

common elements are often magnified and exaggerated. How adeptly and effectively we address the requirements of MOUT today will determine if we achieve operational or military superiority in the future.

MOUT ACTD

An excellent near-term solution for improving operational capabilities of soldiers and Marines in urban environments is the MOUT Advanced Concept Technology Demonstration (ACTD). The MOUT ACTD has embraced a unique approach for achieving its objectives of evaluating advanced technologies to provide technological dominance in MOUT; providing interim capabilities and associated tactics, techniques, and procedures to operational units; and setting the stage for rapid acquisition of selected technologies. This approach employs a technology assessment process (TAP) to filter existing commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) technologies that address a suite of 32 MOUT requirements established by the users (soldiers and Marines).

Ultimately, a final suite of technologies will be integrated into a viable "system of systems" and shown in a culminating demonstration (CD). The down-selection process for the components of the system has involved a series of six Army and four Marine Corps squad and platoon-level tactical experiments that looked at the most promising technologies initially selected from the TAP for specific MOUT ACTD requirements.

These individual experiments, conducted by the Army Dismounted Battlespace Battle Lab at Fort Benning, GA, and by the Marine Corps Warfighting Lab at Camp Lejeune, NC, will be followed by two joint company-level Army and Marine Corps experiments that concentrate on the full suite of systems derived from the individual experiments.

The CD will then operationally display the military use of the final integrated MOUT system of systems at the Joint Readiness Training Center, Fort Polk, LA. Units from the Army's 10th Mountain Division and the Marine Corps' 2nd Marine Division will serve as the experimental force. These participating units will retain the MOUT equipment as residuals once the CD is completed. Simultaneously, efforts will

Looking Out For The Future . . .

THE MOUT ACTD ADVANCED CONCEPT EXCURSION

Dr. Kenneth R. Parham

Introduction

As we watch military events in the world unfold and see societies unraveling, the thought that weighs heavily on our hearts and minds is that the people of the world are, for the most part, just like us. While their clothing, in some cases, signals long-standing ethnic identities, it looks essentially like ours. Their familial structures and other social institutions reveal the same common concerns as the people next door or those in the next town. And as we view their infrastructures, their buildings, roads, and homes, particularly those that are ravaged, bombed out, and bullet-ridden, we silently shudder because we know that we share a common lifestyle with the displaced and dispossessed. All of this is a little too frighteningly close to home.

These common images are poignant because the battlefield is not some largely

uninhabited or geographically marginal locale in the world. Instead, battles are being fought along avenues and in suburban backyards and parks. As we enter the new millennium, we must realize that this may be the predominant way of warfare in the near future.

The U.S. military is currently renewing its focus on Military Operations in Urban Terrain (MOUT). Doctrinal thrusts such as Joint Vision 2010, Army XXI, the Army After Next, Next Marine Corps, and the Marine Corps After Next emphasize that we will swiftly, precisely, and decisively preserve or re-establish peace, while retaining the infrastructure as much as possible and minimizing combatant and non-combatant casualties. This is no simple task because the challenges of warfare in urban settings are, in many cases, inherently different than those of traditional, open warfare, and any

be made to transition the most promising MOU technologies to all warfighters as quickly as possible.

The MOU ACTD is a joint Army and Marine Corps program with the Army Training and Doctrine Command as the program lead and the Commander-in-Chief of the U.S. Special Operations Command (USSOCOM) as the program sponsor. The program has three co-managers: the Operational Co-managers of both the Dismounted Battlespace Battle Lab and the Marine Corps Warfighting Lab, as well as the Natick Soldier Center Technology Program Manager at the Soldier Biological and Chemical Command.

Advanced Concept Excursion

While the MOU ACTD is an excellent solution to address the near-term, urgent requirements of MOU warfare, much more needs to be done to achieve military superiority on future urban battlefields. Recognizing this need, the Deputy Assistant Secretary of the Army for Research and Technology

directed the MOU ACTD co-managers to consider an event that would demonstrate emerging technologies not mature enough for MOU ACTD mainstream experimentation or the residual package. This event would form the basis of a science and technology (S&T) investment strategy for supporting future Army and Marine Corps operations in MOU. Thus, the Advanced Concept Excursion (ACE) was born and, as part of the MOU ACTD, it provides an excellent mechanism for augmenting the COTS and GOTS more mature technology focus of the program.

An ACE coordinator (see author's biography for contact information) was appointed during the summer of 1998. In October 1998, a planning workshop for the ACE was conducted to develop technology selection criteria and to outline a plan that optimizes time and resource requirements to ensure a successful demonstration. ACE demonstrations are scheduled for Nov. 1-12, 1999, at the McKenna MOU site at Fort Benning, GA. Hopefully, these demon-

strations will influence the FY02 Program Operating Memorandum (POM) that delineates funding guidelines for developmental programs.

ACE Features

The ACE includes a number of unique features intended to draw as many promising technologies as possible to the event so a solid foundation for the future MOU S&T investment strategy can be established. As indicated previously, the ACE is *not* a new technology search for MOU COTS and GOTS; rather, the ACE seeks technologies that demonstrate a significant increase to an existing capability or that are revolutionary. From a developmental perspective, ACE is seeking technologies that can transition from S&T in the 2000-2005 timeframe and be fielded in the 2005-2015 timeframe (Figure 1).

Unlike the MOU ACTD itself, which is structured in accordance with the 32 established requirements, ACE technologies may address the full spectrum of brigade and below

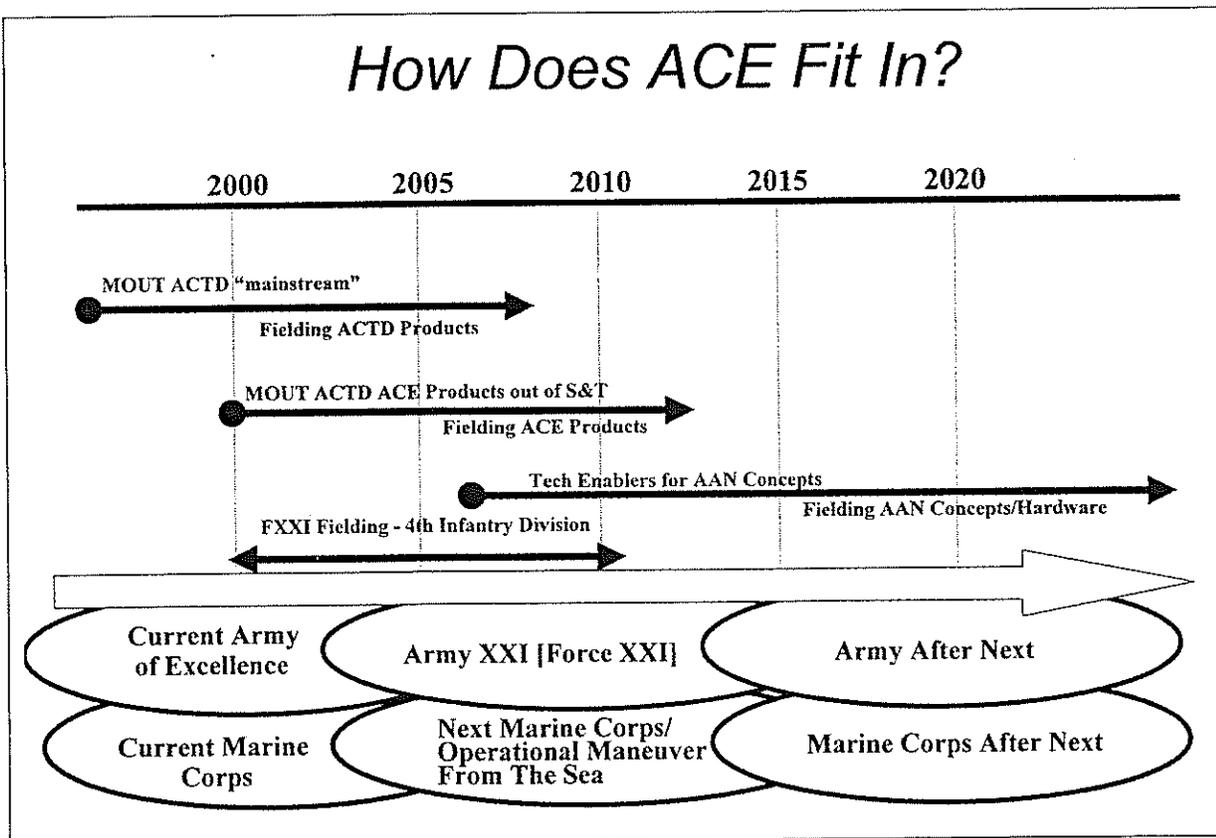


Figure 1.

operations within a MOUT environment. Additionally, consideration of technologies for ACE is open and need not be constrained by current doctrine because ACE is looking to the future.

A driving force behind the ACE, and its primary audience, is the "user jury," which evaluates the potential future military utility of each of the technologies demonstrated. This user jury consists of a military panel of both field-grade officers and senior enlistees, approximately 12 total, who have significant experience with MOUT. Participants for the user jury are sought from units in the XVIII Airborne Corps, the 2nd Marine Expeditionary Force, USSOCOM, and other key Army and Marine Corps organizations.

In addition to the user jury, many other organizations from the DOD materiel and combat development communities, as well as the S&T community, are invited to observe the demonstrations. Their participation promotes cooperative working relations with the technology developers so the most promising technologies can be considered for follow-on funding in government programs (e.g., Science and Technology Objectives, Advanced Technology Demonstrations, the Small Business Innovative Research Program, the Advanced Concept Technology II Program, and others).

Government and industry engineers who developed the MOUT-applicable technology will demonstrate their technology for the user jury (and observers) during a portion of one of the days of the 2-week ACE. The user jury will rate the potential future military use of each technology using criteria that will be developed for this event. These data will be reduced and analyzed and will form the basis of the inputs to the FY02-07 POM.

Participation In The ACE

The solicitation for ACE technology candidates has been published in the *Commerce Business Daily* on several occasions (closing date for submission is Sept. 1, 1999). In addition, the ACE Coordinator has provided briefings on the topic at a number of government and industry venues. To further promote this event, brochures on ACE have been disseminated among the government and industry development communities during the past several months. These promotions direct interested participants to the MOUT ACTD website (<http://mout.actd.org>),

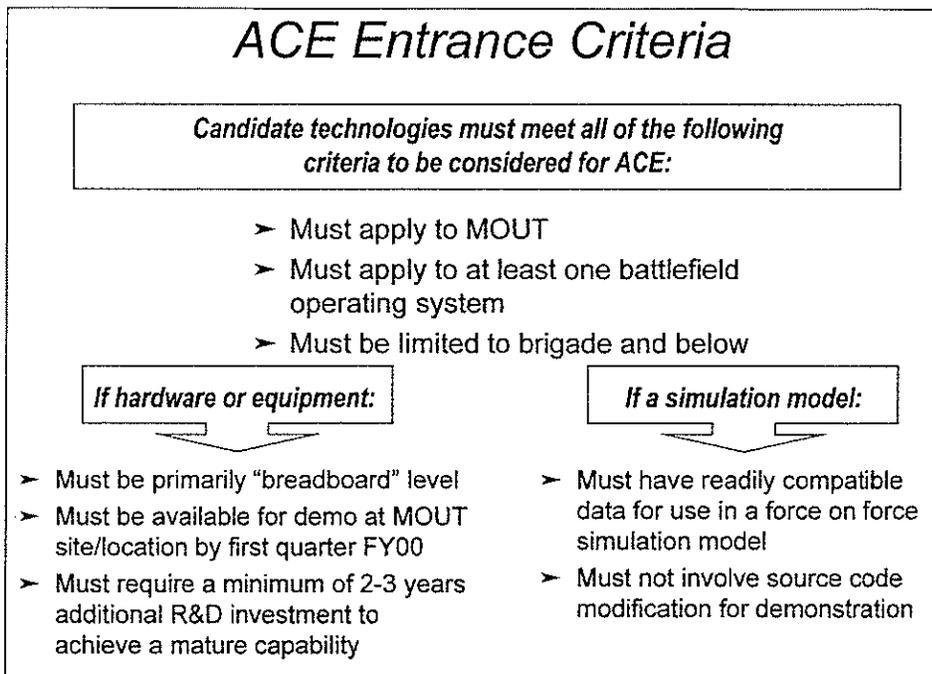


Figure 2.

where one may access a short questionnaire that addresses basic criteria that each candidate technology must meet to be considered for the ACE (Figure 2). Appropriate technical experts and military personnel then evaluate the questionnaires. This effort serves as an initial screening process. If a technology appears to meet the criteria, it will be investigated more thoroughly to ensure that it is reasonable and feasible for demonstration during the early November 1999 timeframe.

The costs involved with developing a technology and actually participating in the demonstration is a recurring issue with the ACE. From the outset, developers have been asked to bear their own costs for technology development and travel to the ACE demonstration. However, the demonstrations will be planned and coordinated by the developer, the ACE Coordinator, and the Dismounted Battlespace Battle Lab at Fort Benning (who ensures that the proper demonstration requirements are met).

Conclusion

The ACE is a unique opportunity for government and industry technology developers to solidify user buy-in for new, promising MOUT technologies

and paves the way for potential new funding streams. From a military perspective, it must be reiterated that the successful technologies that emerge from the ACE will help to build a foundation for an S&T investment strategy for MOUT in the future. In this regard, the ACE provides a MOUT linkage to Army XXI and the Army After Next and to Next Marine Corps and the Marine Corps After Next. The bottom line, however, is the safety and well-being of soldiers and Marines engaged in MOUT. Thus, the ACE is dedicated to supporting our soldiers and Marines in attaining the best possible MOUT capabilities as they preserve the peace.

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