



Photo by Master Sgt. Johancharles Van Boers
November 29, 2006
Soldiers from Dragon Team, Operations Group go out on a training mission in their M113 armored personnel carrier at the National Training Center at Fort Irwin, CA

Army SBIR Vision

To be the Army's premier source of innovative technology solutions, providing direct access to America's high-tech small business Research & Development community, enabling our Soldiers deployed around the world.

The purpose of the SBIR Newsletter is to provide Army, DoD, and other government leadership with additional insight into the vital contributions made by the SBIR program to Army R&D.

Army SBIR Helpdesk:

The Army SBIR help desk is provided to assist small businesses and Government participants with questions and issues regarding the Army SBIR program. The Army SBIR help desk is operated Monday through Friday from 8 am to 5 pm (except on Federal holidays). You may reach the help desk by email at army.sbir@us.army.mil or by calling (703) 806-2085.

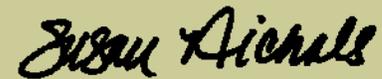
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Letter from PM, Army SBIR

During the week of April 14- 17, the US Army SBIR office successfully hosted the 2008 DoD SBIR Training Workshop, a "Government Only" event in Kansas City, MO. This year's theme was "Raising the Stakes in Kansas City, Sharpening your SBIR Skills". The purpose was to network with other Department of Defense Agencies and focus on SBIR policy, guidance, processes, issues and updates from the Small Business Administration, Commercialization Pilot Program, Technical Assistance initiative, and the Defense Technical Institute Center. Additionally, each service exchanged many of their best practices with the intention of making improvements across the DoD SBIR program. I extend a personal thank you to everyone involved in the preparation and participation of this workshop.



Susan Nichols, PM, Army SBIR

Spotlight

2008 Commercialization Pilot Program

In accordance with the 2006 National Defense Authorization Act, the Army has engaged MILCOM Venture Partners (MILCOM) to implement the Commercialization Pilot Program (CPP). The CPP consists of two distinct phases conducted over a single year. The initial phase involves the identification of a focused group of CPP participants from the pool of active Army SBIR Phase II projects that: 1) address high priority Army technology needs, 2) exhibit a roadmap for rapidly transitioning to Soldiers, and 3) have the potential for commercial use in the private sector. The second phase involves guidance and support from MILCOM to assist in the development of business plans, technology transition plans, market research, and customer collaboration. In addition, the Army has established a \$15 million dollar investment fund aimed to enhance CPP projects and potentially expand research and development, test and evaluation to accelerate transition, and commercialization. During the 2007 CPP cycle, 416 Phase II firms submitted a Commercialization and Transition Assessment (CTA) form, resulting in twenty five firms being identified to participate in the program. Each of these 25 firms will receive additional Army SBIR funding and support from MILCOM. As these efforts under the inaugural CPP performance year conclude, the Army and MILCOM are preparing to initiate a new CPP cycle. As part of that effort the Army and MILCOM will be conducting the data collection and assessment of the ongoing Army Phase II projects for 2008 that confirm their desire to participate in the CPP. Be sure to check with the Army SBIR website, www.armysbir.com, frequently for further updates and information. Any questions and requests for program information should be directed to armycpp@milcomvp.com.



Photo by Spc. Shawn M. Cassatt, Jan 25, 2008
A Soldier looks through the scope of a rocket-propelled grenade launcher discovered in a home in Muqdadiyah, Iraq.



Photo by Richard Rzepka, February 27, 2008
An Army Explosive Ordnance Disposal technician gets some rest after Operation Helsinki near the Bichigan Peninsula, Iraq.

SOLICITATION DATES:

08.2

Solicitation Opens 19 May

Solicitation Closes: 18 Jun

Phase I proposals due

08.3

Solicitation Opens 25 Aug

Solicitation Closes: 24 Sep

Phase I proposals due

DATES TO REMEMBER THIS QUARTER:

National Spring SBIR Conference May 27-30

<http://www.sbirflorida.org/>

08 International Soldier Systems Conference Apr 14-17

[Conference Link](#)

National Fall SBIR Conference Nov 12-14

[Conference Link](#)

Technology Quote...

One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man.

~Elbert Hubbard

Featured Army SBIR Success Story

Sound Innovations Inc.

www.sound-innovations.net

W81XWH-05-C-0031



US Army Medical Research and Materiel Command (MRMC)

An Active Noise Reduction Communication Earplug for Helicopter Crew

The Requirement – US Army pilots have a vital requirement to effectively communicate with every integral member of their flight team. Army pilots provide ground troops with coverage and close air support on dangerous and technically demanding missions. This critical need for the capability to effectively communicate has led the army to a requirement for improvement in sound attenuation for the pilots and crew of military aircrafts. An Army helicopter presents a challenging noise environment with total noise levels reaching over 110 decibels (dB). To put that in perspective, consider that 50 dB is equivalent to an ordinary spoken voice conversation, 100 dB is equivalent to a chainsaw, 120 dB is equal to that of an amplified rock concert and it is at 120dB that the sensation of hearing is replaced with pain. This high level noise impairs radio intelligibility, is fatiguing for the helicopter occupants, and leads to hearing loss. The requirement for earplugs that will significantly reduce the helicopter noise that reaches the ear, thereby reducing fatigue and allowing pilots to hear radio communications more clearly and at lower decibel levels is significant. To better serve helicopter crews the Army seeks to develop and test an in-the-ear active noise reduction (ANR) earphone system for speech communication and hearing protection. The earplug-like system, in combination with an HGU-56 helmet, should be able to provide a combined active and passive insertion loss or ‘effective attenuation’. Active noise reduction (ANR) is a technique of picking up noise signals with a microphone in one part of a system and, after some signal processing, reproducing it through a loudspeaker in the proper amplitude and phase at another location in the system so that the electronic signal cancels the already present acoustic noise signal.



The Technology – Sound Innovations (SI) is developing earplugs that will provide passive and active noise reduction (ANR) while delivering a high fidelity communications signal for Army helicopter crews. SI’s earplug ANR system incorporates its patented hybrid feed forward-feedback tuning algorithm with digital signal processing technology and a low weight, comfortable, earplug incorporating the microphones. Fixed analog Feed-back ANR systems (the current state-of-the-art) perform poorly in earplugs because they cannot handle the wide variations in system dynamics that occur from earplug fit to earplug fit. SI’s adaptive Feedforward ANR technology is uniquely capable of adapting to the variations in earplug fit which allows SI to deliver robust ANR in an earplug to a wide user base. Based on an Army study (Report Number HEL-TM-11-90), good radio speech intelligibility more than doubles the success rate of soldiers in engagements with the enemy, and increases survivability by 75%. Moderate to severe hearing loss can preclude a soldier from performing certain normal military duties – even disqualifying the soldier from continued service. Such hearing loss is seen in 33.5% of post deployment soldiers. The Veterans Administration cites hearing loss as the leading military retiree health disability; in 2006 alone, the VA spent \$901 million on hearing loss claims.

Sound Innovations’AHNR System Design

In-ear headset



ANR module

The Impact – The result will be improved productivity, performance, and hearing conservation. Future fielding of this technology will enhance soldier performance and prevent deleterious effects of noise-induced hearing loss for our soldiers. The development of this technology by Sound Innovations shows promising improvements for not only Army’s air crews, but also other military vehicle crews, and ground force applications as well. SI’s first ANR headset product is now undergoing qualification testing (funded by the Air Force) and is expected to achieve Safe to Fly certification in the second half of 2008. Once SI has received Safe to Fly certification, it can begin selling this product to the aircrew market.