DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
TACTICAL TECHNOLOGY OFFICE (TTO)
PLANNED PROCUREMENTS
May 1998

PROGRAM DESCRIPTION	FUNDING	SCHEDULE	PROGRAM MGR
Advanced Micro-Internetted Unattended Sensors Program: This program will develop and demonstrate low-power, miniature, internetted, unattended sensors that can be hand-emplaced, or delivered singularly or in submunition-sized packages, by projectiles, mortars, or missiles, such as 20mm, 40mm, 60mm, MLRS or ATACMS. This effort will build on ongoing, unattended, sensor technology development efforts presently being funded, but will focus on miniature, low-power, integrated sensor signal processing and communication packages that are less than 1-inch in diameter by 1-inch long. Sensors of primary interest include chemical, imaging (visual and infrared), seismic, magnetic, acoustic, and weather for both land and marine littoral applications. Efficient signal processing, classification, tracking, and data fusion algorithms, for very low power sensor applications, are also of interest.	$10M	BAA 98-18 Proposals due 7/2798 Total program: 3-4 years	Dr. E. Carapezza TTO
Robotics for Urban Terrain, Phase III: This program builds upon the technology developed from Phases I & II. The objective of this effort is to develop a prototype robot that can perform the tasks of a “pointman” and combat engineer, minimizing the risks for human infantry personnel. These tasks would include emplacing explosive charges, and clearing rooms with grenades (real, concussion and/or smoke), thereby facilitating warfighter entry into building.	$20M	BAA 3QFY99 Phase III: 2 years	Dr. Eric Krotkov TTO

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Tactical Mobile Robotics, Phase II: The objective of this program is to enable land warfighters to dominate battlespaces using teams of mobile robots operating in complex terrain, with particular attention to urban environments. Phase II will be a 2-year effort concentrating on system integration and demonstration of the technologies designed and developed in Phase I. Technology development will focus on machine perception, autonomous operation, and robotic locomotion. System demonstration will concentrate on selected urban warfare applications, such as urban assault, urban reconnaissance, and building clearing.	$20M	BAA 3QFY99 Phase II: 2 years	Dr. Eric Krotkov TTO
Micro Adaptive Flow Control: The Micro Adaptive Flow Control (MAFC) program seeks to control the behavior of large-scale flows by exploiting natural-flow responses to disturbances generated by small-scale actuators. By combining innovative actuator and sensor technologies with adaptive control strategies, the program will develop and demonstrate new flow-control approaches with radical, new, performance capabilities. The objective of this planned procurement is to develop, integrate and demonstrate systems applications of MAFC technologies in aircraft, munitions, turbine engines, and/or maritime systems. Phase I systems integration studies may lead to Phase II development and demonstration. Multiple awards are anticipated.	$15M	BAA 1QFY00 Phase I: 6 months Potential Ph. II: 2.5 years	Dr. James McMichael TTO
Advanced Tactical Technology: Advanced Tactical Technology program is exploring innovative technologies for application to the tactical military environment. The programís objective is to identify areas for potential performance/design improvement, supplement, or replacement of existing systems. The program will address issues from end-to-end and focus on systems development. The programís goal is to develop, and/or demonstrate, system or subsystem technologies which provide revolutionary improvements in efficiency and effectiveness in areas such as force projection and rapid ingress/egress, information dissemination, logistics support, extended power supplies, remote countermine, personal armor, chemical/biological warfare, air combat, training, small arms and small arms munitions, systems and munitions transportability, warfighter maneuverability, and electronic countermeasures.	$1M	BAA 3QFY98 Total program: 1-4 years	Dr. Art Morrish TTO