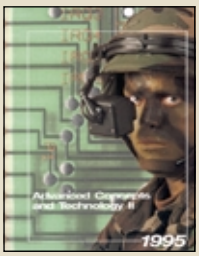
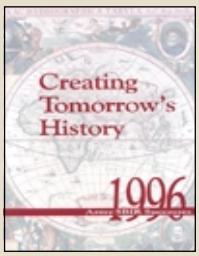
U.S. Army SBIR Commercialization 1999


Army SBIR Accomplishments
1994


Advanced Concepts and Technology II
1995


Creating Tomorrow's History
1996


US Army
1997

America's Army exists to fight and win our nation's wars. In today's world, that role is expanded to include defending our nation's interests on a global scale by conducting missions across the full spectrum of military operations. The Army is now engaged in more missions in more places than ever before, and all these missions have one thing in common. They require the presence of well-trained, well-led, and well-equipped soldiers on the ground. We are the world's premier land combat force.

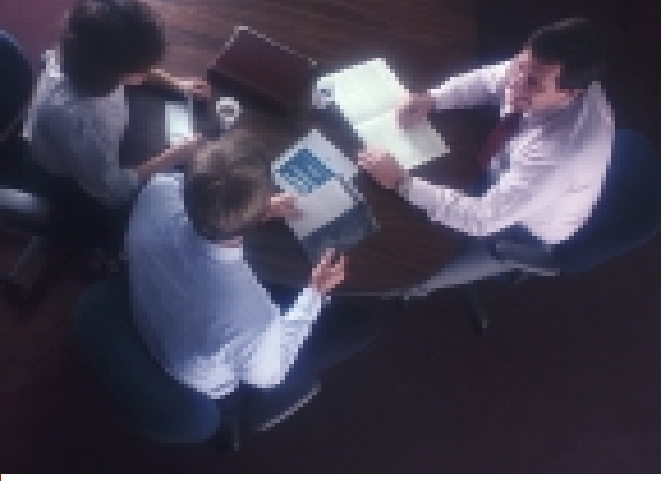
The Army maintains its decisive edge with the help of the small business community. Agile, free thinking, high tech small companies often generate the most innovative and significant solutions to meet our warfighters' needs. Think, for a moment, about some of the innovations that underpin our economic and military strength: the small computer from Apple; the supercomputer from Cray; the planar integrated circuit organized by Fairchild; and the Xerox copier from a small business originally called Haloid. These innovations all came from small companies. It is difficult to think of modern life without them.

In America's Army, we seek to harness these innovative talents for the benefit of our warfighters. The Small Business Innovation Research (SBIR) Program is one way to involve small businesses in early stage research and development projects. This program provides timely and vital seed capital so small companies are able to develop dual-use technologies and products to bring to the marketplace. In the end, the Army SBIR Program benefits the Army, the small business community, and our national economy.

I hope you enjoy this brochure. It provides valuable information about the SBIR Program, and highlights only a few of our recent success stories.

Army SBIR Program

Army scientists and engineers develop SBIR solicitation topics that address current and anticipated warfighting technology needs. While DoD publishes two solicitations annually, the Army participates only in the second, or spring solicitation. Small businesses enter the SBIR process by submitting concepts in the form of “Phase I” proposals against these topics.



Successful SBIR projects move through three phases. As already mentioned, Phase I is the entry point where a company proves the feasibility of its concept in six months for up to $70,000. An option for up to $50,000 funds interim Phase I-Phase II activities if the project is selected to receive a Phase II award. Phase II is a substantial R&D effort, up to $730,000 over two years, which results in a dual-use technology, product, or service. SBIR is very competitive – about one in ten Phase I and one in three Phase II proposals are selected for award.

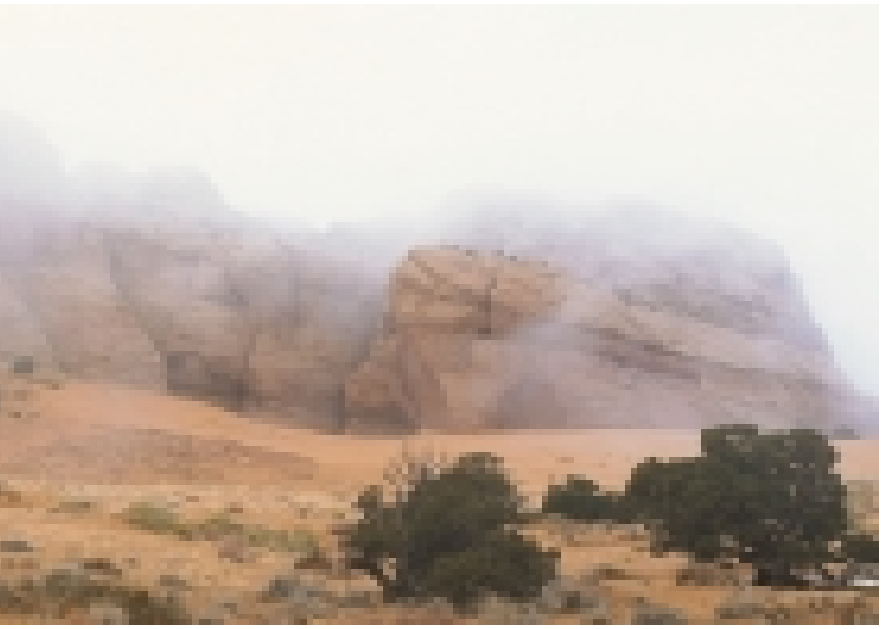
Phase III, the commercialization phase, is the goal of every SBIR effort. In Phase III, the successful company markets its dual-use product or service either to the Government, the private sector, or both!

The Army is proud to present to you the following SBIR success stories. They describe some of the benefits that the Army, the small business community, and our nation have received through this dynamic program.

Reclaiming the Land

Electrokinetics, Inc., Baton Rouge, LA
Sponsored by the Waterways Experiment Station, U.S. Army Corps of Engineers

Heavy metal contamination on Army ranges due to expended ammunition has become a readiness issue. The conventional "haul and bury" solution is extremely labor intensive and costly. Enter Electrokinetics, Inc., which has developed an in-situ remediation solution.



The Electrokinetics system uses two series of electrodes placed in the soil to extract the contaminants. The technology successfully cleared all the lead from a firing range at Ft. Polk, Louisiana. Electrokinetics is assisting a power company in removing arsenic contamination in the soil and the watertable to a depth of 31 feet at a fraction of the cost of other remediation methods. The company is currently preparing to conduct full-scale arsenic remediation at several commercial sites around the country.

PHASE III IMPACTS

$890,000 in sales to date;
$1,000,000 in pending contracts

1996 Army Phase II Quality Award Winner

Revolutionary Structures

Federal Fabrics-Fibers Inc., Andover, MA
Sponsored by the U.S. Army Natick Soldier Center

Soldiers need many temporary Theater of Operation structures which can be erected and dismantled rapidly. Federal Fabrics-Fibers (FFF) has a revolutionary system of pressurized airbeams made of lightweight, high-strength fibers. These innovative building components can be fabricated to form structures of unlimited shapes and sizes.

FFF's new textile technology was mature enough to be immediately transitioned into the Chemically and Biologically Protected Shelter (CBPS). Besides significantly simplifying logistics, inserting FFF's airbeam technology into the CBPS program results in cost savings of over 50%, which could exceed $5M over the life of the program. The technology has widespread applications for pressure vessels and is now being leveraged by the other Services for ammunition barricades, water and fuel containers, space antennas, and mine detection systems.

PHASE III IMPACTS

- Over 1,000 arched beams sold for a total of over $1M in revenues to date
- Patents pending
- 1999 Vice President's Hammer Award

Pilot's Aid

Barron Associates, Inc., Charlottesville, VA
Sponsored by the U.S. Army Aviation Research, Development and Engineering Center

Less helicopter maintenance and repair is needed if the craft is operated within optimum limits for its engine, transmission, and rotor assembly. However, the Army pilot must often fly dangerous missions that focus his or her attention on needs outside the optimum limits. Barron Associates, Inc. (BAI) has developed a limit avoidance system that provides feedback to pilots when they take the aircraft outside preset operating bounds.

This innovative system provides tactile cueing to the pilot through the helicopter controls, giving an immediate indication as to what corrective action should be taken. This allows the pilots to concentrate on the mission without having to watch gauges or listen to audio messages. The pilot retains full control of the aircraft and can override the tactile cueing. BAI is transitioning this SBIR technology to the Army's Helicopter Advanced Controls Technology (HACT) Program, to upgrade helicopter flight control systems.

PHASE III IMPACTS

- $100,000 in subcontracts with Boeing and Sikorsky to support Army HACT Program
- Additional revenues expected in next phase of HACT Program

Modeling Human Performance

Microanalysis and Design, Inc., Boulder, CO
Sponsored by the U.S. Army Research Institute

The Army Research Institute (ARI) recognizes the need for modeling soldier performance in executing complex tasks in combat. Microanalysis and Design (MD) is developing the Human Operator Simulator (HOS) for ARI. HOS is a Unix-based tool that helps predict soldier performance to impact system design as well as training.

MD has successfully marketed their performance simulation technology to General Dynamics, the English Ministry of Defence, and an Australian shipbuilder. MD has enhanced HOS to address situation awareness and the effects of experience in prioritizing and delegating tasks. This resulted in development of the Integrated Performance Modeling Environment (IPME), which has been marketed to the British and Canadian governments. The U.S. Navy purchased IPME to support studies of the Surface Combatant XXI to reduce crew size from 400 to 95.

PHASE III IMPACTS

- IPME development funds totaling $1,250,000 from British and Canadian governments; sales totaling $700,000 to variety of customers including U.S. Navy
- HOS sales totaling $45,000 to British Ministry of Defence, General Dynamics, and an Australian shipbuilder

Enhanced Training

Diamond Visionics, LLC., Vestal, NY
Sponsored by U.S. Army Simulation, Training, and Instrumentation Command

The Army's Close Combat Tactical Trainer (CCTT) uses information technology (IT) to link individual soldiers and vehicle crews – at different locations – within the same virtual exercise. CCTT provides simulation modules for training tank, infantry fighting vehicle, and armored personnel carrier crews as well as dismounted infantry. Platoon through broad task force levels can be handled. This increases training effectiveness and minimizes training resources.

Diamond Visionics has developed a low-cost Commander's Popped Hatch display used for the CCTT. Their large display was shown to be superior to the existing system in a side-by-side demonstration. STRICOM has contracted with Diamond Visionics to deliver several prototype displays for testing with an anticipated production contract for 2,000 units to follow.

PHASE III IMPACTS

- $500,000 production prototype delivery contract with STRICOM
- Additional 9 prototypes delivered to STRICOM for $500,000
- Anticipate production contract for nearly 2,000 units
- Agreements with commercial display and television manufacturers
- 1999 Army Phase II Quality Award Winner

Robotic Enhancement of Logistics

Omnitech Robotics, Inc., Englewood, CO
Sponsored by the U.S Army Armaments Research, Development and Engineering Center

Robotically controlled vehicles have enormous potential to relieve soldiers of excessively hazardous or repetitive tasks. Omnitech Robotics, Inc. has developed an unmanned forklift system for loading and unloading pallets to and from containers. Their technology enables tele-operated control of a single forklift or the semi-autonomous control of multiple forklifts by a single operator. Omnitech's innovative technology demonstrates intelligent behavior and the ability to adapt to variations in the environment, payload, and mission.

After successfully demonstrating their technology, Omnitech won a contract with the DoD Unmanned Ground Vehicle Joint Project Office in Huntsville, AL, to produce a strap-on kit that will convert almost any vehicle to robotic operation. These kits have been used in Bosnia as well as other deployments.

PHASE III IMPACTS

- $15,000,000 contract with Unmanned Ground Vehicle Joint Project Office
- Robotic strap-on kits used in Operations Joint Endeavor, Joint Guard, and Joint Forge in Bosnia

Effective Planning and Execution

Carnegie Group, Inc. (Subsidiary of Logica, Inc.), Pittsburgh, PA
Sponsored by the U.S. Army Communications-Electronics Command

As the pace and volume of information flow grows on the modern battlefield, Commanders must more rapidly execute plans to exploit developing situations. Carnegie Group, Inc. has developed the Course of Action Detail and Evaluation Tool (CADET) to support decision making. CADET is a Java-based intelligent planning system that will generate a detailed battle plan to execute an operation.

Carnegie Group has interfaced CADET with the Army's Battle Planning and Visualization System, as well as the Maneuver Control System – Phoenix (developed under the Army's Advanced Concepts and Technology II (ACT II) Program). After successfully demonstrating CADET under their SBIR contract, Carnegie Group won additional funding from CECOM to add logistics considerations to track unit readiness and capabilities. In addition, the Defense Advanced Research Projects Agency (DARPA) has funded the incorporation of CADET into the Command Post of the Future.

PHASE III IMPACTS

- $300,000 funding from CECOM for system enhancements; $400,000 funding from DARPA for Command Post of the Future
- Strong candidate for incorporation into Army Experimentation 6, Advanced Technology Demonstrations, and other large-scale Army exercises.

On-Site Water Purification

Los Alamos Technical Associates (LATA), Albuquerque, NM
Sponsored by the U.S. Army Tank-Automotive Research, Development and Engineering Center

Transporting potable water in the Theater of Operation causes enormous logistics difficulties. The Army therefore places a premium on purifying water found on site. Los Alamos Technical Associates (LATA) has come forward with just the technology needed to attack this problem.

LATA's innovative technology disinfects water using only salt. The patented process applies electrolysis to a brine solution, breaking down the sodium chloride into a mixture of common disinfectants including chlorine. This solution, when added to water, improves upon the purification and disinfection performance of traditional chlorination processes. In addition, LATA's process eliminates the need for calcium hydrochloride – a hazardous material requiring careful handling, storage, and disposal.

This technology led to the creation of MIOX Corporation, a LATA spinoff company. MIOX was coined from the term "mixed oxidants". LATA/MIOX have sold disinfection services and systems to the U.S. Army, DARPA, the U.S. Forest Service, and numerous private water treatment companies. LATA/MIOX products currently treat millions of gallons of water per day in more than 30 states and 12 foreign countries.

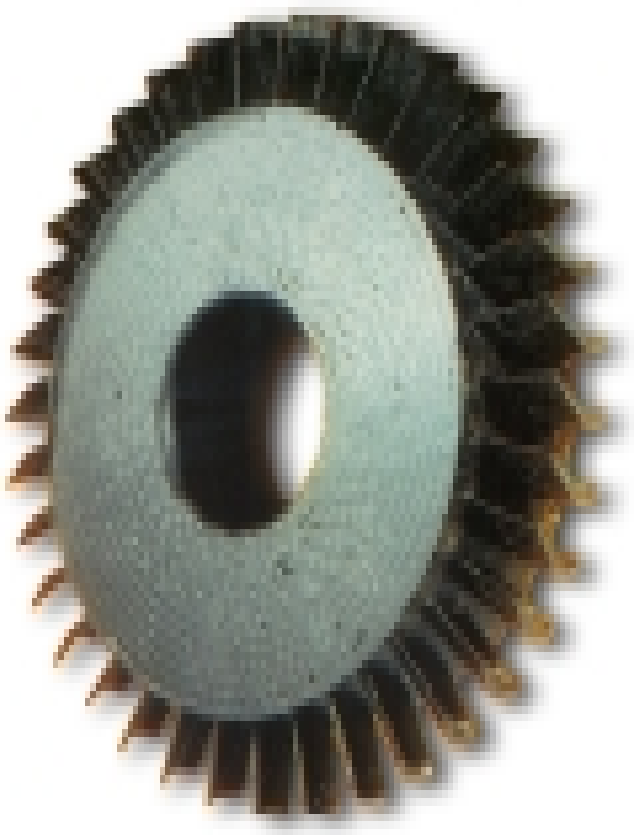
PHASE III IMPACTS

- MIOX sales through 1999 are $9.2M
- LATA received a $2M contract from DARPA to develop and demonstrate hand-held personal water purification units
- MIOX is an EPA-listed compliant technology for drinking water and offers National Sanitary Foundation-listed products.
- 7th fastest growing technology company in state of New Mexico

Complex Shape Composite Components

Foster-Miller, Inc., Waltham, MA
Sponsored by the U.S. Army Aviation Research, Development and Engineering Center

Foster-Miller, Inc. has developed an innovative means of producing composite preforms to mold high performance fibers into complex shapes. This breakthrough technology substantially reduces the cost of composite parts and eliminates previous difficulties in using high performance fibers in preforms.



Foster-Miller's unique process uses multi-layer flat braiding methods and machinery to create complex fiber architectures with high performance ceramic or carbon fibers. The technology has been used to produce lower cost stiffener grids for aircraft wing and fuselage skins, as well as a turbine disk made of high-temperature ceramic fiber composites for future turbine engine applications.

Foster-Miller's technology is being evaluated for use in several major DoD and NASA programs such as the Integrated High Performance Turbine Engine Technology Initiative, the Reusable Launch Vehicle, and the Rotary Wing Structural Technology Demonstrator. The company is also exploring the civil engineering and sporting goods markets.

PHASE III IMPACTS

- Over $1.3M in revenues from government customers, including Defense Department and NASA
- Two patents issued, and two additional patents pending
- Commercial customers include Boeing, General Electric, Lockheed Martin, Sikorsky, Thiokol, Spaulding, and Williams International

Seeing the Threat

Physical Optics Corporation, Torrance, CA
Sponsored by the U.S. Army Missile Research, Development and Engineering Center

In modern warfare, delays in detecting, identifying, and tracking potential threats can be fatal. POC has addressed this problem by developing an innovative Intelligent Processing Operator (IPO) technology.

IPO accelerates the collection of large amounts of information, improves detection probabilities, and helps identify military threats obscured by camouflage, noise, or cluttered backgrounds. It combines state-of-the-art optical elements, electronic components, and computer algorithms for image and data processing. IPO also incorporates spatial (3-D), spectral (frequency dependent), and time data into advanced neural network algorithms to distinguish objects.

PHASE III IMPACTS

- $350,000 in sales to date
- In addition to military applications, IPO products have been used for environmental monitoring and cleanup applications
- IPO-based camera demonstrated to enhance detection of suspects in law enforcement situations

Safe Meals

TDA Research, Inc., Wheat Ridge, CO
Sponsored by the U.S. Army Natick Soldier Center

U.S. Service personnel eat approximately 30 million pre-packaged meals – known as Meals Ready to Eat (MREs) – every year. MREs come in a single package including a heater unit, but the current MRE heaters have a problem: the magnesium used in the water releases highly flammable hydrogen. In addition to posing a hazard to soldiers, this complicates transportation and storage of MREs.

TDA Research, Inc. has developed a non-flammable heater for MREs. Their innovative concept provides two sources of heat when activated with water: hydration and neutralization. This at the same time makes the heaters self-neutralizing and fail-safe. TDA's heaters weigh less than two ounces, require only one ounce of water, produce no gaseous byproducts, and cost significantly less than the current heaters.

After completing their Phase II effort, TDA conducted additional development under a cost sharing agreement through the competitive DoD Dual Use Applications Program. Current projections call for TDA's Nonflammable Ration Heater to save as much as 10 cents per unit, resulting in millions of dollars in annual savings for the Army.

PHASE III IMPACTS

- $100,000 Dual Use Applications Program funding from Army and DARPA
- Commercial applications in outdoor and meals-to-go marketplaces
- U.S. Patent 5935486
- 1997 Army Phase II Quality Awards Winner

Cash Management

Knowledge Based Systems, Inc., College Station, TX
Sponsored by the U.S. Army Space and Missile Defense Command

Recent developments in fuzzy logic and neural networks allow software systems to "think" smarter. Knowledge Based Systems, Inc. (KBSI) developed a generalized decision aid toolkit that applies data mining and neural networking to guide users through problem solutions. The Generalized Representation Modeling and Analysis Tool (GERMAT), facilitates the application of a knowledge-based approach to solve a variety of problems. It guides the user through each step using state-of-the-art user interface technologies.

KBSI demonstrated their innovative capabilities when they adapted GERMAT to the banking industry. This basic inventory control application has improved cash management at many major banks across the country. GERMAT also has numerous other military uses in battlefield classification, target recognition/discrimination, logistics forecasting, and task optimization.

PHASE III IMPACTS

- Cash Forecaster revenues to date exceed $2,000,000
- Cash Forecaster installed in many major banks

Expanded Communications

Physical Optics Corporation, Torrance, CA
Sponsored by the U.S. Army Research Laboratory

Battlefield digitization places a large burden on the Army's communications infrastructure. Physical Optics Corporation (POC) is helping the Army to improve communications on the battlefield. POC has developed selective optoelectronic filters (OEFs) which enable three-dimensional packaging of multi-chip modules in communications systems. These products improve connections between key communications components by reducing the wavelength burden on existing communications systems.

POC has incorporated their technology into filters used in a variety of optical fiber data links. The OEFs simplify the system structures, reduce costs, and increase system speed, data rates, and information payloads. The resulting components allow high-speed, wide-band, inherently parallel operation that provides Gigabit data rate channels. POC has commercialized their technology and expanded it into several versions suitable for either multi-mode or single-mode fiber applications. Their products are finding applications in local area networks (LANs), metropolitan area networks, and wide area networks.

PHASE III IMPACTS

- $350,000 in sales to date; customers include Sony Motion Pictures, Disney Animation, TRW, and Hughes Aircraft
- Overseas installations in Brazil, Argentina, Japan, Korea, England, Sweden, and Israel
- Directly responsible for commercial growth into the optical fiber data link marketplace

WEBSHOT™

Foster-Miller, Inc., Waltham, MA
Sponsored by the U.S. Army Armaments Research, Development and Engineering Center

Recent Army peacekeeping missions and Operations Other Than War (OOTW) underscore the need to control and disable personnel using non-lethal techniques. Foster-Miller has developed a novel capture net using an optical fuse. The idea is straightforward: throw a net over someone and let them struggle with it rather than with a soldier or law enforcement officer.

The WEBSHOT™ system deploys a 15-foot diameter net that fits in a standard 37/40mm, 1.5 x 6 inch cartridge. The munition weighs only 12 ounces, travels 100 feet per second, and has a range of 5 to 30 feet. It is fired from an M79 37mm gas gun or a Foster-Miller-design launcher, and deploys with a loud noise to further startle the target individual. WEBSHOT™ has been field-tested in over 30 countries. The Milford (MA) Police Department became the first department in the country to complete training and equip its officers with nets and net launchers based on their technology.

PHASE III IMPACTS

- 1,200 37mm munitions ($55.00 each) sold to date ($66,000)
- 800 handheld launchers ($95.00 each) sold to date ($76,000)
- U.S. Patent No. 5,750,918
- Global applications in military, law enforcement, corrections, and animal control markets

Plants to Clean Contaminated Soils

Edenspace Systems Corporation (Formerly Phytotech, Inc.), Reston, VA
Sponsored by the U.S. Army Armaments Research, Development and Engineering Center

Edenspace Systems Corporation has optimized the natural ability of certain plants to absorb heavy metals and radioactive contaminants in soil – addressing a critical Army environmental remediation problem. Their solution allows the contaminated soil to remain on-site. The plants are introduced to the soil, absorb soil contaminants through their root systems, and store the contaminants in their aboveground biomass. This allows harvesting of the plant shoots and removal of the contaminants with negligible disturbance of the soil ecosystem. Once concentrated in the plant shoots, the contaminants can be disposed of at a significant cost reduction or, if appropriate, recycled at a significant cost recovery.

Edenspace demonstrated this unique application in the removal of depleted uranium from Army test ranges. Over a two-year period, they have provided commercial-scale services to a wide range of Government, utility, and private sector clients, as well as foreign interests. For example, Edenspace earned a Certificate of Accomplishment from Daimler-Chrysler for successfully removing lead from a contaminated property. Edenspace accomplished the task in 11 months at cost savings of $1.1M.

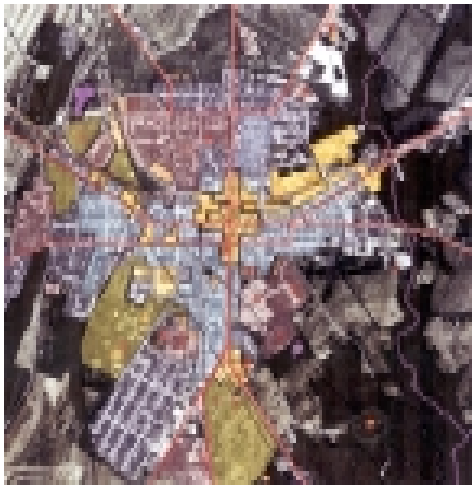
PHASE III IMPACTS

- Over $4M in contracts since mid-1997
- 11 patents received to date (22 in process)
- Clients include DoE, Fortune 500 chemical/manufacturing firms, electric utilities, municipalities, and foreign government agencies
- Certificate of Accomplishment from Daimler-Chrysler

Digital Maps

ESEA, Inc., Mountain View, CA
Sponsored by the U.S. Army Topographic Engineering Center, U.S. Army Corps of Engineers

Military and commercial use of Geographical Information Systems hinges on the availability of geographical datasets with detailed feature and attribute information. Developing these data can be prohibitive due to cost and time constraints. The Army Topographic Engineering Center sponsored ESEA, Inc. in developing a technology that merges two existing datasets, each having complementary strengths, to produce a dataset of superior detail and quality. This technology also speeds up digital map updates. ESEA's conflation technology has proven itself through time and cost savings in a number of applications.



After successfully completing its Army SBIR project, ESEA has marketed its ESEA Conflation System (ECS) by providing conflation services and selling software licenses. Thomas Brothers Maps and ESEA are currently using ECS to perform vector map conflation. Thomas Brothers Maps recently reported the successful merging of U.S. Census Bureau TIGER attributes onto U.S. Geological Survey features in counties within California. ESEA recently used the ECS to merge address ranges onto a base map for the Ventura County (CA) Fire Department. ESEA is currently working with the Florida Department of Transportation (FDOT) to transfer routes from FDOT maps to Florida County maps. In all of these projects, the conflation technology employed by the ECS has resulted in time and cost savings.

PHASE III IMPACTS

- $100,000 service contract with California Department of Transportation
- $28,000 in licensing revenues to Thomas Brothers Maps, the City of Los Angeles, and California's Ventura County
- Conflation technology applicable to communications and utilities industries.

Realistic Fire Control Testing

Creative Optics, Inc., Bedford, NH
Sponsored by the U.S. Army Test and Evaluation Command

Creative Optics, Inc. is developing an innovative technology application using Augmented Reality (AR) to augment the real world with virtual world stimuli. The goal is to utilize AR to develop new range instrumentation to reduce both test and maintenance costs, as well as increase portability, for combat vehicle fire control system testing as part of the Augmented Reality Test Technology (ARTT) program. ARTT will augment the Aberdeen Proving Ground Moving Target Simulator (MTS) ("The Bubble") developed in the late 1970's.

The ARTT system generates, displays, and accurately places a virtual target that is tracked by the tank gunner against a real-world background. Because of ARTT flexibility, control, and repeatability, ARTT can be extended to test a wide variety of combat vehicle fire control systems under various conditions anticipated for the battlefield.

PHASE III IMPACTS

- Has generated $3.2M in Phase III funding
- Spin-off Phase III program (with Patent Pending) for US Navy
- Potential spin-off training applications for every tank in the fleet

- 1997 SBIR National Tibbetts Award Winner
- 1998 SBA Small Business Prime Contractor of the Year, New England

Army STTR Program

The Small Business Technology Transfer (STTR) Program funds innovative technologies developed by small businesses partnering with universities, federally-funded research and development centers (FFRDCs), and other non-profit research institutions. Congress established STTR in 1994 as a companion program to SBIR. It is currently authorized through FY 2001. STTR shares the SBIR Program's objectives and processes with a few important differences:

- STTR provides an incentive for small businesses and researchers to move emerging technologies from the laboratory to the marketplace
- STTR Phase I efforts can be up to one year in duration, for a maximum of $100,000
- STTR Phase II efforts are two-year efforts for up to $500,000

The U.S. Army Research Office (ARO) is the lead execution agent for the STTR Program by virtue of its broad basic research mission within the Army. ARO has developed numerous strategic partnerships with industry and academia to develop new technologies with applications in future Army systems. ARO manages and executes the Army STTR Program while maintaining the dual-use focus mandated by Congress.

Participating in Army STTR

For more information about the Army STTR Program, including upcoming opportunities for participating in the program, visit the Army STTR Web Site at: http://www.aro.army.mil/arowash/rt

STTR Success Story

Most STTR-funded projects are still too new to have achieved significant commercial successes outside the program; but the following page provides an exception to this:

Chemical-Biological Protection in a Tube

Altus Biologics, Inc., Cambridge, MA
Sponsored by the U.S. Army Research Office

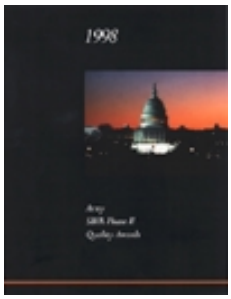
Our soldiers are prepared to operate in the most hostile environments, risking exposure to often deadly chemical and biological agents, for example, the organophosphorous nerve agent Sarin. The preferred method of neutralizing nerve agents is incineration, which is inherently dangerous and inconvenient. Altus Biologics has developed alternatives that would better support soldiers operating in threat areas. Working with the University of Pittsburgh, Altus developed a versatile catalyst material that neutralizes nerve agents by direct contact. This catalyst can be incorporated into many types of materials such as paints, powders, fabrics, and aerosols to provide convenient means of protecting soldiers and equipment from nerve agents dispersed in gas, liquid, or aerosol form.

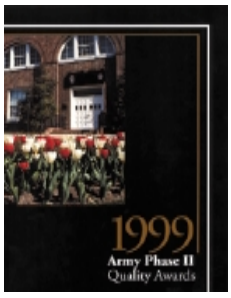
Altus Biologics recently incorporated their STTR-sponsored catalyst into a topical lotion, which is being assessed by The Army Medical Research and Materiel Command for use by soldiers. This unique catalyst is also providing valuable applications in the commercial agricultural industry, particularly in the fabrication and decontamination of pesticides.

PHASE III IMPACTS

- $182,000 contract from Army Medical Research and Materiel Command to develop decontamination lotion
- $25,000 contract with commercial agricultural company to support pesticide production
- $5,000 contract to prove feasibility of military point-of-use decontamination system (similar to fire extinguisher) using innovative catalyst
- Broad applications in pharmaceutical, fine chemical, and agrochemical industries

SBIR Phase II Quality Awards





The Army selects five outstanding Phase II projects each year to receive Army SBIR Phase II Quality Awards. These awardees best exemplify the SBIR goal of developing innovative technologies and products, and moving them into the marketplace.

The Quality Awards competition is open to all companies whose Army SBIR Phase II projects conclude in a given fiscal year. Winners are selected based on three criteria:

- Originality and degree of innovation represented in their research
- Relevance of the research to an Army mission
- Immediate commercialization potential of the technology or product

The Army Research Office-Washington executes the awards program each year. Award plaques are presented to the SBIR companies as well as their sponsoring Army organizations. These outstanding projects also receive recognition in an SBIR Phase II Quality Awards Brochure, which the Army distributes at conferences and other meetings in which the Army SBIR Program participates. This additional exposure provides additional marketing opportunities for awardees within the Army, the Department of Defense, and the private sector.

The 1999 Phase II Quality Awards Winners are:

Single Antenna Feed, Multiple Band Satellite Communications
Austin Info Systems, Inc.
U.S. Army Communications-Electronics RD&E Center

Remote Triage Sensors
Empirical Technologies Corporation
U.S. Army Medical Research and Materiel Command

Improved Decision-Making Training Aids
Cognitive Technologies, Inc.
U.S. Army Research Institute

Lightweight Digital Display Screen
Diamond Visionics, LLC.
U.S. Army Simulation, Training, and Instrumentation Command

Pressurized Airbeams
Federal Fabrics-Fibers, Inc.
U.S. Army Natick Soldier Center

Past Quality Award Winners

1998

Two Color Per Pixel Staring Focal Plane Array
Amain Electronics Company, Inc.
Army Comm-Electronics RD&E Center

Extremely Lightweight Fuel Cell Stacks
Analytic Power Corporation
Army Research Laboratory

Lightweight Monopolar Fuel Cells
Lynntech, Inc.
Army Research Laboratory

Self-Correcting Neural Sensor Fusion
Physical Optics Corporation
Army Missile RD&E Center

Feature-Based Rapid Map Generation System
Vexcel Corporation
Army Topographic Engineering Center

1997

Security Using Automated Speech Recognition
Daniel H. Wagner Associates, Inc.
Army Armaments RD&E Center

Unmanned Aerial Vehicle Guided Landing
Focused Energy Holding Company
Army Missile RD&E Center

Advanced Engine Protection
InnovaTech, Inc.
Army Missile RD&E Center

Wear Resistant Coatings
Materials Resources, Inc.
Army Tank-Automotive RD&E Center

Self-Heating Foods
TDA Research, Inc.
Army Natick Soldier Center

1996

Texture True Digital Maps
Computer Graphics System Development Corp.
Army Topographic Engineering Center

Precision Monitoring
J.A. Woollam Company, Inc.
Army Comm-Electronics RD&E Center

Green Dirt
Electrokinetics, Inc.
Army Waterways Experiment Station

Virtual Infantry
Dive Laboratories, Inc.
Army Simulation, Training, and Instrumentation Command

Point and Navigate
Point Research Corporation
Army Topographic Engineering Center

1995

Optical Integrated Circuit
Integrated Optical Circuit Consultants
Army Missile RD&E Center

Virtual Intelligence Software
Intelligent Text Processing, Inc.
Army Research Laboratory

Universal Joint
Powdered Materials Applications, Inc.
Army Tank-Automotive RD&E Center

Soldier's Personal Adaptive Monitor
S-TRON
Army Comm-Electronics RD&E Center

High Temperature Diesel Tribology System
Surfaces Research
Army Tank-Automotive RD&E Center

1994

Mobile Electric Power
Analytic Power Corporation
Army Natick Soldier Center

Military Disease Hazards
Elatech, Inc.
Army Medical Research and Materiel Command

Fractal Image Compressions
Iterated Systems, Inc.
Army Research Laboratory

Catface Stereo Head Mounted Display
Ralcon Corporation
Army Research Laboratory

Diesel Fueled Refrigerator
Yankee Scientific, Inc.
Army Natick Soldier Center

The Soldier

The Army SBIR program and the Army's Training and Doctrine Command (TRADOC) have formed a partnership to facilitate direct access to industry's cutting edge technologies and maintain the U.S. Army as the dominant global force into the 21st century. TRADOC focuses the Army's Science and Technology programs to demonstrate meaningful solutions to warfighting requirements. Through its Battle Laboratories and Combat Developers, TRADOC identifies the Army's present and future mission requirements. The Battle Labs participate in SBIR topic generation and monitor awards for possible transition and fielding to the warfighter.

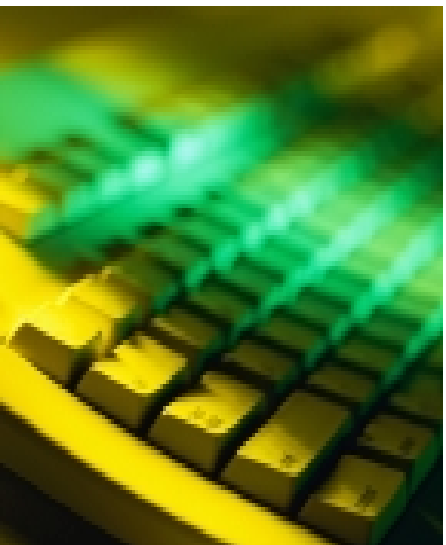
The TRADOC Battle Labs were formed to streamline TRADOC's mission of identifying concepts and requirements for new doctrine, training, leader development, organizations, materiel, and soldier systems. The dynamic change of the U.S. Army's missions has demonstrated the need for teamwork between concept development, requirement generation, solution development, and operational testing.

The Army Advanced Concepts and Technology II (ACT II) program accesses industry's most promising technologies, prototypes, and non-developmental items for realistic demonstrations, and then assesses them for possible transition to warfighter use. Using a two-stage selection process designed to minimize the burden on industry, ACT II solicits two-page concept papers responding to mission requirements. Those firms providing the most promising concepts are invited to submit full proposals. Selected proposals receive 12-month awards , up to $1.5M, culminating in a demonstration to a Battle Lab. Successful technology then may become a developmental or non-developmental item for procurement.

We strongly encourage your continued support of and participation in the SBIR, STTR, and ACT II programs. This unique partnership between industry and the Army ensures that America's soldiers remain the best equipped force in the world; responsive, effective, and decisive into the 21st Century.

Outreach and Sources of Information

The Army SBIR/STTR Program conducts an aggressive outreach program to increase small business awareness of broad opportunities that the Army provides. Army SBIR personnel participate in national, regional, and local conferences across the country. This provides face-to-face contact for small businesses with people who are knowledgeable about Army needs and the SBIR/STTR process. The Army SBIR Web Site identifies upcoming events at which the Army will be participating.



http://www.aro.army.mil/arowash/rt

The Army SBIR/STTR Web Site provides online access to comprehensive information about the program:

- General Information (on participating in the Program)
- Changes and New Requirements
- Points of Contact and Links (to other Army programs and related SBIR sites)
- Proposal Submission (procedures and entry points)
- Recent Army SBIR Awards
- Searchable Database of Past Awards
- Operations and Support Cost Reduction (OSCR)
- Chemical-Biological Defense SBIR Program (Joint Army/ Navy/Air Force)
- Phase III Success Stories
- Phase II Quality Awards Program.

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