Exhibit R-2, RDT&E Budget Item Justification						Date: February 2008	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity BA: 6				R-1 Item Nomenclature: PROGRAM: Small Business Innovation Research PROGRAM ELEMENT: 0605502S			
Cost ($ in millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	4.309	0.000	0.000	0.000	0.000	0.000	0.000
Project 1: DMEA	2.269	0.000	0.000	0.000	0.000	0.000	0.000
Project 2: DLA	2.040	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification:

Small Business Innovation Research (SBIR). The purpose of DoD's SBIR program is to harness the innovative talents of our nation's small technology companies for U.S. military and economic strength. The Small Business Innovation Research program funds early-stage R&D at small technology companies and is designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation

B. Program Change Summary:

	FY 07	FY 08	FY 09	FY 10
Previous PB 08	0.000	0.000	0.000	0.000
Current BES	4.309	0.000	0.000	0.000
Total Adjustment	4.309			
SBIR Transfer	4.309			

Change Summary Explanation:
FY07 - $2.269M from Microelectronics Technology Development and Support, PE 0603720S
$1.106M from Logistics R&D Technology, PE 0603712S
$0.122M from Deployment and Distribution Enterprise Technology PE 0603713S
$0.184M from Defense Technology Analysis PE 0605798S
$0.628M from Manufacturing Technology PE 708011S

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2008
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity BA: 6				Project 1, DMEA Small Business Innovative Research (SBIR) Program Element: 0605502S			
Cost ($ in millions)	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity	2.269	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification:

The Microelectronics Technology Development and Support efforts are to design, develop, and demonstrate microelectronics concepts, technologies, and applications to extend the life of weapon systems and to solve operational problems (e.g., reliability, maintainability, and performance) while addressing diminishing manufacturing sources. This includes providing for the development and long-term support structure necessary to ensure rapid prototyping, insertion, and support of microelectronics technologies into fielded systems. The Defense Microelectronics Activity **(**DMEA) provides technical and application engineering support for the implementation of advanced microelectronics research technologies from design through assembly and installation. The DMEA provides an organic capability to support these strategically important technologies within the DoD. These advanced technologies are translated into solutions for military needs. DMEA's SBIR program is comprised of a mix of studies, investigations, planning efforts, developments, and the fabrication of solutions.

B. Accomplishments/Planned Program

	FY 07	FY 08	FY 09	FY 10
Accomplishment/ Effort/Subtotal Cost	2.269	0.000	0.000	0.00
RDT&E Articles Quantity – N/A				

FY 2007 Plans: ($2.269)

- Topic DMEA07-1: High-Throughput Experimentation Physical Vapor Deposition (PVD) Chamber for Accelerated Microelectronics Materials Research and Development:

  The goal of this effort is to determine the feasibility of developing a PVD chamber capable of placing 100 or more tests sites on a single wafer. The deposition process at each site will be independently controlled. This will enable incremental variations in semiconductor process parameters. If successful, this will result in orders of magnitude reduction in both time and cost for the microelectronic research and development efforts. The objective of this topic is to develop a PVD chamber capable of depositing multiple material conditions in isolated areas on a single silicon wafer, enabling multiple experimental

data points to be accomplished rapidly on a single silicon wafer.

- Topic DMEA07-2: In-Line Characterization System for Advanced High K Dielectric / Metal Gate CMOS Transistor Stack for the Development of High Speed, Low Power Microelectronics:

- The key metrics necessary to accelerate the development and integration of advanced gate stacks are primarily electrical (e.g. work function, leakage, etc.). In order to measure these parameters today, wafers must be processed through the first metal layer in order to form electrical contacts. This measurement delay slows down the learning rate, which, in turn, impedes progress toward the effective integration of these high-performance structures. Using non-contact probes such as e-beams and specially designed test structures will enable these electrical measurements to be made in-line, immediately after the gate stack formation. Moving these measurements in-line will accelerate learning and result in more effective and cost-efficient integration of these new structures. The objective of this topic is to develop a contactless, in-line system to electrically characterize advanced high-K dielectric / metal gate CMOS transistor stacks

- Topic DMEA07-3: Ultra Low-Power Miniaturized Flexible Radio Optimized for Long-Term Battery Operation:

  A perfected ultra-low power flexible reconfigurable radio will enable timely fielding of task-specific radio transceivers, with the major development effort in software rather than hardware. The objective of this topic is to develop and demonstrate the design for a flexible, reconfigurable radio transceiver implemented on a microelectronic device that is suitable for long term operation (one year or more) on battery power.

C. Other Program Funding Summary: none

D. Acquisition Strategy: SBIR posting for Phase 1 and subsequent Phase 2 selection based on progress made and promise of approach. Proposals are being evaluated at this time

E. Major Performers: Unknown at this time

Exhibit R-2a, RDT&E Project Justification							Date: February 2008
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity BA: 6				Project 2, DLA Small Business Innovative Research (SBIR) Program Element: 0605502S			
Cost ($ in millions)	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 1: (Title & Acronym)	2.040	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification:

DLA's ability to deliver Americans the right logistics solution in every transaction requires more than successful management of the Department's wholesale supplies and suppliers. It requires supply chain excellence. Our military's ability to generate and sustain combat readiness indefinitely, anywhere on the globe requires that DLA-managed materiel flow seamlessly and as needed from the nation's industrial base to where it is ultimately used.

DLA's SBIR program seeks to solicit high-risk research and development proposals from the small business community. All selections shall demonstrate and involve a degree of technical risk where the technical feasibility of the proposed work has not been fully established. Phase I proposals should demonstrate the feasibility of the proposed technology and the merit of a Phase II for a prototype or at least a proof-of-concept demonstration. Phase II selections will be strongly influenced on future market possibilities and commercialization potential demonstrated.

B. Accomplishments/Planned Program

	FY 07	FY 08	FY 09	FY 10
Accomplishment/ Effort/Subtotal Cost	2.040	0.000	0.000	0.00
RDT&E Articles Quantity – N/A				

FY 2007 Plans: ($2.040) DLA Topic 07-01 Advanced Technologies for Discrete Parts Manufacturing seeks drastically lower unit costs of support through manufacturing revolutions that also have applicability to low and high volume production from commercial sales. This will result in an improvement in the affordability of these innovations to DLA and its customers and the development of cost effective methods to sustain existing defense systems while potentially impacting the next generation of defense systems

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: DLA was part of DoD SBIR solicitation 7.2. Proposals are being evaluated now.

E. Major Performers: To be determined