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

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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.