



Integrating Small Business Innovation Research (SBIR) Developed Technologies into Boeing Products

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filling in **John Shakespeare**

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“Beyond SBIR Phase II: Bring Technology Edge to the Warfighter”

Arlington, VA

Boeing uses SBIR to discover, develop , evaluate emerging technology from non-traditional organizations

- Leading-edge technologies, new concepts, and small business experts potentially giving Boeing a competitive advantage**
- SBIR provides seed funding to small businesses for development and insertion of new technologies**
- Opportunity to grow the generation of future research topics to provide technology enabling new products and features.**
- Support by Boeing puts small businesses in a better competitive position as it demonstrates “commercialization potential”**
- SBIR is an extension of the same government customers with whom Boeing pursues new or expanded business**

Why Boeing Participates

- Able to build partnerships with small businesses in the development of technology as a part of the SBIR program
- Assists in meeting DoD small business program goals over the long term through participation in SBIR - “good faith effort”
- *Achieve “win - win” by helping small businesses be successful*



Boeing Participation

- **Phantom Works and IDS currently working with 28 small businesses on SBIR contracts**
 - 5 Phase I
 - 21 Phase II
 - 2 Phase III
- **Have worked with over 100 companies on over 200+ technology projects over the last 10 years**
- **Presence at 4 or 5 national or regional SBIR conferences each year**
 - **Approximately 10 personnel are here to speak with you one on one over the next two days**

Examples of Phase II SBIR Contract Support in 2006

- **Onboard Space Autonomy through Integration of Health Management and Control Reconfiguration**
- **Denial of Service Countermeasures Appliance for Computer Network Operations**
- **Advanced Flow Control Actuators for Fuselage Drag Reduction**
- **Nano Engineered Coatings**
- **Metal Rubber Protective Aircraft Coatings**
- **Target Scene Resolution and Calibration**
- **Modeling, Testing and Deploying a Multifunctional Radiation Shielding**
- **Real Time Fault Tolerant Computing for GMD**
- **Innovative Weight Efficient Combined Structural/Thermal Protection System**
- **Satellite Communication Links**
- **Nano Phase Powder Based Exothermic Braze Repair Technology**
- **Self Sensing Local/Global Structural Health Monitoring System**

Phase III Successes

- **Virtual Cockpit Development Program**
 - **Microvision, Inc as prime, Boeing as sub**
 - Awarded Phase I and II
 - Army awarded Phase III contract in Sep '99
 - Additional awards in 2000 and 2001
- **Advanced Adaptive Autopilot for JDAM**
 - **Guided Systems Technology as prime, Boeing as sub**
 - Awarded Phase I and II
 - Air Force awarded Phase III contract in Mar '01
- **Cruise Missile Autonomous Routing System (CMARS) for Tomahawk Mission Planning System**
 - **Scientific Systems Co, Inc as prime, Boeing as sub**
 - Awarded Ph I in Mar 1999, Ph II in Dec 1999
 - Navy Awarded Ph III in Oct 2004; Boeing awarded subcontract in 2006 – matched by Navair

Phase III Successes

- **Robust Image Based Navigation System for UAV**
 - **Scientific Systems Company, Inc, Boeing as sub**
 - Phase I and II from Navy
 - Phase III from awarded Jun 2007
- **Talon NAMATH GPS – SDB & JDAM Application**
 - **NAVSYS Corporation**
 - Phase I from Air Force
 - Phase III contracts awarded to NAVSYS and Boeing
 - Period of Performance – Nov 05 through Sep 06
- **Robust Surface Navigation (Network Assisted GPS)**
 - **NAVSYS Corporation**
 - Phase I and II awarded to NAVSYS by Army
 - Subcontract from Boeing - qualifies as a Phase III contract
 - DARPA & Air Force Program – PW White Space Project

Boeing SBIR Participants Advanced Systems & Technology

David Whelan - Enterprise Growth

Jeff Frericks - White Space Programs

Gail Taylor-Smith - Strategic Technologies

Brian Sisco - Product Development- P-8A

William Renton - Structures- 787

Mark Myers - Engineering Project Management

William Freiberg - Operations Analysis

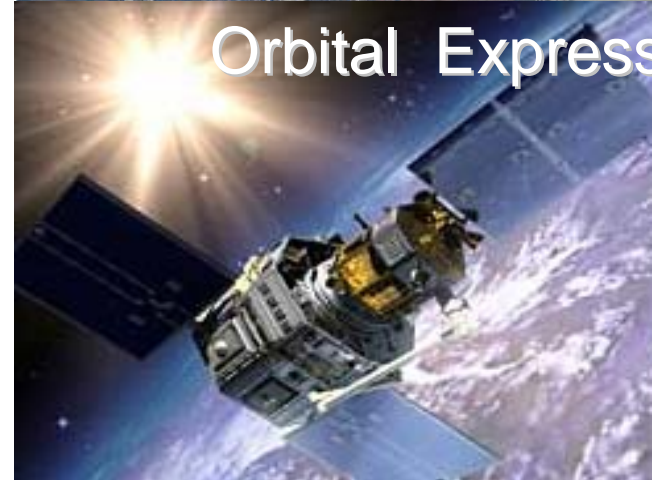
Timothy Coogan - Subsystem Development

Kay Blohowiak - Material Process & Physics

Per Beith - Global Broadband Systems

Raul Alvarado Jr - Supplier Diversity

Richard Hendel - SBIR Initiative Project Manager



Summary

- **The government's SBIR program continues to grow in importance each fiscal year**
- **IR&D can be enhanced for both small business and Boeing through SBIR partnerships**
- **A "long term" project with large payback potential**
- **Boeing is an active participant in the program and continues to search for technology and develop partnerships through the SBIR program and venues**

