

Introduction

The U.S. Army has maintained its competitive edge in the global community by taking advantage of America's oldest enterprises - our small businesses. The best solutions are not necessarily the biggest, and big innovations don't always come from the largest businesses. Often, it is the agile, free-thinking, small business which comes up with the most novel solution to an Army problem.

The highly competitive Army Small Business Innovation Research (SBIR) Program provides funding to small businesses for innovative solutions to the problems

facing today's soldiers and offers small businesses vital, early-stage, capital to produce marketable commercial products and services. In short, the ARMY SBIR program supports the soldier while providing opportunities for small businesses - benefits which will provide a return on investment for many years.

Each year, the Army tracks the return on its SBIR investment by surveying past SBIR projects to identify those that have successfully transitioned to the commercial market. Their success stories illustrate the benefits to the Army, the individual small businesses, and our economy as a whole.

The History of SBIR

The United States Congress initiated the SBIR Program in 1982 to increase small business involvement in federal research and development (R&D). Recent SBIR legislation extended the program to the year 2000, emphasizing four objectives:



Stimulate technology innovation,

Increase small business participation in federal R&D,

Increase private sector commercialization of technological advances developed through federal R&D, and

Increase participation by woman-owned and by socially and economically disadvantaged small businesses.

**Successful SBIR research efforts
move through three phases:**

Phase I Feasibility Study

Phase I contracts are awarded to small businesses to demonstrate the feasibility of innovative concepts. The SBIR Program is competitive—approximately one in ten proposals is funded. Phase I awards are generally limited to six-month, \$100,000 efforts.

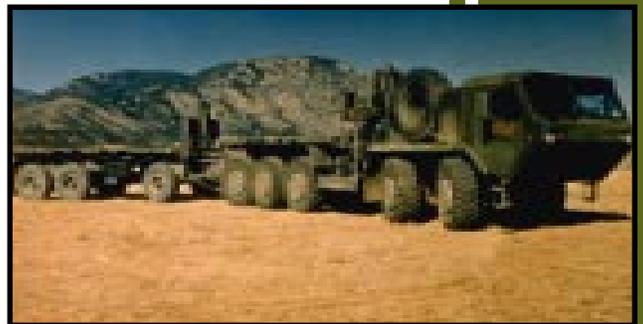


Phase III Commercialization

Phase III culminates all SBIR initiatives. In Phase III, a product, process, or service developed in Phase II is marketed outside the SBIR Program. Small firms achieve Phase III success by private sector commercialization or through non-SBIR government follow-on contracts.

Phase II Research and Development

Successful Phase I efforts may result in Phase II contracts for research, development, and early prototype production. Phase II awards are for up to two years, with a funding ceiling of \$750,000.



On the next 16 pages,

we would like to present our latest SBIR

companies who have achieved Phase III Success!

Hot Lunch



TDA Research, Inc. (TDA) has developed a FIRE FREE™ Heating system to replace the system the Army previously used to heat field rations. The previous system produced a substantial quantity of flammable and explosive hydrogen gas. The FIRE FREE™ system eliminates hazards while maintaining convenience for the soldier. The safety and effectiveness of this new system have been demonstrated through independent evaluations. All soldiers in the field can benefit from the improved safety offered by the FIRE FREE™ heater.

This system has been adapted for a self-heating beverage package which will heat eight ounces of water by more than 100°F

"The size of the potential commercial market for self-heating beverages can be estimated from the fact that Americans drink more than 150 billion cups of coffee per year."

in less than seven minutes. For maximum convenience, the water needed to activate the heater can be included in the package, and the heater can be activated by a pull-tab. Examples include a self-heating meal (tray package containing a three-component entree) or beverage (coffee, tea, hot chocolate, soup).

Phase III Impact

- Expected sales - \$1.4M
- Recipient of 1997 Army Phase II Quality Award
- U.S. patent applied for
- Heaters now in preparation for additional field trials by U.S. Army
- Other organizations have requested samples and test quantities

Electric Reconnaissance



SRICO

Columbus

Ohio

S RICO developed the Photonic Electric Field Sensor product, IPES-2001, a photonic electric field measuring device. The electric field modulates an optical beam which is guided by the IPES-2001. The exiting optical beam carries information about the field strength and frequency of the electric field.

SRICO's device offers significant improvements in the measurement of electric fields compared to conventional electrical devices. In some instances, for example medical and biological research,

it offers new measurement capabilities not possible using existing products. The photonic electric field sensor has potential applications in a number of industries including: Aerospace/Avionics; Automotive; Computers; Electric Utilities; Medical Instrumentation; Military; Semiconductors; Transportation; and Test and Measurement.

"The latest technology in electric field measurement."

SVG150s5

DELL100s38

CMPX7

NYTA25

CANO5¼

U.S. Army
Research
Laboratory

Phase III Impact

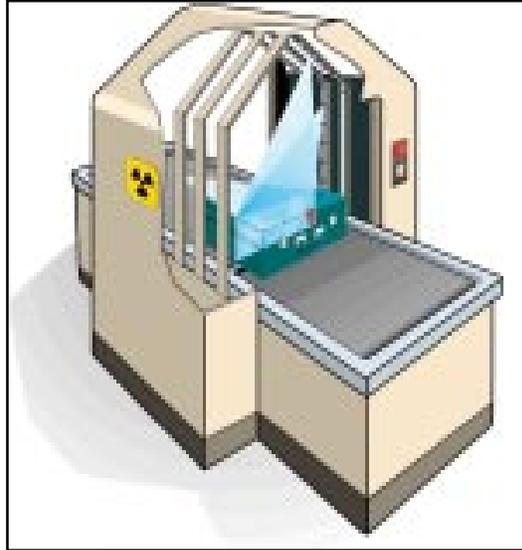
- \$330K in sales to date; U.S. Patent No. 5,267,336
- 1996 R&D 100 Award for one of the most significant technological innovations of the year.
- Benefits include improved measurement accuracy; non-contact measurement capability; remote sensing capability; and electrical isolation; in a small, compact, rugged package.

ENSCO

Springfield

Virginia

Safe Skies



Ensco is developing a real-time computer tomography (CT) system module as part of the Automated Baggage Inspection System (ABIS) for inspection of agricultural products in airport baggage. Advanced technologies, including a novel, photon-counting X-ray detector and a non-rotating, real-time multi-spectra CT system, are used to discriminate internal components based on physical and atomic composition. ENSCO is working in concert with the Army to deliver a fielded ABIS.

ABIS has the potential to process at least 1,000 bags/hour and detect many types of concealed objects in containers, such as weapons, explosives, and drugs. The

"It will reduce U.S. exposure to terrorist attacks by inspecting baggage for explosives and reduce the amount of contraband entering this country."

concealing container may be baggage, shipping crates, briefcases, handbags, etc. It is expected that this technology will be used to replace line-scanner systems that are currently used at airports, courthouses and other building. The ABIS computer interface will allow the operator to input new information about articles found in bags during manual inspection in order to expand the knowledge base of the system.

CFIN_{12s9}

LCCL_{8½}

DUSA_{5s4½}

AURA₁₂

KRSI_{7¼}

U.S. Army
Tank-
automotive
& Armaments
Command

Phase III Impact

- \$1.1M contributed by U.S. Department of Agriculture
- Uses a non-rotating CT system design for high reliability, ease of maintenance, and low manufacturing cost
- Adaptable to multiple airport operational scenarios
- Will prevent agricultural pests from entering the U.S., protecting the U.S. environment and ecosystems.

Growing Thin

Ionwerks

Houston

Texas



Electronic devices, coatings, displays, sensors, and optical devices are items each of us use daily. Each of these devices depends on the successful deposition of thin films. Ionwerks developed instrumentation for MSRI (Mass Spectroscopy of Recoiled Ions) and DRS (Direct Recoil Spectroscopy) for application to real-time, in-situ control of the growth of semiconductor and insulator thin films.

Based on these technologies, Ionwerks developed a reflectron Time of Flight (ToF) analyzer and their Time-to-Digital Converter (TDC)/four anode detector combination. This analyzer is capable of performing surface analysis using both secondary ion

Customers include; Battelle Pacific Northwest Laboratories, IBM Yorktown Heights, University of Manitoba, University of Giessen, University of North Carolina, Texas A&M University and University of Houston.

mass spectroscopy (SIMS) and MSRI.

The Ionwerks reflectron is also unique in its ability to perform SIMS analysis under ultrahigh vacuum conditions. The two techniques are complementary: MSRI provides quantitative elemental information while SIMS provides qualitative information regarding the molecular species present on the surface.

EEFT_{32s7}

IUBC_{14¼}

TRPS₁₂

OSSI₄

HAUS_{2¼}

U.S. Army
Research
Office

Phase III Impact

- 12 TDCs sold to date, exceeding \$90K
- \$300K in gross sales of reflectrons and associated hardware
- Completed second CRADA with Argonne National Labs

Safe Bullets



Texas Research Institute Austin (TRI) recently developed and tested a non-toxic replacement for lead projectiles used in practice rounds in firing ranges, where millions of dollars are currently being spent each year in the remediation of lead contamination. The new substance, Ecomass, has the same density as lead and can be molded into virtually any shape using standard high-volume production techniques.

"Applications in projectiles, weights and medical X-ray shielding make this an exciting development."

Alan V. Bray, President

Ecomass meets or exceeds the performance of lead in terms of compatibility with current cartridge manufacturing equipment, ballistic characteristics, accuracy, and penetration. Currently, an Army purchase of 75,000 rounds is pending, which will demonstrate the ability to fabricate large production quantities. In addition to military applications, testing has been completed, illustrating that Ecomass has radiation shielding capability which could be used in medical facilities.

Phase III Impact

- \$28K of sales to date
- Ecomass trademark approved, patent pending
- \$75K pending Army purchase for development effort

Virtually Speaking



MÄK
Technologies,
Inc.

Cambridge

Massachusetts

MÄK Technologies, Inc. has developed and packaged "VR-Link." This breakthrough networking technology utilizes an easy-to-use software toolkit which has become the most widely used Distributed Interactive Simulation (DIS) interface software in the world.

DIS has radically changed the process by which soldiers train for combat. By connecting many types of simulations into a shared virtual world, DIS dramatically increases the training benefit from simulation. Using DIS, soldiers can now train like they fight—in teams.

Prior to the introduction of DIS, simulation was used only in training for tasks such as

"VR-Link provided the flexibility and multiple platform support we needed"
Vince Golubic, MSEE, White Sands
Visualization Test & Analysis Facility

piloting an aircraft or operating a specific weapons system. A single soldier would train in a stand-alone, very expensive, high-fidelity simulator with the goal of learning one particular task. The only way for soldiers to train as teams was to send hundreds or thousands of troops with equipment to remote locations to conduct live training scenarios.

VR-Link is now being used extensively by many major U.S. military simulation programs. Beyond the military marketplace, VR-Link is being incorporated into PC- and web-based video games to provide multi-user, 3D, real-time functionality.

CCIR₁₄¼

PGEN_{14s4}

WCLX₁₆

ESCO₄

LTRE₃¼

Phase III Impact

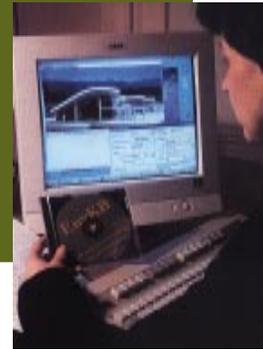
- 250 customers holding over 400 licenses
- Sales exceeding \$2.5M to date
- Specific customers include: Boeing; Lockheed-Martin; Northrop-Grumman; Raytheon; GTE Government Systems; and Hughes Aircraft.

U.S. Army
Simulation,
Training, and
Instrumentation
Command

Sottler
Henke
Associates,
Inc.
(SHAI)

Belmont
California

Eco-Software



SHAI has developed a full-scale environmental knowledge base (EnvKB) for operational use. The EnvKB is an aid for environmentally sustainable building design and specification, so facility designers and construction managers can incorporate environmental considerations into their decision processes.

EnvKB acts as a repository for environmental data, case studies of good environmental design, and provides a materials database. The system allows users to enter new facts about their project

and then retrieve pertinent design information based on this knowledge base. EnvKB also includes listings of regulated chemicals, recycling centers, and numerous other facts useful in sustainable design.

"The EnvKB acts as publishing mechanism for design ideas and case studies - knowledge can be shared within design community using EnvKB as the medium."

U.S. Army
Construction
Engineering
Research
Laboratories
(Corps of
Engineers)

MVSI₉

DEGE_{7½}

AXIM_{9½}

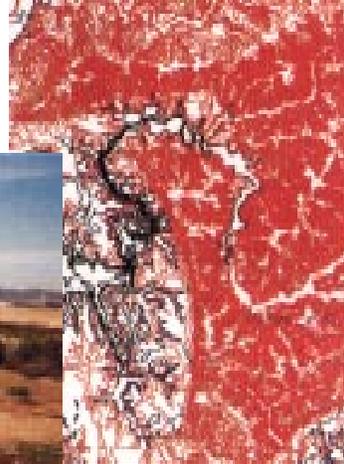
SCOP_{6½}

ABFS_{6¼}

Phase III Impact

- EPA and DOE have provided additional funding of \$440K
- Other contribution totaling \$70K received to date
- Distributed 700 units to members of the architectural and environmental design communities for review, education, and operational use.

Seeing Through Earth



Geophex,
Ltd.

Raleigh

North Carolina

Geophex, Ltd., created GEM-2, a new multi-frequency electromagnetic sensor. The Geophex ElectroMagnetic sensor is a hand-held, multi-frequency, electromagnetic induction instrument. GEM-2 is the only broad-band EM instrument currently available. The ability of GEM-2 to operate at multiple frequencies allows a pseudo 3-D distribution image of buried targets to be reconstructed which greatly enhances the detectability of small or complex targets beneath the Earth's surface.

"A revolutionary new geophysical sensor for environmental geotechnical investigation."

Gem-2 has already promoted new and innovative data acquisition procedures, and is only the beginning of a family of state-of-the-art EM instruments being developed and operated by Geophex.

GMRK9%

PAMX11s4

UPBN8

GILD3%

JSTN8%

Phase III Impact

- GEM-2 has been licensed to Geophysical Survey Systems, Inc., in New Hampshire for mass production and worldwide sale in 1997.
- Unit sells for \$14K, with expected sales of \$1.4M
- Opens a new dimension in data quality and quantity for characterizing buried subsurface features with EM instruments.

U.S. Army
Construction
Engineering
Research
Laboratories
(Corps of
Engineers)

Point
Research
Corporation

Santa Ana

California

You Are Here



Point Research Corporation developed a personal dead reckoning system which utilizes the Global Positioning System (GPS). This electronic dead reckoning capability will provide position information in dense jungles and urban canyons or even inside buildings and tunnels during EW jamming.

"You can't get lost with this thing!"

The PointMan™ Dead Reckoning Module (DRM) is a miniature, self-contained electronic navigation unit that provides the user's position (Latitude / Longitude) relative to an initialization point. The DRM is the first practical implementation of a drift-free dead reckoning navigation system for use by personnel on foot. Position errors are typically less than 3% of the distance traveled from the initialization point.

U.S. Army
Topographic
Engineering
Center
(Corps of
Engineers)

PARL₁₂

RLLY_{2½}

DLTK_{7½}

BROC_{12s4½}

CBCF_{6¼}

Phase III Impact

- U.S. Patent 5,583,776 awarded
- 27 evaluation units sold; \$55,000 in sales
- 1996 Army SBIR Phase II Quality Award Winner
- Potential commercial markets in navigation for the blind, medical monitoring and personnel tracking

Trucking On The Information Superhighway



"We can save our customers millions of dollars with our satellite-based tracking and communications system. This new technology affords customers an inexpensive way to track and monitor their trucks, trailers, and other mobile assets worldwide via the Internet."

Greg Pause, Program Manager, Torrey Science Corporation

Torrey Science Corporation has developed two-way data communication devices that will report location and monitor the operation of vehicles and heavy equipment. The system can also be tailored to monitor load, temperature, pressure, humidity, and other important variables. This means less downtime for the customer, more effective preventive maintenance, better tracking and theft prevention, and better scheduling of resources.

The Torrey Science communicator provides reliable connectivity using a satellite network. The network is a constellation of small Low Earth Orbit (LEO) satellites which

orbit 775 kilometers above the Earth. The low orbit permits the use of very small, inexpensive communicators which are not possible for traditional geostationary satellites. Commercial systems are currently being field-tested and certified for operation on Caterpillar heavy equipment to provide a global, wireless solution to the problem of tracking construction vehicles.

The system is ideal for applications requiring reliable communications in a small package, and is particularly useful for remote sites, isolated stations and unmanned equipment. Users can stay in touch with their equipment, no matter where it is around the globe.

IMPH_{3/4} DBAS_{7s2} VICL₂ CNTL₇ UICI_{2/4} BNT

Phase III Impact

- 60 units sold to date, \$75K in sales, Patent pending
- The potential market for this product is enormous—there are literally millions of trucks, tractors, trailers and tanks around the world.
- Torrey Science's product is specifically designed to handle very harsh operating environments including construction zones, battlefields, and other tough terrains.

Torrey
Science
Corporation

San Diego

California

U.S. Army
Communication
Electronics
Command

J.A.
Woollam
Company
Inc.

Lincoln
Nebraska

Controlled Composition



The J.A. Woollam Co. has found an optically-based way to control the manufacturing of sophisticated materials using the technique of ellipsometry. This technique helps to accurately control material processing parameters.

Microelectronic circuits are normally made using the semiconductor material silicon. Under Army SBIR support, J.A. Woollam used this technique to create a "chip" made on a very sophisticated material named "MCT" for use in night vision observation. MCT is

difficult to make reproducibly, but the utilization of ellipsometry accurately controls the material composition, growth temperature, and material thickness.

" The world-leader in manufacturer of low-cost multi-wavelength ellipsometers for material process control."

U.S. Army
Communication
Electronics
Command

USAP¹⁷

VIDA^{8½}

FNLY^{9½}

AVGN^{16s3½}

MTMC^{6¼}

Phase III Impact

- \$2.2 M in ellipsometers sales in the last 2 years.
- Multiple patents approved (5,521,706 and 5,504,582)
- 1996 recipient of the "Franklin-Jefferson Award" from the Small Business High Technology Institute for "Science, Technology, and Innovation."

Don't Touch That Dial!

Astron
Corporation

Stirling

Virginia



Conventional HF antennas (1.5 to 30 MHz) require tuning network couplers to achieve efficient transmission at different frequencies. Network couplers are expensive and require either motor-driven tuning inductors and capacitors or high voltage tuned diodes to achieve the desired tuning. The tuning time can approach one minute with the net result being delays in transmission and an inability to rapidly change frequencies to avoid jamming or to achieve significant anti-jamming capability.

Astron addressed these concerns and developed a series of innovative no-tuning broadband techniques which can be applied to aircraft, ship, vehicular, and

"Improved performance since it can operate over all frequencies, coincidentally ideal for frequency hopping communications, anti-jam and jamming systems."

ground antennas. A 16-foot antenna was built for the Army for vehicular- and ground- portable applications. Other versions include 25-foot and 35-foot antennas for use on buildings, ships- and a 50-foot long wire version exists for large aircraft. The technology is capable of applications at frequencies up to microwave frequencies.

IAAI_{2¼} CORE_{12s3} VCA₁₅ FFG₁₃ RADIF_{4¼} ME

U.S. Army
Communication
Electronics
Command

Phase III Impact

- Over 100% increased reliability due to elimination of conventional tuning network couplers
- \$275K in sales to date
- Broad coverage patent granted for a variety of applications and frequencies

Continued SBIR Success

Phase III represents the successful culmination of an SBIR project. Phase II success is measured by whether the prototype product or service developed by the small business can meet an Army need; however, in Phase III, the small business must develop the prototype into a successful product which can be marketed and sold outside of the SBIR Program. Phase III revenues can be obtained from Government or private customers, and cannot use SBIR funds (reserved for Phase I and II).

The Army SBIR Program has sponsored many efforts which have successfully entered the Phase III commercialization stage. The Department of Defense and Army surveys have reported 107 Army companies which have achieved Phase III sales. Our Phase III companies and their total sales to date are listed below (\$242.3M and counting). We have also taken this opportunity to update some of the Phase III information we have reported in previous years. Many of the companies we highlighted in previous versions of our accomplishments brochure still enjoy continued success and product sales.

ADVANCED MOTION CONTROL
\$230,000

ADVANCED ROTORCRAFT
TECHNOLOGY, INC.
\$8,000,000

ADVANCED TECHNOLOGY &
RESEARCH, INC.
\$40,250

AERODYNE RESEARCH, INC.
\$50,000

ALPHATECH, INC.
\$30,000

ALTERNATIVE SYSTEM CONCEPTS
\$600,000

AMHERST SYSTEMS, INC.
\$1,200,000

ANACAPA SCIENCES, INC.
\$748,000

ASTRON
\$375,000

AURORA OPTICS, INC.
\$25,000

CAPE COD RESEARCH, INC.
\$80,000

CARDINAL SCIENTIFIC, INC.
\$1,500

CHEMETEK
\$10,000

COLEMAN RESEARCH
CORPORATION
\$500,000

COMPUTATIONAL MECHANICS
CORPORATION
\$130,000

CONTINUUM DYNAMICS, INC.
\$120,000

DEDICATED ELECTRONICS, INC.
\$5,059

DEFENSE RESEARCH
TECHNOLOGIES, INC.
\$200,000

DELTA INFORMATION SYSTEMS, INC.
\$550,000

DESE RESEARCH, INC.
\$1,129,270

EIC LABS, INC.
\$7,331,000

ENSCO, Inc.
\$1,100,000

ESSEX CORPORATION
\$80,000

EXTERIOR WALLS SYSTEMS, LTD.
\$100,000

FERMIONICS CORPORATION
\$3,500,000

FLOW, INC.
\$10,000

SRS Technologies
Their computer display
technology has resulted in
contracts valued at \$1.2M
and \$700K sales to date.

FOSTER-MILLER, INC.
\$605,000

GEO-CENTERS, INC.
\$100,000

GEOPHEX, LTD.
\$2,000,000

GINER, INC.
\$250,000

GRADIENT LENS CORPORATION
\$1,500,000

H&N INSTRUMENTS, INC.
\$50,000

HYPRES
\$699,349

IAP RESEARCH, INC.
\$20,000

II-VI, INC.
\$10,000,000

INDUSTRIAL QUALITY, INC.
\$52,000

INFORMATION RESEARCH LAB, INC.
\$20,000

INTEGRATED SENSORS, INC.
\$1,500,000

ANALYTICAL METHODS, INC.
\$1,105,000

ANALYTICAL SOFTWARE INC.
\$150,000

APPLIED LOGIC SYSTEMS, INC.
\$25,000

APPLIED TECHNOLOGY ASSOC., INC.
\$11,000

ARCHITECTURAL ENERGY
CORPORATION
\$1,600,000

ASPEN SYSTEMS, INC.
\$100,000

**Integrated Sensors
Incorporated**
As a result of their SBIR project
with the Aviation & Missile
Command, ImageExpress has
demonstrated sales of \$1.5M

Hypres
New Josephson Array Voltage
Standard Products include 1
volt and 10 volt chips. Chip
sales to date exceed \$540K.



INTEGRATED SYSTEMS RESEARCH CORPORATION
\$75,000

INTEGRATED SYSTEMS, INC.
\$70,826,000

INTERSCIENCE, INC.
\$230,000

IONWERKS
\$300,000

J.A. WOOLLAM COMPANY, INC.
\$2,200,000

KARTA TECHNOLOGY, INC.
\$2,000,000

KVH INDUSTRIES, INC.
\$2,500,000

LASER-GENICS CORPORATION
\$10,000

LASER SCIENCE, INC.
\$2,500,000

LIGHTWAVE ELECTRONICS CORPORATION
\$13,530,000

MAK TECHNOLOGIES, CIN.
\$2,500,000

MANATECH, INC.
\$15,000

OPHIR CORPORATION
\$21,591,546

OPTELECOM, INC.
\$300,000

ORTEL CORPORATION
\$500,000

PERII SYSTEMS, INC. (formerly Perii, Inc.)
\$195,000

PHOTONIC SYSTEMS, INC.
\$350,000

PHYSICAL OPTICS CORPORATION
\$637,000

PHYSICS MATHEMATICS & COMPUTERS, INC.
\$80,000

POINT RESEARCH CORPORATION
\$55,000

PRECISION COMBUSTION, INC.
\$400,000

PRECISION NAVIGATION, INC.
\$6,000,000

PREDICTION SYSTEMS, INC.
\$7,000,000

PROSPECTIVE COMPUTER ANALYSTS, INC.
\$3,000,000

QUANTEX CORPORATION
\$12,000

QUANTIC INDUSTRIES, INC.
\$700,000

RADIATION MONITORING DEVICES, INC.
\$3,300,000

RALCON CORPORATION
\$198,000

REDZONE ROBOTICS, INC.
\$80,000

ROOS INSTRUMENTS
\$10,000,000

SATCON TECHNOLOGY CORPORATION
\$190,000

SCIENTIFIC RESEARCH ASSOC., INC.
\$309,000

SCIENTIFIC TECHNOLOGY, INC.
\$100,000

SENTEC CORPORATION
\$300,000

SILICON DESIGNS, INC.
\$65,000

SOFTWARE PRODUCTIVITY SOLUTIONS, INC.
\$100,000

SONEX ENTERPRISES, INC.
\$600,000

SOUTHWEST SCIENCES, INC.
\$560,000

SPARTA, INC.
\$225,000

SPECTRA RESEARCH, INC.
\$31,000

SRICO
\$330,000

SRS TECHNOLOGIES CO.
\$1,129,000

SSG, INC.
\$2,690,000

STOTTLER HENKE ASSOCIATES, INC. (SHA)
\$510,000

SUNREZ CORPORATION
\$200,000

TDA RESEARCH
\$1,400,000

TECHNICAL SOLUTIONS, INC.
\$7,575,000

TEXAS RESEARCH INSTITUTE
\$134,000

TORREY RESEARCH
\$75,000

TRIFID CORPORATION
\$250,000

UNIVERSAL SENSORS
\$187,000

VEXCEL CORPORATION
\$343,000

VHG LABS, INC.
\$3,000

VISTA CONTROLS CORPORATION
\$16,000,000

WILFRED BAKER ENGINEERING, INC.
\$60,000

**Prospective
Computer Analyst**
Quality Assurance (ESQA)
software has continued
growth with overseas sales
doubling in 1997 and more
than \$30 Million in contracts
received from the DoD.

**Texas Research
Institute Austin, Inc.**
Received patent notification
on DECON-Check™, added 8
additional distributors, and
reported \$31K in sales to date.

MATERIALS & ELECTROCHEMICAL RESEARCH
\$117,000

MICRO ANALYSIS & DESIGN
\$20,000

MICROWAVE MEDICAL SYSTEMS, INC.
\$1,345,000

MILLIMETER WAVE TECHNOLOGY, INC.
\$3,050,000

MIOX (former Los Alamos Tech. Assoc.)
\$3,500,000

MISSION RESEARCH CORPORATION
\$795,000

NEW HORIZONS DIAGNOSTICS
\$3,000,000

NOISE COM, INC.
\$650,000



Aspen Systems, Inc.
Their Thermoelectric Fan
(TEF) saves enough fuel to
pay for itself in less than a
year. Total revenues
already exceed \$100K.



These two pages contain a listing of the companies highlighted within this brochure. If you would like more information, please feel free to contact them directly. . .

Aspen Systems, Inc.

Hamed Borhanian
 184 Cedar Hill Street
 Marlborough, MA 01752
 (508)481-5058
 (508)480-0328 fax
 www.aspensystems.com

Astron Corporation

Joseph R. Jahoda
 22560 Glenn Drive, Suite 114
 Sterling, Virginia 20164-4440
 (703)450-5517
 (703)450-9753 fax
 www.astronantennas.com
 aston@erols.com

ENSCO

Michele Pennington
 5400 Port Royal Road
 Springfield, VA 22151
 (703)321-4630
 (703)321-4529 fax
 pennington@ensco.com

Geophex, Ltd.

I.J. Won, Ph.D.
 605 Mercury Street
 Raleigh, North Carolina 27603-2343
 (919)893-8515

HYPRES

John Coughlin
 175 Clearbrook Road
 Elmsford, NY 10523
 (914)592-1190

Ionwerks

Ketti Eipers-Smith
 2472 Bolsover, Suite 255
 Houston, TX 77005
 (713)522-9880
 (713)522-6735 fax
 www.ionwerks.com

J.A. Woollam Company, Inc.

John A. Woollam
 645 M Street, Suite 102
 Lincoln, NE 68508
 (402) 477-7501

MÄK Technologies, Inc.

Sue Hoxie
 185 Alewife Brook Parkway
 Cambridge, MA 02138
 (617)876-8085 x136
 (617)876-9208 fax
 shoxie@mak.com

Commercialization: the stage a product is in when, following testing and changing as deemed necessary, it is to be brought to the market with a full promotional campaign, either grand or small, regional or national.

ABOR	..	56	1378	31%	30%	30%	-	1/2
ABAX	..	..	828	4	34%	34%	-	1/2
ABEK	.40	1.3	15	154	30%	30	30%	+ 1/2
ABND	..	98	54	17%	16%	17%	+ 1/2	
ABTE	..	cc	605	9%	8%	9%	+ 3/4	
ABRI	.16a	2.3	9	4	7	7	-	3/4
AXAS	..	40	45	14%	14%	14%	-	3/4
ACRI	..	dd	243	8%	7%	8%	-	1/2
ACLE	..	14	303	3%	3%	3%	+ 1/2	

Profit the reward to
the entrepreneur for
assuming the risks of
establishing, operating,
and managing of a
given enterprise or
undertaking

Point Research Corp

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ROI: return on investment; the
amount earned in direct
proportion to the capital invested.

ABCR	..	56	1378	31%	30%	30%	-	1/2
ABAX	..	..	828	4	34%	34%	..	..
ABBK	.40	1.3	15	154	30%	30	30	..
ABND	..	88	54	17%	16%	17	..	..
ABTE	..	cc	605	9%	8%	9	..	..
ABXX	..	..	..	7	7	7	..	..
ABYS	..	..	..	14%	14%	14	..	..
AC	..	..	..	7%	7%	7	..	..
AC	..	..	..	3%	3%	3	..	..
ACLY	..	..	..	13%	13%	13%	-	1/2
AC	..	..	..	7%	7%	7	..	..
AC	..	..	..	31%	31%	31	..	..

SBIR Phase II Quality Awards Program



The Army conducts an annual awards program to recognize SBIR Phase II (Research and Development Phase) efforts which exemplify the SBIR goal of bringing innovative technologies and products to the marketplace. All Army SBIR Phase II companies whose projects conclude in a given fiscal year are eligible to compete for that year's quality awards. Award winners are selected based on the following three criteria: originality and innovation of research; relevance of the research to the Army mission; and immediate commercialization potential of the research, reflecting the primary goal of bringing technology and products to the marketplace.

Each year, the Army selects the five most exceptional Phase II projects and presents awards at a formal awards banquet. The SBIR Quality Awards ceremony is a part of the biannual Army Science Conference Awards ceremony and dinner in years when that conference is held. During off-years, the awards ceremony is held at a suitably prestigious location in the Washington, DC area. A senior Army Science and

Technology official presents the awards to the SBIR companies as well as to their sponsoring Army organization's Technical Director, SBIR manager, and contract Technical Monitor. Phase II Quality Award winners may be nominated for other external or Department of the Army awards.

The Army SBIR Program Management Office ensures that noteworthy Phase II projects receive widespread recognition. The office prepares an SBIR Phase II Quality Award Winners Pamphlet recognizing the top five projects. These pamphlets are distributed at all conferences and other meetings at which the SBIR Program participates, providing visibility and potential marketing opportunities for the award winners within the Army and DoD communities, as well as in the private sector.

The Army Phase II Quality Awards are sponsored by the Deputy Assistant Secretary of the Army for Research and Technology. The Army SBIR Program Management Office is responsible for executing the awards program.

On the next page is a listing of the Quality Award Winners for 1997. Congratulations to all of these companies!



1997 Quality Award Winners

Daniel H. Wagner Associates, Inc.

Computer Security Using Automated
Speech Identification

Sponsored by: US Army Tank-automotive
and Armaments Command, Picatinny
Arsenal, NJ

Focused Energy Holding Co.

Guided Landing of Unmanned Aerial
Vehicles

Sponsored by: US Army Missile Command ,
Huntsville, AL

InnovaTech, Inc.

Advanced Engine Protection

Sponsored by: US Army Aviation and Missile
Command, Ft. Eustis, VA

Materials Resources, Inc. (MRI)

Wear Resistant Coatings

Sponsored by: US Army Tank-automotive
and Armaments Command, Picatinny
Arsenal, NJ

TDA Research, Inc.

Self-Heating Foods

Sponsored by: US Army Soldier Systems
Command, Natick, MA

1996 Quality Award Winners

Computer Graphics System Development Corporation

Texture True

Sponsored by: U.S. Army Topographic
Engineering Center

J.A. Woollam Company, Incorporated

Precision Monitoring

Sponsored by: U.S. Army Communications-
Electronics Command

Electrokinetics, Incorporated

Green Dirt

Sponsored by: U.S. Army Waterways
Experiment Station

Dive Laboratories, Incorporated

Virtual Infantry

Sponsored by: U.S. Army Simulation,
Training, and Instrumentation Command

Point Research Corporation

Point and Navigate

Sponsored by: U.S. Army Topographic
Engineering Center

1995 Quality Award Winners

Intelligent Text Processing, Inc.

Virtual Intelligence Software

Sponsored by: U.S. Army Research
Laboratory

S-TRON

Soldier's Personal Adaptive Monitor

Sponsored by: U.S. Army
Communications-Electronics Command

Integrated Optical Circuit Consultants

Optical Integrated Circuit

Sponsored by: U.S. Army Aviation and
Missile Command, Huntsville, AL

Powdered Materials Applications, Inc.

Universal Joint

Sponsored by: U.S. Army Tank-automotive
and Armaments Command

Surfaces Research

High Temperature Diesel Tribology System

Sponsored by: U.S. Army Tank-automotive
and Armaments Command

1994 Quality Award Winners

Analytic Power Corporation

Mobile Electric Power

Sponsored by: U.S. Army Soldier Systems
Command

Elatech, Inc.

Military Disease Hazards

Sponsored by: U.S. Army Medical Research
and Materiel Command

Iterated Systems, Inc.

Fractal Image Compressions

Sponsored by: U.S. Army Research
Laboratory

Ralcon Corporation

Catface Stereo HMD

Sponsored by: U.S. Army Research
Laboratory

Yankee Scientific, Inc.

Diesel Fueled Refrigerator

Sponsored by: U.S. Army Soldier Systems
Command, Natick, MA





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US Army

Small Business Innovation Research

Commercialization

1997

