spiral development and evolutionary acquisition processes available for our use.

People are SOF's greatest asset. Rapidly applying medical technology to save lives is a top priority. An excellent example is our One-Handed Tourniquet. This tourniquet provides SOF with a vastly improved capability to self-provide immediate trauma care for combat-induced wounds. The requirement for such a device was forwarded by SOF operators to

USSOCOM's Biomedical Initiative Steering Committee (BISC) which supports the Special Operations Medical Technology (MEDTECH) program. The BISC focused on accelerating fielding of the tourniquet. USSOCOM, through the BISC, worked closely with the U.S. Army Institute for Surgical Research (ISR) and SOF operators, to develop and evaluate multiple prototypes. We were able to field prototype tourniquets to deployed SOF operators in 2002.

TECHNOLOGY TRANSITION PROCESS

We have learned from both the experiences of the MILDEPs and our own early experiences that transitioning new technologies into fieldable equipment is a difficult challenge that, if not solved, denies needed capabilities to our SOF users. Within our structure, we are addressing this challenge by transforming our technology transition process to function like “an interstate instead of a traffic jam.” In USSOCOM, as throughout DoD, technology development is an integral part of the acquisition process. Our Advanced Technology Directorate is collocated with our PEOs and other acquisition professionals. This collocation enables continuous collaboration, as well as the early agreements and necessary planning for successful technology transition. This process, coupled with our close cooperation with the user, enables us to adequately plan for the resources required to support the new capability.

As we look to the future, we will continue to rely heavily on the MILDEPs, Defense Agencies, OGAs, academia, and industry partners to leverage their intellectual and development capabilities. We will use technology roadmaps built upon USSOCOM's Technology Thrust Areas (TTAs) drawn from Special Operations Technology Objectives (SOTOs) reflecting the Commander's refocus on the GWOT to guide our research, development, test and evaluation (RDT&E) efforts. In addition, we will continue the judicious use of ACTDs to focus on system of systems approaches to reduce sensor to shooter lag time. We will strengthen our collaboration

with the MILDEPs through efforts such as the Army's Future Force Warrior (FFW) program to develop and demonstrate revolutionary capabilities for the individual soldier and small team using a holistic and synergistic approach.; Navy projects to improve Intelligence, Surveillance and Reconnaissance (ISR) in denied littoral areas; and Air Force programs such as the Air Force Research Laboratory's Battlefield Air Operations kit to develop technologies to better locate, identify, designate, and transmit target information.

CONCLUSION

In closing, science and technology programs are crucial to Secretary of Defense Rumsfeld's goal to provide transformational capabilities to the DoD. I believe the successes the Department of Defense has enjoyed in science and technology are significant.

Now, and in the future, USSOCOM will continue to pursue technologies that improve its ability to execute the GWOT, while remaining ready to deal equally with the demands of both our warfighting and peacetime roles, missions, and responsibilities.

It has truly been an honor for me to come before you today to tell you about our successes and the future science and technology focus at USSOCOM in support of the "Quiet Professionals". Most of all, thank you for your continuing support of our SOF Warfighters.