



Ballistic Missile Defense Organization SADBU



UPDATE

A Quarterly Newsletter for Small Businesses

VOLUME II NUMBER I

SMALL AND DISADVANTAGED BUSINESS UTILIZATION

MARCH 2000

Irvine Sensors Corp. Profile of a SBIR Small Business



James D. Evert
President and CEO

Irvine Sensors Corporation (ISC), headquartered in Costa Mesa, CA, is the award-winning inventor of three-dimensional (3D) semiconductors and the SIRComm® technology used for wireless infrared (IR) communications. Founded in 1980, the company pioneered the development of advanced signal processing and image stabilization technologies for focal planes. Today, Irvine Sensors continues to develop advanced technologies for 3D stacked integrated circuits, flexible circuits, systems-in-cubes for embedded applications, miniaturized sensors and sensor readout circuitry, miniature cameras, optical interconnections, image processing and recognition devices, and low-power

continued on page 7

HBCU/MIs

To follow-up on the set-aside research awards made to HBCU/MIs based on the 1999 Broad Agency Announcement, an investigative team comprising of representatives from the Science and Technology Deputate, the Office of Small and Disadvantaged Business Utilization, and the Test, Simulation and Evaluation Deputate will visit the following campuses and meet with Principal Investigators. It is anticipated that the following campuses will be visited during the calendar year 2000.

- Clark Atlanta University
- Florida International University
- Fisk University
- City College of New York
- University of New Mexico
- University of Puerto-Rico,
Mayaguez
- Morgan State University
- Howard University
- Norfolk State University

Recent New Awards

On November 1, 1999, EER Systems, Inc., a woman-owned small disadvantaged business, was awarded a contract, valued at \$18,009,818, to provide research, analysis, and technical support to the Program Operations Deputate's core program functions, which include: planning and control, cost estimating and analysis, financial management, information systems, and review and audit. The contract has a seventeen-month base period with no options and is scheduled to end on April 30, 2001.

On December 1, 1999, Welcom Software Technology, a small business, was awarded a purchase order, valued at \$69,400.00, for providing Open Plan Professional Software Version 2.1 B Stand Alone as well as training for Open Plan Basic and Open Plan Advanced. The order had a one-month base period with no options and ended on January 1, 2000.

On February 14, 2000, Radisson Resort Parkway was awarded a purchase order, valued at \$2,500.00, for providing supplies and services for the Fourth Annual BMDO Business Management Review. The order had a four-day base period with no options and ended on February 18, 2000. ♦

Inside This Edition

Director's Message	2
BMDO News	3
SBA News	4
Update on Small Business	4
Internet News	5
Legislation/Regulation Update	6
Calendar of Events	8

Director's Message



Stephen M. Moss
Director/SADBU

In an effort to provide a meaningful and comprehensive event for small businesses, the BMDO Small Business Day has been rescheduled for the month of May. It was determined that the first BMDO Small Business Day hosted by the Office of Small and Disadvantaged Business Utilization (SADBU) and the Procurement Technical Assistance Program (PTAP) will focus on women-owned small businesses (WOSBs). This event, which is scheduled to be held at George Mason University, is designed to assist WOSBs learn how to compete for BMDO prime contracting funds, as well as build relationships with representatives from large and small businesses that are currently prime contractors for possible subcontracting opportunities.

Over the past few years, the President, the Congress and the Small Business Administration (SBA) have put special emphasis on helping women-owned small businesses grow and develop into viable government contractors. All Federal government agencies have been assigned a goal of awarding five percent of procurements to WOSBs. BMDO is committed to meeting this challenge, which is the reason that the first BMDO Small Business Day will focus on WOSBs.

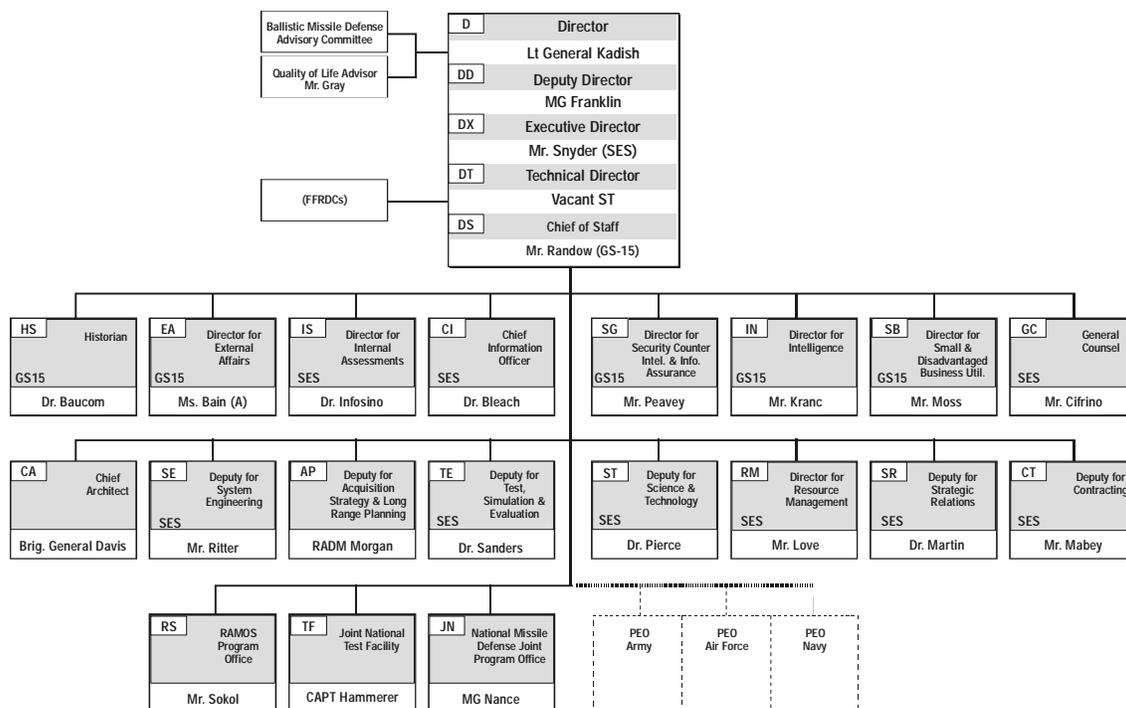
Several resources are available to help WOSBs learn about government contracting procedures and provide a network with other women-owned small businesses. There is a list of Web Sites in our Internet News section that are geared to serving the WOSB community. My staff and I are continually seeking innovative ways to locate and develop procurement relationships with WOSBs. Women-owned small businesses, who are new to Department of Defense contracting, are encouraged to participate in upcoming DoD and BMDO small business events.

Again, this Small Business Day event is one of many that have been planned to help BMDO meet its goals of doing business with small, small disadvantaged, women-owned, and HUBZone small businesses.

Additionally, my staff and I have put together a plan in an effort to be more proactive in seeking out WOSBs for BMDO procurements. WOSBs are strongly urged to keep a watchful eye on the BMDO BARBB Web Site for procurements that fit their capabilities. The BARBB site may be accessed at: <http://www.acq.osd.mil/bmdo/barbb/barbb.htm>. ♦

BMDO Organizational Changes

In December 1999, the BMDO reorganization was finalized. Due to the extensive changes, we are printing the most recent organizational structure shown below.



BMDO NEWS . . . BMDO NEWS . . .

BMDO's SBIR Receives More Than 680 Proposals

The Ballistic Missile Defense Organization's (BMDO) Small Business Innovation Research (SBIR) Program office received 684 Phase I proposals in 16 topic areas in response to the Department of Defense's SBIR Solicitation Number 2000.1. The solicitation closed on January 12, 2000, and the evaluation and selection process is underway. The following is a preliminary breakout of the number of Phase I proposals received in each topic area:

Topic No.	Description of Topic	Proposals Received
1	Directed Energy Concepts and Components	46
2	Kinetic Energy Kill Vehicles and Components	21
3	Sensors	107
4	Manufacturing Sciences and Technology/Unit Cost Reduction	33
5	Non-Nuclear Power Sources and Power Conditioning	46
6	Propulsion and Logistics Systems	26
7	Thermal Management	29
8	Survivability Technology	06
9	Lethality and Vulnerability	05
10	Computer Architecture, Algorithms, and Models/Simulations	59
11	Optical Computing and Optical Signal Processing	36
12	Structural Concepts and Components	29
13	Structural Materials and Composites	53
14	Electronic Materials	87
15	Superconductivity Concepts and Materials	12
16	Surprises and Opportunities	89

Check the BMDO SBIR Web Site for additional information. The address is: <http://www.winbmdo.com/>.

STTR Program

On January 4, 2000, the Small Business Technology Transfer (STTR) program solicitation was posted on the DoD SBIR/STTR Web Site at http://www.acq.osd.mil/sadbu/sbir/00/dod_sttr00.htm, as indicated in the December 1999 issue. The BMDO STTR topic for the 2000 solicitation is Electronics and Photonics. Proposal submissions opened on March 1, 2000, and will close on April 12, 2000. For updated information, be sure to check the BMDO SBIR Web Site at <http://www.winbmdo.com>.

The DoD STTR Solicitation can be downloaded from the following Internet address: http://www.acq.osd.mil/sadbu/sbir/00/dod_sttr00.htm. ♦

PROCUREMENT OPPORTUNITIES

Visit the BMDO Acquisition Reporting Bulletin Board (BARBB) on the Internet
<http://www.acq.osd.mil/bmdo/barbb/barbb.htm>

SBA NEWS

The following was a Small Business Administration news release published on January 28, 2000.

SBA Answer Desk Now Offers E-Mail Service For Small Business Entrepreneurs

WASHINGTON - America's 25 million small business owners and future entrepreneurs can now e-mail their questions about starting and growing their businesses to the U.S. Small Business Administration (SBA). SBA has expanded its Answer Desk service to the Internet.

The new service builds on SBA's toll-free telephone Answer Desk Service, which handles nearly 3,000 information requests each week. Ten business information assistants, who answer specific business questions and provide information on SBA programs and assistance, staff the Answer Desk, located in Charlotte, North Carolina.

The new service will allow persons seeking answers to business questions to e-mail their requests through the SBA website – www.sba.gov – 24 hours a day, seven days a week. In addition, telephone callers can speak with a business information assistant during regular operating hours.

"Our mission is to help people start and grow their businesses. The expansion of the Answer Desk to the Internet is the latest example of our effort to provide greater access to SBA's programs and services. Now a small business person can ask specific questions, day or night, with the click of the mouse," said SBA Administrator Aida Alvarez.

Besides answering specific questions, the Answer Desk staff directs callers to the wide range of publications and information resources available through their local SBA office and at the SBA website.

"Not all questions are easy ones," said Lee Cornelison, SBA district director in North Carolina. "We answer questions such as 'How do I start a business?' or 'How do I get a loan?' immediately. Some others require research. We're averaging nearly 3,000 calls each week and the goal of our Answer Desk staff is to respond to all questions within one work day," he said.

Answer Desk operating hours are 9:00AM – 5:00 PM, Eastern Time, Monday through Friday. The toll-free number is 1-800-U-ASK-SBA (1-800-827-5722). Spanish-speaking business specialists are available at the Answer Desk.

The Top Ten Most Frequently Asked Questions

1. How do I get a small business loan?
2. How do I get a small business grant?
3. How do I get started in business?
4. How do I get a business license?
5. How do I get a tax identification number?
6. How do I write a business plan?
7. What type of collateral do I need for a loan?
8. Is there any small business assistance available in my area?
9. What classifies a business as "small"?
10. How can I get my business certified as woman- or minority-owned?

Update on Small Business

The following was a House of Representatives' Small Business Committee press release published on January 6, 2000.

COMMITTEE "DISAPPOINTED" BY DEPARTMENT OF DEFENSE ACTION ON CONTRACT BUNDLING Committee Plans to Continue a Dialogue with the DoD

WASHINGTON, DC – Noting that small business owners across the nation are still waiting for definitive and clear answers, House Committee on Small Business Chairman, Jim Talent (R-Mo.) and Ranking Minority Member, Representative Nydia Velazquez (D-NY) have stated that they will continue to probe the Department of Defense (DoD) for additional information regarding the Flexible Acquisition and Streamlining Tool (FAST) program proposed at Warner Robins Air Force Base in Georgia.

Chairman Talent, who received two separate responses to earlier inquiries about the proposed bundle from the Honorable David Oliver, Principal Deputy Undersecretary of Defense, stated, "Based upon a preliminary review of the documents forwarded to us in the DoD's response, the Committee is disappointed. It appears that Oliver is attempting to "backtrack" from the clear declaration that he made before the Committee at the November 4th hearing where he noted that the FAST contract was, indeed, a bundle. As a result, the House Committee on Small Business will be continuing to have a dialogue with DoD officials in an effort to determine any potential negative effects that the FAST contract or other bundles could have on the future of small business in the federal contracting and procurement arena."

Continued on Page 5

Note This

DoD Subcontracting Plan Test Program Extended

On January 25, 2000, the Department of Defense (DoD) issued a notice in the *Federal Register*, to amend its Test Program for Negotiation of Comprehensive Small Business Subcontracting Plans. This notice implements Section 817 of the National Defense Authorization Act for Fiscal Year 2000, which provides for a five-year extension of the Test Program from September 30, 2000 to September 30, 2005.

The Test Program, which began October 1, 1990, is designed to determine whether the negotiation and administration of comprehensive small business subcontracting plans will reduce administrative burdens on contractors while enhancing subcontracting opportunities for small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals under DoD contracts. This notice became effective on January 24, 2000. ♦

Update on Small Business

(cont'd from page 4)

Contract bundling is the federal government's policy of consolidating procurement contracts into a single, large contract. Unfortunately, these bundling efforts effectively exclude many small businesses from competing in the procurement process. The request for clarification on the FAST program was requested following a November 4th hearing held by the Committee to determine the affect that contract bundling has on small business. At that hearing, Members specifically expressed great concern over the effects that large contract bundles would have on the DoD's plans to meet its goal to promote small business in the federal procurement arena.

Internet News

Some Useful Internet Addresses

Web Site Highlight

To contribute to the economic success of Women-Owned Small Business (WOSB), the Department of Defense developed the Women-Owned Small Business Program and created the WOSB Web Site, which went online in May 1998. This site has information on the WOSB Program, procurement information and opportunities, DoD Points of Contact, and other WOSB resources. This Web Site may be accessed at: <http://www.acq.osd.mil/sadbu/wosb/>.

Other Useful Web Sites:

- The Online Women's Business Center provides information to assist women-owned firms in all stages of development - <http://www.sba.gov/womeninbusiness/>
- The National Women's Business Council was established to promote bold initiatives, policies and programs designed to support women's business enterprises at all stages of development in the public and private sector marketplaces - <http://orgs.womenconnect.com/nwbc/>
- The Women's Business Enterprise National Council (WBENC) is dedicated to enhancing opportunities for women's business enterprises in America's major business markets - <http://orgs.womenconnect.com/wbenc/>
- The BMDO home page: <http://www.acq.osd.mil/bmdo/>
- The BMDO Small and Disadvantaged Business Utilization home page: <http://www.acq.osd.mil/bmdo/bmdolink/html/sadbu.html>
- The BMDO Acquisition Reporting Bulletin Board: <http://www.acq.osd.mil/bmdo/barbb/barbb.htm>
- The BMDO Chief Information Officer's home page: <http://www.acq.osd.mil/bmdo/ciomod/>
- The BMDO Technical Information Center: <http://www.acq.osd.mil/bmdo/bmdolink/html/tic.html>
- The BMDO Office of Technology Applications: <http://www.acq.osd.mil/bmdo/bmdolink/html/transfer.html>

Legislation/Regulation Update

Small Business Size Standards

On January 26, 1999, the Small Business Administration (SBA) published a proposed rule, in the Federal Register, to amend its small business size regulations. This proposed rule would require government agencies to consult with the SBA in writing before proposing small business size standards for use in its programs, if those standards vary from those established by the SBA. This proposed rule, requested comments be submitted on or before March 27, 2000, to be considered in the formulation of the final rule.

Small Business Innovation Research Program Reauthorization Act of 1999 (H.R.2392)

Rep. James Talent (R-MO) introduced this Bill to the House of Representatives on June 30, 1999. The purpose of this Act is to amend provisions of the Small Business Act concerning the Small Business Innovation Research (SBIR) Program (a program providing a portion of Federal research and development funding to small businesses) to: (1) extend the SBIR until September 30, 2007; (2) require an annual SBIR report to be submitted to the House Committee on Science; (3) require the Administrator of the Small Business Administration (SBA) to revise certain SBIR policy directives concerning funding awards; and (4) direct each Federal agency required to establish a Small Business Technology Transfer Program to include in its annual performance plan a section on its SBIR. The Bill passed the House of Representatives on September 27, 1999, and was referred to the Senate Small Business Committee on September 28, 1999. No further action on this Act has been reported.

.....
Federal Acquisition Circular (FAC) 97-15 was issued on December 27, 1999 and amends the Federal Acquisition Regulation (FAR) as follows:

Contract Bundling – Item III

This interim rule amends Parts 2, 4, 5, 7, 10, 15, and 19 of the FAR to implement Sections 411 – 417 of the Small Business Reauthorization Act of 1997 (Public Law 105-135). Sections 411 – 417 state that Agencies must:

(1) perform market research when bundled requirements are anticipated; (2) justify bundling in acquisition strategies; (3) meet specific estimated benefit thresholds before bundling requirements; (4) assess the impact of bundling on small businesses; (5) submit solicitations containing bundled requirements to the SBA procurement center representatives for review; and (6) include a source selection factor for the offerors' proposed use of small businesses as subcontractors and their past performance in meeting subcontracting goals. This interim rule became effective on December 27, 1999, and made a request for comments, which were due on or before February 25, 2000, to be considered in the formulation of the final rule.

SBA's 8 (a) Business Development (8 (a) BD) Program – Item VII

This final rule amends the interim rule published in the *Federal Register* on June 17, 1999 (64 FR 32742) as Item III of FAC 97-12. The final rule amends Parts 12, 19, and 52 of the FAR to conform to and implement revisions made to the Small Business Administration (SBA) regulations pertaining to its 8 (a) Business Development Program, contained in 13 CFR Parts 121,124, and 134. The final rule emphasizes the eligibility procedures for admission to the 8 (a) BD and contractual assistance programs. This rule became effective on December 27, 1999, after no public comments were submitted in response to the interim rule.

Special Simplified Procedures for Purchases of Commercial Items in Excess of the Simplified Acquisition Threshold – Item VIII

This final rule amends FAR subpart 13.5 to implement Section 806 of the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65). Section 806 amends Section 4202 (e) of the Clinger-Cohen Act of 1996 (Sections D and E of Public Law 104-106) to extend the expiration of the test of special simplified procedures for purchases of commercial items greater than the simplified acquisition threshold, but not exceeding \$5,000,000, through January 1, 2002. This rule became effective on December 27, 1999. ♦

Irvine Sensors Corp.

(cont'd from page 1)

analog and mixed signal circuits for diverse systems applications. In February 1997, a special solid state data recorder developed by NASA was retrofitted onto the Hubble Telescope, and includes 3D memory stacks from Irvine Sensors. The company holds over 60 US and foreign patents, and commercializes its technologies through independently-financed and managed subsidiaries.

The company has been led by President and CEO, James D. Evert, since February 1997. Mr. Evert is responsible for all facets of the corporation's business, including those of its subsidiaries. He has more than 25 years of management experience, and was with IBM and Fujitsu Microelectronics, Inc. before joining Irvine Sensors. Mr. Evert is a graduate of Syracuse University with a B.S. degree in Electrical Engineering. Irvine Sensors' technical direction is under the leadership of company co-founder, John C. Carson, Senior Vice President and Chief Technical Officer. Mr. Carson chairs the Irvine Sensors Scientific Advisory Board, which includes former BMDO Assistant Deputy for Technology, Dr. Dwight Duston. He also serves as Chairman of the Industrial Advisory Board for the Center for Neuromorphic Systems Engineering at the California Institute of Technology. Mr. Carson holds a B.S. in Physics from the Massachusetts Institute of Technology.

Irvine Sensors' Advanced Technology Division (ATD) is the company's core business and "product engine", and is responsible for the research and development of the company's advanced technologies and products. The Microelectronics Products Division (MPD) is the company's manufacturing arm. Established in 1997 to broaden Irvine Sensors' stacked product lines, MPD is focused on 3D microelectronics, using several proprietary chip-stacking technologies to dramatically reduce printed circuit board area.

Novalog, Inc. was Irvine Sensors' first subsidiary and founded in 1995. The company designs, develops, and sells wireless infrared communications products, with a focus on applications compatible with the standards of the Infrared Data Association (IrDA®). The company's second subsidiary, MicroSensors, Inc., was founded in 1997 and is focused on designing, developing and producing micromachined sensors and sensor readout circuits for MicroElectroMechanical Systems (MEMS) applications. Irvine Sensors' newest subsidiary, Silicon Film Technologies™, Inc., was founded in 1998 and formerly known as Imagek, Inc. The company designs, develops, and sells proprietary electronic film systems and other digital imaging products and services.

Irvine Sensors is most well known for its patented techniques for stacking microchips in a pancake-configuration to produce a 3-D chip stack. Stacking chips on top of each other reduces the length of chip interconnections, producing smaller, faster multi-chip modules. Recently, the U.S. Patent and Trademark Office awarded ISC a patent for its Neo-Stack™ technology, which permits different size and function microelectronics to be stacked and integrated in an extremely miniaturized unit. The resulting unit is an ultra-high-density, embeddable system. The process is not limited to conventional integrated circuit chips, but can be also be used with advanced technologies such as high-speed Gallium Arsenide circuitry as well as miniaturized optical, opto-electronic and electromechanical sensors . . . all "mixed and matched" within the same stack. A stackable neo-layer of several different chips including lasers and detectors has already been functionally demonstrated under a U.S. Army program to develop opto-electronic switches and processing modules. "Smart memory" sub-systems, such as those required for the BMDO-funded Silicon Brain program, are also an application for Neo-stacks.

Irvine Sensors and BMDO have a long history of developing neural network electronics together. Under BMDO-funded SBIR awards, the company developed neural network technology that utilized its chip-stacking processes. This led to BMDO funding of the Silicon Neuron Missile Seeker program that utilized Irvine Sensors' Three-dimensional Artificial Neural Network (3DANN™) technology to demonstrate a chip set and module for high speed image processing and target recognition. This work led to a Jet Propulsion Laboratory (JPL) contract and US Air Force SBIR awards for further development of the 3DANN technology and products, as well 3DANN's readiness for insertion into BMDO systems. Most recently, 3DANN has led to a BMDO-funded development contract for Irvine Sensors to demonstrate a superconducting digital router for high speed data communications. Expected to exploit TRW's BMDO-sponsored superconducting high speed switching technology, the planned "super switch" is expected to eliminate several bottlenecks experienced by today's Internet users and enhance fiber optics performance. ISC has developed four commercial 3DANN products: 1) 3DANN-R, a commercial version of the module; 2) the VIP/Balboa™ image processing board; 3) a daughter card accelerator for the VIP/Balboa; and 4) electronic image stabilization and enhancement software for video. The Silicon Brain program is a continuation of the collaborative efforts of Irvine Sensors and BMDO to further develop neural network electronics. ♦

CALENDAR OF EVENTS

April 9-12, 2000 **World Congress 2000**
Hyatt Regency Hotel
Crystal City, VA
For more information contact:
The National Contract
Management Association
www.ncmahq.org/congress2000

April 12, 2000 **Rep. Jim Moran's Procurement Fair**
Ft. Myer, VA
For more information contact:
Mary Miller
(202) 225-0017

May 1, 2000 **Defense Supply Service-Washington**
Hilton Hotel
Alexandria, VA
For more information contact:
Grace Foster
(703) 697-6024

May 5-7, 2000 **The National SBIR
Spring 2000 Conference**
Crystal Gateway Marriott Hotel
Arlington, VA
For more information contact:
teddy@seeport.com

May 17, 2000 **Ninth Annual Small Business
Opportunities Fair**
Naval Surface Warfare Center (NSWC) –
Dahlgren Division
Dahlgren, VA
For more information contact:
The National Small Business Council
(301) 596-0770

May 23, 2000 **BMDO Small Business Day**
(Rescheduled date)
By Invitation Only
PTAP Entrepreneurial Center
Fairfax, VA
For more information contact:
Sterling Tilley
(703) 921-1659

May 25, 2000 **Goddard Annual
Small Business Conference**
NASA Goddard Space Flight Center
Greenbelt, MD
For more information contact:
Crystal Davis
Crystal.e.davis.1@gsfc.nasa.gov

June 12-14, 2000 **33rd Annual Joint Industry/SBA
Procurement Conference**
Washington, DC
For more information contact:
The Small Business Administration
(202) 205-6465

**Oct. 30-
Nov. 1, 2000** **The SBIR Fall 2000 Conference**
Seattle, WA
For more information contact:
Sharon DelaBarre
sharon@zyn.com

Database Update

We continue to encourage small businesses that have submitted database forms to the BMDO Office of Small and Disadvantaged Business Utilization (SADBU) to inform this office about organizational changes as well as corporate qualifications, so that we can maintain an accurate profile of your capabilities for our outreach efforts. The SADBU database is updated on a continuous basis and is used as a source for matching appropriate small businesses with BMDO technical requirements. The database is also used as a mailing list for our quarterly newsletter, The SADBU Update. If your firm has had organizational changes that have not been passed on to this office, you may request and complete a small business database update form so that our records reflect current information about your firm. You may also download the

form from the BMDO SADBU home page on the Internet at <http://www.acq.osd.mil/bmdo/bmdolink/html/sadbu.html>

For those firms that are not currently in our database, you may either request a company profile form from the SADBU Office or go to the above web site. If your firm is interested in doing business with BMDO, a small business information packet, which contains information about contracting opportunities, is also available. You may obtain this information by contacting Stephen M. Moss by e-mail at stephen.moss@bmdo.osd.mil.

SADBU UPDATE is produced by McNeil Technologies, Inc.
for the Small and Disadvantaged Business Utilization Office of the
Ballistic Missile Defense Organization.

McNeil Technologies, Inc.
6564 Loisdale Ct., Suite 800
Springfield, VA 22150