BUDGET JUSTIFICATION FOR PROGRAM ELEMENTS

OF THE

DEFENSE LOGISTICS AGENCY

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

Fiscal Year (FY) 2008/2009 Budget Estimates

FEBRUARY 2007

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
FISCAL YEAR (FY) 2008/2009 BUDGET ESTIMATES
PROGRAM ELEMENT SUMMARY (R-1)
(Dollars in Thousands)

February 2007

R-1 Line Item No.	Program Element Number	Title	Budget Activity	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
42	0603712S	Logistics R&D Technology Demonstration	03	51.910	58.838	18.736	19.314
43	0603713S	Distribution Process Owner (DPO) Technology Development and Implementation	03	9.857	15.158	0	0
45	0603720S	Microelectronics Technology Development and Support	03	118.383	92.554	0	0
59	0603805S	Dual Use Application Programs (NCMS/CTMA)	03	10.200	0	0	0
101	0603713S	Deployment And Distribution Enterprise Technology	05			25.000	25.000
126	0603712S	Generic Logistics R& D Technology Demonstrations	06			4.000	
152	0605798S	Defense Technology Analysis	06	6.991	7.947	0	0
226	0708011S	Industrial Preparedness/ ManTech	07	35.867	33.570	20.114	20.627
227	0708012S	Logistics Support Activities	07	2.859	2.901	2.846	2.866
		TOTAL - DIRECT		236.067	210.968	70.696	72.807

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				R-1 Item Nomenclature: Program Title: Logistics R&D Technology Demonstration Program Element: 0603712S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	51.910	58.838	18.736	19.314	19.637	20.362	20.790	21.137
Project 1: Medical Logistics Network (MLN)	2.859	2.937	2.900	2.951	2.849	2.926	2.984	3.031
Project 2: Weapon System Sustainment (WSS)	5.229	5.436	5.429	5.556	5.626	5.788	5.903	5.996
Project 3: Supply Chain Management (SCM)	1.892	3.705	2.672	2.840	3.070	3.300	3.365	3.418
Project 4: Strategic Distribution & Reutilization (SDR)	2.911	3.081	3.391	3.519	3.580	3.709	3.807	3.885
Project 5: Energy Readiness Program (ERP)	1.449	1.835	2.063	2.158	2.192	2.256	2.301	2.337
Project 6: Defense Logistics Information Research (DLIR)	2.274	2.326	2.281	2.290	2.320	2.383	2.430	2.470
Project 7: Other Congressional Adds (OCAs)	31.415	35.540	0	0	0	0	0	0
Project 8: Continuous Acquisition Lifecycle Support (CALS)	3.881	3.976	0.00	0	0	0	0	0

A. Mission Description and Budget Item Justification: The central idea of the Focused Logistics Joint Functional Concept "is to build sufficient capacity into the … sustainment pipeline, exercise sufficient control over the pipeline from end to end, and provide a high degree of certainty to the supported joint force commander that … sustainment, and support will arrive where needed and on time." The Defense Logistics Agency (DLA) R&D program helps achieve this vision by pioneering advanced logistics concepts and business processes that provides the leanest possible infrastructure, the use of the best commercial and government sources, and the application of business practices . The Logistics R&D program develops and demonstrates high risk, high payoff technology that will provide a significantly higher level of support at lower costs, than would be otherwise attainable. The program has a proven track record of implementation and benefits. One example is the DoD EMALL. DoD EMALL was the first web based, distributed architecture on-line ordering capability. It has been adopted by the Army, Navy and the Department of Homeland Security. DLA's overall R&D program has demonstrated positive net present value and a positive return on investment.

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3	R-1 Item Nomenclature: Program Title: Logistics R&D Technology Demonstration Program Element: 0603712S

B. Program Change Summary:

	FY 2006	FY 2007	FY 2008	FY 2009
Previous PB 07	51.815	23.437	20.407	20.868
Current BES	51.910	58.838	18.736	19.314
Total Adjustments	+.095	+35.401	-1.671	- 1.554

Change Summary Explanation:
FY 2006: $1.200 moved from Supply Chain Management to PRO-ACT project in IP/ManTech; Congressional adds increased $1.294, Weapon System Sustainment increased by $.001due to funding adjustment.
FY 2007: $.140 withheld by OSD, $35.54 added for Other Congressional Adds
FY 2008: $1.200 moved from Agent Based Logistics Processes to PRO-ACT project in IP/ManTech. Fiscal guidance cut $.471. P
FY 2009: $1.200 moved from Agent Based Logistics Processes to PRO-ACT project in IP/ManTech. Fiscal guidance cut $.354.

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 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Medical Logistics Network (MLN), Project 1				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 1: Medical Logistics Network	2.859	2.937	2.900	2.951	2.849	2.926	2.984	3.031
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Defense Medical Logistics Transformation provides a comprehensive, standardized, unified, and policy compliant enterprise architecture, plan and implementation of initiatives to further unify the Medical Logistics Enterprise. The medical logistics community requires a multi-organizational, multi-disciplinary approach to future healthcare supply that spans the military services, the Office of the Secretary of Defense, our coalition partners, and commercial industry and involves diverse, yet complimentary functional disciplines such as cost estimating/financial management, system architecture and design, functional process mapping, transportation, telecommunication, networking, program management, contracting, engineering, and supply chain management.

Master Data Management (MDM) will develop a proof of concept for a centralized, authoritative Materiel Master Catalog that will be the basis for net-centric Service Oriented Architecture (SOA) cataloging web services. The catalog will be developed using a rigorous structured methodology that is developed with Commercial-Off-The-Shelf (COTS) MDM Integration toolsets. This proof of concept pilot will define the capabilities incorporated in the available COTS tools and compare and contrast the leading products with the eventual goal of selecting the best value tool for use by DMLSS-DLA. The proof of concept pilot will integrate data from up to 23 individual, decentralized activities participating in the Army Medical Materiel Agreement (AMMA).

Med/Surg Item Data Synchronization services for Navy Medical Logistics Command (NMLC) will develop ways to assist the Navy to manage and source items in their medical assemblages. The NMLC is the data repository and manager for over 8,000 medical and surgical items for the US Naval Ship Comfort and Mercy. The day-to-day data management of these items is a laborious, manual process. Keeping up with cataloging changes, and discovering those changes after-the-fact, is an ever-increasing task. Validating National Stock Numbers (NSNs), checking for product availability, and cross-referencing NSNs to commercial product identification numbers is done by exception.

Average Cost for Alternate Commercial Product Ordering Program (ACPOP): Develop an independently determined average cost to customers per item ordered via Prime Vendor ACPOP vs. local purchase direct from manufacturers or distributors. Identify processes involved and framework in year one for ongoing annual calculations.

Functional Executive Agent Medical Support (FEAMS): FEAMS will provide the IT system support to execute the Executive Agent (EA) mission for the Medical Logistics Supply Chain, including three major interrelated components: 1) Requirements Determination (RDT) will create a joint medical requirements contingency forecasting process that provides accurate, commercially available, timely, continuously updated requirements on the basis of current clinical practices and with ongoing feedback and adjustment from actual contingency support. 2) Standardization Tool Suite (STS) will develop and coordinate the resources necessary to improve the efficiency and effectiveness of product standardization, ultimately reducing the Service unique requirements for contingency operations and peacetime. 3) Decision Support System (DSS) will collect, organize, and display metrics addressing the efficiency and effectiveness of the overall Medical Logistics Supply Chain, and specific EA areas of management interest, in near real time.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
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Project 1: Medical Logistics Network	2.859	2.937	2.900	2.951	2.849	2.926	2.984	3.031
RDT&E Articles Quantity - N/A								

Business Reengineering. The Services obtained funding to consolidate Service medical logistics headquarters in one facility at Ft. Detrick, MD. Business Reengineering will provide objective data that enables the Joint Service medical logistics community to make informed decisions regarding initial collocation, integration, and consolidation opportunities within the Joint Medical Logistics Center. To strike this balance between efficiency and mission requirements, the sharing alternatives must be built upon a firm understanding of military medical logistics, common business functions, business processes and practices, and dependencies between the organizations, while eliminating risks related to business continuity, critical path development, and potential mission disruption. DoD Directive 5101.9 directs DLA as Executive Agent (EA) to establish the strategic and operational relationships necessary to achieve effective Class VIIIA supply chain support. Support of this consolidation will provide the EA with an opportunity to get more into the planning process and enhance working relationships.

Radio Frequency Identification (RFID) technology is receiving substantial attention within military logistics because of DoD's mandate for suppliers to use RFID on all pallets and cases. The Defense Medical Logistics Standard Support (DMLSS) program is planning to use this technology, not only to meet the DoD directive for medical pallets and cases to be tagged commencing in January 2006, but more importantly, to improve the end-to-end visibility and tracking of medical supplies, resulting in enhanced medical care for the warfighter. In doing so, DMLSS needs to understand the potential issues in implementing RFID to automate and improve the logistics processes and methods to address them. Some of the major problems that we propose to research are listed below. This pilot will offer DMLSS and the Defense Logistics Agency (DLA) the unique opportunity to address the risks of implementing RFID, identify and address technology problems early, understand the compliance requirements with the DoD RFID directive, and plan a comprehensive enterprise-wide deployment of RFID. This pilot will help investigate and measure the benefits of RFID when applied in the supply chain of medical materiel.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	2.859	2.937	2.900	2.951
RDT&E Articles Quantity – N/A				

FY 2006 Projects: ($2.859)

- Provided Medical Logisticians the architecture capabilities to support future Medical Logistics operations and ultimately the Defense Medical Logistics Transformation. Initiate Defense Medical Logistics Transformation to incorporate the structure and architecture necessary to support expeditionary, modular force concepts integrate the end-to-end Medical Logistics Supply Chain. Model detailed to-be processes to enable reengineering Defense Medical Materiel Standardization Program. ($2.250)
- Initiated Master Data Management Proof of Concept Phase I including market research for COTS acquisition to provide initial Materiel Master Catalog that will be the basis for net-centric SOA cataloging web services. ($0.290)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
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Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 1: Medical Logistics Network	2.859	2.937	2.900	2.951	2.849	2.926	2.984	3.031
RDT&E Articles Quantity - N/A								

- Provided Naval Medical Logistics Command the ability and web-based tool sets to cross reference and source Authorized Medical Allowance List**,** Med Surg National Stock Numbers, and Fleet Prime Vendor items to commercial products of choice. Expand site data from four to eight Navy Medical facilities as sentinel sites for readiness analysis and product price reductions. Expanded Med Surg product sourcing tool sets to Air Force sites the Defense Medical Standards Board applications**.** ($0.304)
- Validated cold chain packaging protocols. Procure validation services from a third party independent testing provider; complete testing for 48, 72 and 96 hour shipping times under varied ambient temperatures; and use results to modify protocols or justify continued use of current protocols as is. ($0.015)

FY 2007 Plans: ($2.937) -

- Provide Medical Logisticians the architecture capabilities to support future Medical Logistics operations and ultimately the Defense Medical Logistics Transformation. Continue Defense Medical Logistics Transformation Initiatives to incorporate the structure and architecture necessary to support expeditionary, modular force concepts integrating the end-to-end Medical Logistics Supply Chain. Develop net-centric sharing of authoritative medical product data, support to standardization process, sharing of business intelligence and warehouse data, and support to Combatant Commanders' logistics dashboards. ($2.366)
- Provide the capabilities for planners and logisticians at the Service, Joint, and Defense levels to improve modeling capabilities for estimating contingency medical materiel requirements as part of FEAMS development. ($0.277)
- Develop Master Data Management operational capability Proof of Concept Phase I and initiate Phase II including COTS production implementation. ($0.294)

FY 2008 Plans: ($2.900)

- Provide Medical Logisticians the architecture capabilities to support future Medical Logistics operations and ultimately the Defense Medical Logistics Transformation. Continue Defense Medical Logistics Transformation Initiatives to incorporate the structure and architecture necessary to support expeditionary, modular force concepts integrating the end-to-end Medical Logistics Supply Chain. Continue design and development of net-centric sharing of authoritative medical product data, support to standardization process, sharing of business intelligence and warehouse data, and support to Combatant Commanders' logistics dashboards. ($2.370)
- Implement enhanced modeling capabilities for estimating contingency medical materiel requirements and incorporate improved modeling capabilities into DMLSS-DLA systems in conjunction with planners and logisticians at the Service, Joint, and Defense levels. ($0.267)
- Continue to develop and expand capabilities of Master Data Management operational capability. Complete Phase II including COTS production implementation. ($0.263)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
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Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 1: Medical Logistics Network	2.859	2.937	2.900	2.951	2.849	2.926	2.984	3.031
RDT&E Articles Quantity - N/A								

FY 2009 Plans: ($2.951)

- Provide Medical Logisticians the architecture capabilities to support future Medical Logistics operations and ultimately the Defense Medical Logistics Transformation. Continue Defense Medical Logistics Transformation Initiatives to incorporate the structure and architecture necessary to support expeditionary, modular force concepts integrating the end-to-end Medical Logistics Supply Chain. Continue design and development of net-centric sharing of authoritative medical product data, support to standardization process, sharing of business intelligence and warehouse data, and support to Combatant Commanders' logistics dashboards. ($2.448)
- Fully integrate enhanced modeling capabilities for estimating contingency medical materiel requirements and incorporate improved modeling capabilities into DMLSS-DLA systems in conjunction with planners and logisticians at the Service, Joint, and Defense levels. ($0.275)
- Continue to develop and expand capabilities of Master Data Management operational capability. Initiate Phase III integration of COTS ($.228)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: Karta Technologies, Inc of San Antonio, TX is developing the architectural artifacts and process maps of the current and future Medical Logistics Supply Chain. These artifacts will guide the transformation of DMLSS-DLA and the medical logistics supply chain to meet the requirements of the future. Option 1 of the contract was exercised in July 2006 and additional options are scheduled for July 2007-2009.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Weapon System Sustainment (WSS), Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Weapon System Sustainment	5.229	5.436	5.429	5.556	5.626	5.788	5.903	5.996
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Support Defense Logistics Agency (DLA) Strategic Plans Goals 1 and 2. The program spans multiple weapon systems and supply chains to improve internal processes, provide methods, reduce costs and lead times, and ultimately, improve readiness for DLA customers.

The program is focused in three project areas:

- Process improvement: The program delivers technologies that enable the workforce to provide a faster response to customer requirements at a lower cost.
- Sustaining engineering: Includes material substitution, supply chain technical considerations, tooling costs, readiness inputs to business case assessment, and improvements to value engineering, reverse engineering, and source qualification capabilities.
- Advanced manufacturing: Implementing manufacturing techniques for problem parts to improve item supportability quickly and inexpensively.

The program has expanded its focus from aviation to all DLA hardware supply chains; the title has been changed to reflect the expanded focus.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	5.229	5.436	5.429	5.556
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($5.229)

- Process Improvement: Investigated and refined existing processes in order to employ a more proactive approach to hardware availability and supply. Accomplishments in this focus area included: a joint project with Warner Robins Air Logistics Center (WRALC) to understand root causes of DLA items causing awaiting parts conditions and providing recommendations to eliminate or reduce them; initiated two additional projects to address problems common to DLA and WRALC; worked closely with HQ DLA in continued efforts to develop Peak Policies for infrequently-demanded items in 10 additional weapon systems to reduce inventory costs, number of procurement actions and backorders; and initiated an effort to determine the feasibility of using Army maintenance and operational trend data to improve forecasts. Updated the characterization of DLA supply support for its customers from FY 1999 through FY 2005 with the inclusion of Business Systems Modernization (BSM) data. ($2.372)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Weapon System Sustainment (WSS), Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Weapon System Sustainment	5.229	5.436	5.429	5.556	5.626	5.788	5.903	5.996
RDT&E Articles Quantity - N/A								

- Sustaining Engineering: These functions include engineering analyses and assessments of materials, components, etc. required to manufacture parts; analysis of failure trends; testing of prototype and first article parts; and qualification of new parts and sources. Accomplishments in this focus area included: development and demonstration of a proof-of-concept analysis tool to quickly identify opportunities to reduce backorders by identifying substitute O-ring National Stock Numbers with stock on-hand that have the same or better technical and environmental capabilities; and the identification of root causes for 100 oldest backorders at Defense Supply Center Philadelphia including development of solutions to those causes that would eliminate backorders or reduce backorder ages when those causes occur in the future. ($2.257)
- Advanced Manufacturing: Demonstrate and validate new and advanced manufacturing capabilities that can dramatically improve DLA's response to customer needs for parts availability and cost reduction. Accomplishments in this focus area included: identification and demonstration of alternate materials and manufacturing processes to reduce the cost and production lead time (PLT) for a class of items in Federal Stock Class (FSC) 5355 (knobs); and proactively seeking opportunities to partner with Service Manufacturing Technology and Small Business Innovative Research programs in order to reduce the cost of future projects to reduce backorders, PLT, and total costs. ($.600)

FY 2007 Plans: ($5.436)

- Process Improvement: The projects initiated in FY 2006 will be completed, and several new projects will be initiated. The emphasis in FY 2005 and FY 2006 on stocking policies will be sustained and new efforts initiated to improve different aspects of these policies and to continue efforts to develop peak policies for Class A weapon systems throughout DLA. The results of these projects, when implemented, will reduce inventory costs, backorders, and procurement workload. ($2.542)
- Sustaining Engineering: The projects initiated in FY 2006 will be continued and new projects initiated. Efforts will continue to develop generic solutions to the causes of backorders across a wide range of FSCs and to improve methods to forecast future backorders. The O-ring substitution analysis tool will be completed, its item reduction capabilities demonstrated, its substantial benefits to backorder reduction proven, and transferred to Defense Standardization Program Office (DSPO) for deployment and maintenance. New efforts will emphasize technologies for automated identification of specialty metal usage and techniques to quickly qualify surplus dealers as acceptable sources. ($2.250)
- Advanced Manufacturing: Activities in this area will continue to seek opportunities to partner with Service ManTech programs to develop new technologies that can reduce manufacturing costs and PLT. New efforts will be initiated in the supplier-facing domain with the objectives of reducing item costs and PLT, but also to improve supplier availability and time to respond to DLA requests for quotes. ($.644)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Weapon System Sustainment (WSS), Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Weapon System Sustainment	5.229	5.436	5.429	5.556	5.626	5.788	5.903	5.996
RDT&E Articles Quantity - N/A								

FY 2008 Plans: ($5.429)

- Process Improvement: Efforts in this area will complete the projects initiated in FY 2007 and start new projects that continue the emphasis on reducing backorders and inventory costs while improving internal efficiencies. The completed implementation and increased stability of BSM, along with deployment of associated business processes, is expected to present new opportunities identified by functional users, especially in the areas of demand and supply planning as well as in interaction between the two. The WSS Program will implement processes to proactively seek and exploit them, and then to pursue those opportunities by developing and demonstrating improved capabilities. ($2.575)
- Sustaining Engineering: This area will continue to focus on addressing and resolving the root causes of backorders, better methods to predict future backorders, and expand efforts in item reduction, with benefits in inventory and procurement costs, backorders and backorder duration. New efforts are expected to support DLA's needs that arise from new responsibilities resulting from realignments within DoD, particularly in the area of technical data. ($2.250)
- Advanced Manufacturing: Jointly-funded efforts with the Services will continue to be emphasized, with new opportunities developed and associated projects initiated. The focus on the supplier-facing side will be deepened, with new projects addressing common problems facing segments of the supplier base, such as suppliers of turbine engine parts, bearings producers and manufacturers of complex structural components, segments where unit costs tend to be very high and PLTs very long. Projects will demonstrate new capabilities which can dramatically reduce unit costs or sharply cut PLTs. ($.604)

FY 2009 Plans: ($5.556)

- Process Improvement: New projects will continue to focus on improvements to internal processes, especially those involving demand and supply planning, forecasting and opportunities identified by functional users in new business processes associated with BSM. Benefits in this area will continue to be improved internal efficiencies, and reduced backorders and inventory costs. ($2.500)
- Sustaining Engineering: The prior emphasis on reducing backorder ages through better prediction of upcoming backorder and resolution of root causes will diminish. New projects will greatly expand the aspect of implementing modern technical data capabilities and streamlining the current procedures for securing and funding required engineering support from the Service Engineering Support Activities (ESAs). Benefits from this new emphasis principally will be reduced PLT and parts costs, along with access to additional sources. ($2.400)
- Advanced Manufacturing: Efforts will continue on advanced manufacturing technology projects initiated in prior years, since projects of this type are multi-year in duration and require incremental funding. The prior focus on the supplier-facing side will be continued, principally by addressing common problems in additional segments of the supplier base in order to reduce the high costs and long PLTs typically associated with the segments selected. ($.656)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Supply Chain Management, Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Supply Chain Management	1.892	3.705	2.672	2.840	3.070	3.300	3.365	3.418
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: DLA has organized along Supply Chains to provide an integrated, combat logistics solution that is coordinated among the services and across DoD. There is a need for the Agency to stay abreast of the latest supply chain management principals and techniques that will improve the supply availability of DLA-managed items by managing supply chains to shorten lead times and reduce costs. The dynamic nature of DLA's mission requires a flexible R&D mechanism to rapidly take advantage of the evolving supply chain improvements and innovations.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	1.892	3.705	2.672	2.840
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($1.892)
- Develop tools and displays to manage Class I commodities ($0.262)
- Technical and transitional advancement of the Node Management & Deployable Depot (NoMaDD) Advanced Concept Technology Demonstration (ACTD) ($0.334)
- Study to determine feasibility of hydrogen as a DoD fuel ($0.150)
- Study to determine feasibility of establishing a pilot contract for chemical management services ($0.303)
- Develop a quality assurance modernization program ($0.100)
- Develop and evaluate Battlefield Backorder Breakout Initiative (B3I) Concept of Operations ($0.042)
- Research and development of the Depot Production Collaboration Tool ($0.093)
- Other miscellaneous supply chain initiatives ($0.608)

FY 2007 Plans: ($3.705)
- TentNet Efforts to enhance the supply chain for portable shelters so that peacetime and wartime supply availability can be raised to reasonable levels. ($2.099)
- Support DLA's Advanced Concept Technology Demonstration by developing supply requirements for Node Management from the perspective of the DLA Logistics Operations Center. ($1.606)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Supply Chain Management, Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Supply Chain Management	1.892	3.705	2.672	2.840	3.070	3.300	3.365	3.418
RDT&E Articles Quantity - N/A								

FY 2008- 2009 Plans: Supply Chain Initiatives and opportunities continue to develop and pursue emerging Supply Chain Management opportunities as they evolve.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:
- Bondcote Corporation – Coated Industrial Fabrics (Anticipated Award date 06/07)
- Omnova Solutions – Coated Industrial Fabrics (Anticipated Award date 06/07)
- Johnson Outdoors – Eureka! Tents (Anticipated Award date 06/07)
- TopTec Tents – Tent Manufacturing (Anticipated Award date 06/07)
- Outdoor Venture Corporation – Tent Manufacturing (Anticipated Award date 06/07)
- Anchor Industries – Tent Manufacturing (Anticipated Award date 06/07)
- FTL Design Engineering Studio – Design (Anticipated Award date 06/07)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Strategic Distribution & Reutilization (SDR), Project 4				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 4: Strategic Distribution & Reutilization	2.911	3.081	3.391	3.519	3.580	3.709	3.807	3.885
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

This project consists of two thrusts: Node Management and Deployable Depot (NoMaDD) and Reutilization Risk Reduction (R3). NoMaDD is an approved FY 2006-FY 2008 Advanced Concept Technology Demonstration (ACTD) that will develop, integrate, demonstrate, and transition Information Technology (IT) and field-operable material management that transforms logistics support of expeditionary warfare and humanitarian operations. Reutilization Risk Reduction is focused on reducing risks that militarily-sensitive equipment will be sold to potential enemies or other parties that could use the surplus material for nefarious purposes.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	2.911	3.081	3.391	3.519
RDT&E Articles Quantity – N/A				

FY 2006: Evaluated Node Management (NM) tools to monitor strategic-to-tactical movement of Class I supplies (food) and containers. Initiated NoMaDD Concepts of Operations (CONOPS), Tactics, Techniques and Procedures (TTPs), and Integrated Assessment Plans (IAPs). ($2.911)

FY 2007 Plans: Continue spiral development/demonstration of NM capabilities, including tools for distribution pipeline management, fuels distribution, and joint asset visibility. Complete procurement of Deployable Depot equipment and begin training, test, and evaluation. CONOPS, TTPs, IAPs, and transition plans will be finalized. Proven NM capabilities will move into the Army's Battle Command Sustainment Support System (BCS3). ($3.081)

FY 2008-2009 Plans: Conduct NoMaDD Military Utility Assessments and Extended User Evaluations, correct deficiencies, and complete transition. Begin testing and implementation of R3 alternative risk reduction techniques. Refine, test, and support full implementation of R3 procedures. ($6.910)

C. Other Program Funding Summary: NoMaDD is jointly funded with United States Transportation Command (USTRANSCOM) funding (Program Element 0603713) in FY 2006 ($1.5M) and FY 2007 ($2M). The program has been approved as an Office of the Secretary of Defense (OSD) sponsored Advanced Concept Technology Demonstrations (ACTD) and OSD will contribute $2M/year in funding in FY 2006 through FY 2008.

D. Acquisition Strategy: N/A

E. Major Performers: PMO BCS3 and NSWC CRANE

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Energy Readiness Program (ERP), Project 5				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 5: Energy Readiness Program	1.449	1.835	2.063	2.158	2.192	2.256	2.301	2.337
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

- Program Management Office Support (PMO) for developing program strategies and goals, preparing documentation for the program, and performing quick reaction studies and analysis.
- Alternate Energy Development (AED) to include synthetic fuel specifications and acquisition plan; renewable fuels studies and planning, continued study of the use of hydrogen by DoD, and other directives specified in the Energy Policy Act (EPA) of 2005.
- Testing and approving of additional +100 Thermal Stability Additives (TSA) for use in Jet Propulsion Fuel (JP-8), and additional additive studies for +100 Low Temperature and Static Dissipater.
- Study and implementation of Automated Information and Data Collection (AIDC) to Defense Energy Supply Center (DESC) business processes, which would allow for real time transactional information.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	1.449	1.835	2.063	2.158
RDT&E Articles Quantity – N/A				

FY 2006 Plans: ($1.449) - Energy Program Management Office initial planning and strategy development ($.199 PMO), Phase II Hydrogen Study – develop and manage a DoD Roadmap and Strategy for Hydrogen and initiate synthetic fuel procurement and participate in test planning ($.50 AED), Phase II of Study planned to be completed including testing of competitive products ($.35 TSA), Initial planning and working with Army/ BCS3 using NoMadd as platform data integration/synthesis ($.40 AIDC).

FY 2007 Plans: ($1.835) - Continued PMO support in program implementation and planning ($.189 PMO), Implement recommendations of Phase II Hydrogen report and continue development of synthetic fuel specifications with industry ($.40 AED), Final report of the Additive Study and initial testing of Low Temperature additive and Static Dissipater additive ($.50 TSA), Phase I of Execution plan producing Implementation Plan ($.746 AIDC).

FY 2008 Plans: ($2.063) - Continued PMO support in program implementation and planning ($.223 PMO), Implement recommendation of Phase II report and continue development synthetic fuel specifications with industry ($.44 AED), Phase II of Execution Plan – select Commercial off-the-Shelf (COTS) hardware and develop Buy Plan, and finalize schedule and begin deployment ($1.40 AIDC).

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Energy Readiness Program (ERP), Project 5				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 5: Energy Readiness Program	1.449	1.835	2.063	2.158	2.192	2.256	2.301	2.337
RDT&E Articles Quantity - N/A								

FY 2009 Plans: ($2.158) - Continued PMO support in program implementation and planning ($.228 PMO), Full scale testing of synthetic fuel under assured fuels initiative and continued implementation of Hydrogen Logistics Strategy ($1.50 AED), Conduct studies and analysis on initial roll out and deployment of RFID capability ($.43 AIDC).

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:
- Logistics Management Institute (awarded 04/06) - Supporting DLA/DESC with general office support coupled with detailed studies and analysis (PMO), as well as hydrogen and fuel cells related studies and strategic planning (AED).
- Air Force Research Lab (AFRL) - Supporting studies and testing of thermal stability additive (TSA) and synthetic fuel (AED)
- Oak Ridge National Lab (ORNL) - Supporting studies and implementation planning for the RFID and TAV of Class III (AIDC)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Defense Logistics Information Research (DLIR), Project 6				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 6: Defense Logistics Information Research	2.274	2.326	2.281	2.290	2.320	2.383	2.430	2.470
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

The DLIR Program objective is to research, identify, and implement potential or existing technologies using high-risk, high-payoff tools, methods, techniques, and products. The DLIR Program will partner with commercial industry to perform short-term projects in various logistics business areas which align with DLA's strategic vision. DLIR improves functional and business processes using the latest technologies available, which support the nation's warfighter. The technical areas of interest are:

- Enhancement of Federal Catalog & Related Logistics Information
- Development of Logistics Data Interoperability & Availability
- Relate Government/Commercial Item Descriptions & Taxonomies to Supplier Capabilities

B. Accomplishments/Planned Program. The DLIR R&D program Source Selection Board (SSB) evaluated 28 short-term project (STP) briefings from 17 industry partners that ended Aug 10, 2006. Four STPs are currently in the process of award, but have not yet been announced. Three Technical Solutions Council meetings in different focus areas involving the 17 industry partners were held. The purpose of these council meetings was to exchange information on technology problems facing both government and industry and to discuss possible solutions using new technology.

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	2.274	2.326	2.281	2.290
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($2.274)

- Established three Technical Solutions Councils with commercial industry/government individuals, in each of the technical areas of interest described above to address opportunities in the area of interest. Held council meetings with each team.
- Awarded four short-term R&D projects to individual industry team members following opportunity briefings.

FY 2007 Plans: ($2.326)

- Continue focus on Technical Solutions Councils to address new technology/methodology in each area.
- Focus on capability gap areas to include:
  - Customer-focused supply chain & logistics data
  - Best-of-breed processes, practices & technology
- Comprehensive supply chain visibility & availability

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Defense Logistics Information Readiness (DLI), Project 6				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 6: Defense Logistics Information Readiness	2.274	2.326	2.281	2.290	2.320	2.383	2.430	2.470
RDT&E Articles Quantity - N/A								

- Logistics data functionality and compatibility to commercial industry data.
- Award three short-term R&D projects in each technical area of interest.

FY 2008-2009 Plans:

- Re-solicit Broad Agency Announcement (BAA). The Defense Logistics Information Service (DLIS), as a corporate entity, will review progress and impact of Technical Solutions Councils and address possible new technical areas and continue to focus on capability gap areas such as:
    - Customer-focused supply chain & logistics data and best-of-breed processes, practices & technology
    - Comprehensive supply chain visibility & availability
    - Logistics data functionality and compatibility to commercial industry data.
- Award short-term R&D projects in each reviewed technical area of interest after opportunity briefings.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Other Congressional Adds (OCAs), Project 7				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Other Congressional Adds	31.415	35.540	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:
Congressionally added programs for the Logistics Research and Development (Log R&D) program element, along with explanation, are provided below.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	31.415	35.540	0	0
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments:

- **Diminishing Manufacturing Source Center of Excellence Program (DCE):** Leveraged state-of-the art technology to provide the warfighters a centralized approach to solving diminishing manufacturing source and obsolete parts problems; maintain a centralized repository for Diminishing Manufacturing and Material Shortages (DMSMS) information; and database systems necessary for the sustainment of our aging military systems. Karta Technologies Inc. Awarded 04/06. ($.986)
- **Emerging/Critical Interconnection Tech Program (E/CIT) Program - Embedded Passives R&D Testbed (EPT):** Maintaining North American printed circuit board technical and manufacturing capability to meet current and future DoD warfighter needs. Establish joint R&D program between Naval Sea (NAVSEA) Crane and the Association Connecting Electronics Industries (IPC). Develop, evaluate, and test processes to manufacture buried passive and other emerging technologies for present, future DoD weapon system needs. Awarded 03/06. ($2.129)
- **Pilot Project to Improve Energy Procurement (EPP):** Alternative Energy Sources Initiative - Support to evaluate alternate energy sources, determine availability, and propose a plan that identifies the best use of these alternate energy products within the DoD: ($.986)
    - Research possible alternate energy technologies and determine their availability
    - Establish communication and generate interest with alternative energy suppliers to provide alternate energy for DoD/Federal Government
    - Determine any barriers that exist in the generation, use, handling, and supply of said products
    - Provide possible solutions to overcome these barriers
    - Coordinate with customers (military services and federal civilian agencies) to determine future energy needs
    - Develop a strategy to connect the technologies available to the needs of the customer (What is the best fit for each alternate energy product?)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Other Congressional Adds (OCAs), Project 7				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Other Congressional Adds	31.415	35.40	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

- **Intelligent Logistics Info Mgmt Bridge System (ILI):** To create the design and build a prototype for a system to solve the problem of disparity and incompatibility of data silos used to retrieve and organize Radio Frequency Identification Device, user identification and data silos. The collected data and information will allow the development of predictive capabilities for just-in-time ordering, management, delivery, maintenance scheduling, and reliability studies. The development of this application will improve Performance-based Logistics (PBL) and sense and respond logistics (S&RL). Awarded 08/06. ($.986)
- **Vehicle Fuel Cell (VFC):** Commercialized the use of fuel cells in transportation applications to promote early adoption among military administrative vehicles. Insert the technology into our installation fleets. Ballard, Sunline Transportation, Kettering. Awarded 06/06 ($4.830)
- **Aging System Sustainment & Enabling (ASE):** Provide localized assistance to small businesses in economically-depressed areas to qualify suppliers and parts for DLA. Oklahoma State University (OSU) Awarded 07/06. ($.986)
- **California Manufacturing Technology (CMT):** Improve DoD access to Small Manufacturers in the State of California. Awarded 04/06. ($4.927)
- **New England Manufacturing (NEM):** Improve DoD access to Small and Medium sized Manufacturers (SMEs) in the New England area; This includes Maine, Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut. Awarded 04/06. ($.986)
- **Connectivity Rapid ID (CRI):** Improve the ability of small to medium enterprises in the United States to do business with the DoD (Buy America Act). San Diego State University Research Foundation & East County Economic Development Council. Awarded 04/06. ($.986)
- **Distributed Inventory Management System (DIM):** Fund California State University Long Beach (CSULB) to develop a next-generation radio frequency identification (RFID) capability that overcomes some of the limitations of the existing RFID technology. CSULB School of Engineering has developed a Concept of Operations and is working with DLA to support the requirement for the Deployable Depot. Awarded 06/06. ($.984)
- **Processing Fuel Cell Components using 3+ Ring Extruder (FCC):** The primary project objective is to continue research on using the 12 Screw Ring Extruder to produce ceramic performed materials to manufacture items such as brake drums for heavy trucks or use in components where there is a desire to increase durability, reduce weight, and improve performance. In this program we will also be researching the use of the 12 Screw Ring Extruder as part of a continuous manufacturing process, to manufacture composite body panels using more exotic materials that cannot be mixed by the machinery current use to mix thermo-plastics. Awarded 05/06. ($2.464)
- **Tactical Wheeled Vehicle Safety Inspection (TWV):** The goal of this program is to develop a conceptual redesign of the interior of an M1114 High Mobility Multi-purpose Wheeled Vehicle (HMMWV) for the purpose of optimizing safety and efficiency of the crew compartment. The contractor will study, define and baseline the problems of the current vehicle interior occupant safety and human factors concerns before creating solutions and generating CAD representations and physical mock-ups of the refined concepts. Awarded 07/06. ($.986)

Exhibit R-2a, RDT&E Project Justification								Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Other Congressional Adds (OCAs), Project 7				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Other Congressional Adds	31.415	35.540	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

- **DoD EMALL Net Inventory Services (ENI):** Expand and extend the functionality of DoD EMALL to include Service Parts Ordering Tool and Master Data File integration. Awarded 04/06. ($.986)
- **Hydrogen Logistics Fuel Initiative (HLF):** Seeking to work on several items simultaneously to further DoD knowledge of requirements for a possible transition to using hydrogen as a defense logistics mobility fuel: ($.986) Partnering with Army, Department of Energy and Department of Transportation on strategic locations for potential Hydrogen stations.
    - Collaborating with others to identify hydrogen military infrastructure technical objectives
    - Develop database to store DOD Hydrogen Initiatives
    - Continue engagement with industry and government stakeholders
    - Consider weapon system implications
    - Develop a DOD strategy roadmap
- **Mfg Extension Partnership-Midwest Consortium (MEP):** Fund the Wisconsin MEP to develop and implement a repeatable and systemic lean manufacturing program to assist small and medium-sized manufacturing companies to better serve as suppliers to their original equipment manufacturers (OEMs) and ultimately the DoD. ($1.182)
- **Solid Hydrogen Storage and Fuel Cell Systems (SHS):** Program is focused on integrating solid hydrogen storage into fueling ground support platforms. We expect to have internal combustion engines burning hydrogen fuel safely stored in nickel-metal hydride to demonstrate clean and petroleum free performance. Fuel cell auxiliary power unit range extenders will be integrated into electric drive platforms on base administrative vehicles. Awarded 08/06. ($2.070)
- **Next Generation Airstart Craft (NGA):** Provide development funds to spur support equipment improvements for the warfighter. Phoenix Aerospace. Awarded 08/06. ($1.675)
- **Thermal Transinformative Barcoding of Consumables (TTB):** The funds will be used by Sira and their commercial and academic partners to develop a thermal-transducive bar code for military food packaging applications. Awarded 06/06. ($.986)
- **Spray Technique Analysis & Research/Defense (STR):** Reduce cost and air pollution by improving the efficiency of spray painting throughout DoD. Southwest Research Institute, Iowa Waste Reduction Center at University of Northern Iowa. Awarded 08/06. ($1.294)

Exhibit R-2a, RDT&E Project Justification								Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Other Congressional Adds (OCAs), Project 7				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Other Congressional Adds	31.415	35.540	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

FY 2007 Plans:

- **Defense Tech Showcase Initiative:** ($1.640)
- **Distributed Inventory Management System (DIM):** Fund California State University Long Beach (CSULB) to develop a next-generation radio frequency identification (RFID) capability that overcomes some of the limitations of the existing RFID technology. CSULB School of Engineering has developed a Concept of Operations and is working with DLA to support the requirement for the Deployable Depot. Awarded 06/06. ($.994)
- **ECIT Program – Embedded Passives R&D Testbed**: ($1.923)
- **Florida Defense Manufacturing Initiative**: ($1.988)
- **Advanced Mobile Gas-to-Liquid Fueler:** ($2.882)
- **Defense Fuel Cell Locomotive:** ($1.938)
- **DoD Vehicle Fuel Cell Program:** ($4.522)
- **High Energy Battery Development for Aerial Vehicles:** ($3.354)
- **Hydrogen Logistics Fuel Initiative (HLF):** Seeking to work on several items simultaneously to further DoD knowledge of requirements for a possible transition to using hydrogen as a defense logistics mobility fuel: Partnering with Army, Department of Energy and Department of Transportation on strategic locations for potential Hydrogen stations.
- **New England Manufacturing Supply Chain:** ($1.938)
- **Next Generation Manufacturing Tech Initiatives:** ($2.638)
- **Solid Hydrogen Storage and Fuel Cell Systems**: ($2.186)
- **Solid Hydrogen Storage Initiatives**: ($5.168)
- **Spray Technique Analysis**: Reduce cost and air pollution by improving the efficiency of spray painting throughout DoD. ($1.292
- **Emergency Power Source for National Guardsmen**: ($1.093

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: See information associated with each project provided under 2006 Plans.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Continuous Acquisition Lifecycle Support (CALS), Project #8				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project #8: Continuous Acquisition & Lifecycle Support	3.881	3.976	0.000	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Information and information technology impact almost every functional component of the DoD, from tactical units to the supply lines that support them. In fact, Joint Vision 2020's central goal is the capability of collecting, processing, and disseminating a steady flow of information to U.S. forces, while exploiting or denying an adversary's ability to access that information.

To this end, the DoD has embarked on a set of critical and ambitious programs. These programs are to insure that information technology plays a key role in achieving war fighter superiority in the 21st century. Embodied in the DoD 2020 logistics vision are integrated supply chains focused on meeting war fighter requirements at the point of need. This, in turn has caused the DoD to insure that all automated information systems have a degree of "interoperability".

The main goal of the DoD's Information Technology initiatives is a shared data environment. This environment supports the DoD 2020 Logistics Vision and all five key logistics initiatives. It provides users the capability to employ automated tools that accomplish tasks more effectively and efficiently and that exchange current and accurate information in a timelier manner across enterprises.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	3.881	3.976	0.000	0
RDT&E Articles Quantity – N/A				

FY 2006 Plans: ($3.881): In order to satisfy these needs and requirements, DoD is moving to accomplish the following activities:

- A DoD-wide Logistics Environment which includes the following emerging concepts:
  - Force-Centric Logistics (implementation)
  - Logistics Transformation Roadmap
  - Sense and Respond Logistics (S&RL)
  - GIG/Network-Centric Concept (NCOW Reference Model)
  - DoD Enterprise Modeling and Performance Based Logistics

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number Continuous Acquisition Lifecycle Support (CALS), Project #8				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project #8: CALs	3.881	3.976	0.000	0	0	0	0	0
RDT&E Articles Quantity - N/A								

- Satisfy customer requirements at the point of need.
- Reduce cycle times to meet dynamic warfighting requirements (i.e., customer wait time).
- Replace large investments in infrastructure with information superiority, interoperability, information assurance, security, and accuracy.
- Create robust partnerships with the industrial commercial sector.
- Reduce organizational echelons to only those that benefit the warfighter.
- Provide a high degree of information security and audit capabilities.

FY 2007 Plans ($3.976):
- On-going support to the Joint Logistics Vision 2020.
- Continuation of the DoD Future Logistics Enterprise (FLE) initiative.
- Supply Chain Management and Operational Reference Modeling implementation
- DoD Enterprise Modeling and Performance Based Logistics
- Net Centric Enterprise Services
- DoD Corrosion Exchange Initiative

C. Other Program Funding Summary: N/A

F. Acquisition Strategy: N/A

G. Major Performers: N/A

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				R-1 Item Nomenclature: Program Title: Deployment and Distribution Enterprise Technology Program Element: PE0603713S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	9.857	15.158	0	0	0	0	0	0
Project 1: Capabilities Based Logistics	1.515	3.024	0	0	0	0	0	0
Project 2: Deployment and Distribution Velocity Management	3.492	6.706	0	0	0	0	0	0
Project 3: Cross Domain Intuitive Planning	4.850	5.428	0	0	0	0	0	0
Project 4: End-to-End Visibility	0	0	0	0	0	0	0	0
Project 5: Distribution Planning and Forecasting	0	0	0	0	0	0	0	0
Project 6: Joint Transportation Interface	0	0	0	0	0	0	0	0
Project 7: Distribution Protection/Safety/Security	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: Global War On Terrorism (GWOT) lessons learned and daily operations indicate that current distribution and logistics processes remain outdated and are rarely capable of providing required warfighter support in an agile, efficient and economical manner. Designation of United States Transportation Command (USTRANSCOM) as the Distribution Process Owner (DPO) and shift within the Department to transform the distribution and logistics processes, demands the examination and improvement of the entire supply chain. Unpredictable and extended global distribution routes, limited visibility of sustainment requirements, force packaging limitations, lift constraints, complex supply chains, as well as non-networked battlefield command and control (C2), planning, and decision support tools impede timely warfighter logistical support. The centralization of distribution and logistics intermodal research and development facilitates the development/fielding of transformational enhancements to validated distribution capability gaps. The USTRANSCOM RDT&E program explores and matures promising technologies to enhance support to combatant commanders and other customers of Department of Defense's (DOD's) distribution and transportation systems.

B. Program Change Summary:

	FY 06	FY 07	FY 08	FY 09
Previous PB07	9.857	15.215	0	0
Current FY08 BES	9.857	15.158	0	0
Total Adjustments	0.000	-0.057	0	0

Change Summary Explanation: FY07 OSD withhold.

	Exhibit R-2, RDT&E Budget Item Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				R-1 Item Nomenclature: Program Title: Deployment and Distribution Enterprise Technology Program Element: PE0603713S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	9.857	15.158	0	0	0	0	0	0
Project 1: Capabilities Based Logistics	1.515	3.024	0	0	0	0	0	0
Project 2: Deployment and Distribution Velocity Management	3.522	6.706	0	0	0	0	0	0
Project 3: Cross Domain Intuitive Planning	4.820	5.428	0	0	0	0	0	0
Project 4: End-to-End Visibility	0	0	0	0	0	0	0	0
Project 5: Distribution Planning and Forecasting	0	0	0	0	0	0	0	0
Project 6: Joint Transportation Interface	0	0	0	0	0	0	0	0
Project 7: Distribution Protection/Safety/Security	0	0	0	0	0	0	0	0

C. Other Program Funding Summary: Displayed on R-2a.

D. Acquisition Strategy: N/A for budget activity 3.

E. Performance Metrics/Major Performers: Displayed on R-2a.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number – Capabilities Based Logistics, Project 1				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 1: Capabilities Based Logistics	1.515	3.024	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

The Department requires procedures and technologies which provide enterprise-level capabilities critical to the distribution system to improve performance of the end-to-end DOD supply chain in direct support of the full range of military operations. Ability to rapidly respond to customers' changing demands, with a reliably high level of service. These needs include: capabilities which enhance any supply or transportation mission (aeromedical, air refueling, joint logistics over-the-shore, seabasing); analysis, tailoring and implementation of selected best enterprise-level practices from industry; and tools/procedures to optimize transportation plus supply (distribution) plans and schedules in support of an entire operation. This project addresses the required mission support to combatant commanders and other customers in the area of capability-based logistics.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	1.515	3.024	0	0
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments: Node Management and Deployable Depot (NoMaDD) Advanced Concept Technology Demonstration (ACTD). Developed and demonstrated initial spirals of Node Management tools to monitor strategic-to-tactical movement of Class I supplies (food) and containers. Define requirements and initiate development of capabilities for other classes of supply and retrograde. An initial Limited User Evaluation was conducted for Node Management in Apr-May 06.

FY 07 Plans: Continue spiral development and demonstration of Node Management capabilities to include tools for distribution pipeline management, fuels distribution, and joint asset visibility. Support transition activities of approved spirals into BCS3.

C. Other Program Funding Summary: USTRANSCOM's funds support Program Management Office (PMO) Battle Command Sustainment Support System (BCS3) and Tapestry Solutions. Funds modified existing Tapestry Solutions contract, with other expenses paid from OSD and Defense Logistics Agency (DLA) sources. Funds also support DLA's NoMaDD ACTD program under PE # 0603712S. Also providing $0.5M to Defense Distribution Center (DDC) for demonstration of NoMaDD capabilities in Bright Star.

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:
Tapestry Solutions	San Diego, CA	Software Development (NoMaDD/BCS3)	Nov 06/$1.985M
Stanley/LMI	Alexandria, VA	RDT&E program support	Oct 06/$0.416M
MITRE	Ft Monmouth, NJ	RDT&E program support	Oct 06/$0.500M

	Exhibit R-2a, RDT&E Project Justification							Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number – Deployment and Distribution Velocity Management, Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Deployment and Distribution Velocity Management	3.522	6.706	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

DOD requires procedures/technologies targeted at optimizing throughput at the nodes and through the conduits of the deployment and distribution supply chains, from origin to point of use and return to include: inventory management enhancers (includes node cargo management/tracking); materiel handling innovations (including methods of reducing handling); improved physical access to nodes (includes aircraft all-weather visual systems); port throughput enhancements (includes in-port time reduction methods); and innovative delivery methods (for example, precision airlift, autonomous re-supply). This project addresses required mission support to combatant commanders and other customers of DOD's distribution and transportation systems in the area of deployment/distribution velocity management.

B. Accomplishments/Planned Program:

	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/ Effort/Subtotal Cost	3.522	6.706	0	0
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments:

- Analyze joint multi-modal/service compatible platforms that permit the efficient, seamless and continuously visible movement of supplies through the distribution system addressing intermodal exchange and battlefield distribution issues
- Engineering and programmatic planning for development of a unique, FedEx-like Transportation Tracking Number (TTN) to increase assurance of planned vs. actual tracking of unit movements required by Combatant Commanders in the Joint Operational Planning and Execution System (JOPES)
- Assess feasibility of using specialized cargo platforms for transporting military unit equipment on conventional container ships
- Develop a system capable of selectively retrieving/discharging cargo at sea from container ships

FY 07 Plans:

- Conduct of Joint Modular Intermodal Distribution System (JMIDS) Joint Capabilities Technology Demonstration (JCTD) limited military utility assessment (LMUA) to evaluate intermodal enhancements and increased agility/flexibility in joint distribution system
- Building prototype and assessing utility of a unique, FedEx-like Transportation Tracking Number (TTN) to increase assurance of planned-vs.-actual tracking of unit movements required by Combatant Commanders in the Joint Operational Planning and Execution System (JOPES)
- Ascertain if specialized containers can be used to transport unit equipment via container ships/provide support comparable to roll on/roll off ships

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number – Deployment and Distribution Velocity Management, Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Deployment and Distribution Velocity Management	3.522	6.706	0	0	0	0		
RDT&E Articles Quantity - N/A								

- Complete the development and successfully demonstrate a system capable of selectively retrieving fully loaded 20FT containers from at sea container ships (in up to sea state 5) for selected onward movement

C. Other Program Funding Summary: $0.498M FY06 and $2.694M FY07 to Army for the Joint Modular Intermodal Distribution System (JMIDS) Joint Capabilities Technology Demonstration (JCTD) (PEs 0633001/0665805 refer).

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:	FY08 Estimated Award Date/$:
ITLT Solutions Inc.	Jacksonville, FL	Contrail/Beam System Dev	Mar 07/$1.0M	Oct 07/$2.0M
Benedict Engineering	Tallahassee, FL	Selective Retrieval Prototype Design, Build and Demo	Nov 06/$1.500M	
SAIC	Crane, IN	JMIDS Support	Oct 06/$2.693M	
MITRE Corporation	Ft Monmouth, VA	Engineering and development of Transportation Tracking Number	Nov 06/$0.240M	Oct 07/$0.240M
ORNL	Oak Ridge, TN	Construct vehicle prototype of port opening and sustainment C2 vehicle		Nov 07/$0.5M
To Be Determined	TBD	Construct prototype and conduct Experimentation/integration for Transportation Tracking Number	Mar 07/$1.172M	Oct 07/$1.475M
Booz-Allen Hamilton	McLean, VA	Vessel Off-Load Tech		Oct 07/$2M
TBD	TBD	Air-skid Prototype Development		Oct 07/$2.8M

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number – Cross Domain Intuitive Planning and Execution, Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Cross Domain Intuitive Planning and Execution	4.820	5.428	0	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Procedures/technologies which improve decision-making and collaboration within the supply chain, from the planning stage to real-time execution and retrograde operations, without need for highly specialized operators of the tools. Projects in this area address following areas: decision support tools for any echelon of the supply chain or decision-maker, distribution process simulations and models for analysis and training, distribution demand forecasting/execution monitoring tools, on-line training, automated decision-maker support (e.g., queuing, alerting, recommended courses of action), automated status monitoring with information fusion and drilldown capability, and resilient C2 infrastructure capabilities. This project will provide required mission support to combatant commanders and other distribution/transportation customers in the area of collaborative planning/execution/information sharing/decision support tools.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	4.820	5.428	0	0
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments:

- Develop a database and query tool which enables international exchange of airlift (military and commercial) and sealift (military and commercial) schedules to support Coalition Task Force operations
- Explore scalability of web service technology to globally share command and control and transportation info with all (Joint, Service) users Expand current modeling capabilities to perform quantitative programmatic analysis of all aspects of distribution end-to-end process
- Expand geospatial awareness through the fusing of existing information into a logistics common operating picture

FY 07 Plans:

- Modify Global Decision Support System 2 (GDSS 2) and Global Air Transportation Execution System (GATES) to globally share command and control and transportation info with all (Joint, Service) users
- Complete development/testing of enhanced capability to model all distribution scenarios/methods within existing programmatic systems Complete the development/testing of an enhanced geospatial awareness/logistics operating picture within the USTRANSCOM Deployment Distribution Operations Center (DDOC)
- Design, development, integration, documentation and testing of the Joint Air Logistics Information System – Next Generation (JALIS NG) prototype and its infrastructures. This includes improvements and upgrades to the Scheduler's Workbench, enhanced Request Validation Routing capabilities, and optimizing command and control processes related to the requesting, validating, scheduling, and monitoring of worldwide operations support airlift missions
- Commence two year effort to develop and incorporate an air refueling module planning/execution capability within the Joint Flow and Analysis System for Transportation (JFAST)

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				Project Name and Number – Cross Domain Intuitive Planning and Execution, Project 3				
Cost ($ in millions)	FY 2006	FY2007	FY2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project 3: Cross Domain Intuitive Planning and Execution	4.820	5.428	0	0	0	0	4.100	4.083
RDT&E Articles Quantity - N/A								

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:	FY08 Estimated Award Date/$:
BBNT Solutions	Cambridge, MA	Developing Inter-theater model and Interface between models	Dec 06/$0.654M	
Federated Software Group	St. Louis, MO	Develop software to allow for optimizing operations airlift	Dec 06/$0.688M	
Federated Software Group	St. Louis, MO	Explore scalability of web services and visualization capabilities in the Single Mobility System	Feb 07/$0.610M	
Federated Software Group	St. Louis, MO	Explore scalability of web services in Global Decision Support System 2	Feb 07/$0.610M	
Computer Sciences Corporation	Fairview Heights, IL	Explore scalability of web services in Global Air Transportation Execution System (GATES)	Dec 06/$0.500M	
Booz-Allen Hamilton	McLean, VA	Developing software to allow info exchange between U.S. and Coalition logistic systems		Oct 07/$1.00M
DPRA	Knoxville, TN	Develop JFAST model to include air refueling	Feb 07/$0.377M	Oct 07/$0.430M

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				R-1 Item Nomenclature: Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification: DMEA was established in 1997 by the Office of the Secretary of Defense to act as the joint DoD Center for microelectronics acquisition, transformation, and support. The DMEA mission is to design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to extend the life of weapon systems and to solve operational problems (e.g., reliability, maintainability, performance, and assured supply). 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. The DoD is increasingly reliant on the use of "smart" weapons based on microelectronics. All future engagement scenarios depend on the use of these systems. Likewise, the use of microelectronics has exploded in the commercial world, driving the semiconductor industry to supersede successive generations of semiconductor technologies with new technologies every 18 months. The growth in commercial products has driven DoD's share of the semiconductor market below 0.1%. DoD must rely on technologies that become obsolete every 18 months and an industry in which DoD has no influence due to low market share. This is a Defense-wide issue since many systems across the Department use the same microelectronic process technologies. Therefore, the DMEA mission includes providing for the development and long-term support structure necessary to ensure rapid prototyping, insertion, and support of advanced microelectronics technologies into fielded systems. The DMEA applies both available leading-edge technologies and innovative applied research and development (R&D) approaches to develop solutions to current problems. DMEA's RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions. This effort applies to all DoD systems using electronics e.g., F-22, B-2, Airborne Warning And Control System, F-16, F-15, F-14, Global Positioning System, USQ-113, Joint Strike Fighter, EA-6B, M-65, AN/TSC-93B, and AN/GSC-49 (V). Funds are required for technical and analytical support, equipment, supplies, travel, and publications.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				R-1 Item Nomenclature: Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000

B. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 06	FY 07	FY 08	FY 09
PB 07	0.000	0.000	0.000	0.000
Current BES	118.383	92.554	0.000	0.000
Total Adjustment	0.000	0.000	0.000	0.000
Congressional Program Reductions	0. 000	0.000	0.000	0.000
Congressional Rescissions	0. 000	0.000	0.000	0.000
Congressional Increases	115.037	46.723	0.000	0.000
Reprogramming	3.346	45.831	0.000	0.000

Change Summary Explanation:

FY06 - Congressionally directed programs in new PE0603720S, Microelectronics Technology Development and Support. Reprogramming from Software Engineering Institute to Microelectronics Technology Development and Support for Advanced Lithography project that was in the wrong PE for proper execution.

FY07 – Congressionally directed programs in new PE0603720S, Microelectronics Technology Development and Support.($45.598M) Request submitted to reprogram six lines ($44.688M) from PE0603712S, Generic Logistics R&D Technology Demonstrations to PE0603720S, Microelectronics Technology Development and Support that were in the wrong PE for proper execution.

C. Other Program Funding Summary: Provided at the Project Level.

D. Acquisition Strategy. N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	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 RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions. This effort applies to all DoD systems using electronics e.g., F-22, B-2, Airborne Warning And Control System, F-16, F-15, F-14, Global Positioning System, USQ-113, Joint Strike Fighter, EA-6B, M-65, AN/TSC-93B, and AN/GSC-49 (V). Funds are required for technical and analytical support, equipment, supplies, travel, and publications.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Ferrite Diminishing Manufacturing Program efforts will be the identification, assessment, and demonstration of advanced technologies to facilitate improved electronics and microwave subsystems for size, weight and power (SWaP) improvements in the electronics required to support the ferrite devices for future satellite and weapon system programs ($1.034)

- University Materials Characterization and Metrology Center efforts are to identify the chemical and structural elements of materials and devices, as well as chemical, optical, electrical, and physical principles in measurement science and to be an enabler to the nanotechnology industry by providing expertise, training, and making available shared diagnostics equipment. ($0.987)

- DMEA Core Research 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).and to ensure rapid insertion of transformational technologies into fielded weapon systems by providing the necessary development, manufacturing engineering, and long-term support structure. ($19.741)

- Spintronics Memory Storage Technology efforts are to achieve a breakthrough in magnetic random access memory (MRAM) technologies together with companion programs in electronics packaging and advanced materials in order to develop a technology that will be produced domestically and will transition from the lab to the battlefield in a timely and cost effective manner ($10.068)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Center for Nanoscience Innovation efforts are to systematically clarify the feasibility of applying nanoscience and technology to defense requirements. ($8.390)

- Ruggedized Smart/Secure Radio Frequency Identification (RFID) efforts are to develop rugged, adaptive and reconfigurable reader technology using intelligent sensing and signal processing, and to develop rugged single chip RFID transceivers integrated with anti-tamper and tripwire systems to enable the use of RFID to secure critical assets. Investigated the use of ultra-thin silicon on sapphire technology to improve power reflection from the RFID tag which will impact system performance in the areas of read efficiency and range. The RFID reader is being redesigned to incorporate ruggedization for military use and software be developed to include security features. ($5.034)

- Optimizing Electronics for Advanced Controlled Environment Systems (ACES) efforts are to resolve thermal issues regarding electronics densification & advanced electronics packaging in military high-performance computing applications by designing components, chip-scale packaging, stacked structures, and electronic environmental systems that can withstand the demanding military thermal environments. ($4.195)

- Low Voltage Tunable Material efforts are to develop doped Barium Strontium Titanate (BST) thin film material to create reliable 3 to 4 volt tunable components. These components will have the high tunability, high reliability and good RF power handling capability required in critical military and Homeland Security communications systems. One path forward for improving Low Voltage Tunable Materials is the marriage of bismuth zinc niobate (BZN) tunable material with BST. The tuning properties of BZN complement those of BST such that linearity and Q for thin film tunable materials are increased and stabilized. ($1.974)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Spray Cooling Migration Program efforts develop standardized spray cooling technology products, demonstrate them in cross-platform migrations and develop an automated process for integration of spray cooling products into military systems. ($5.034)

- Tunable Monolithic Integrated Circuit efforts are to monolithically integrate tunable radio frequency dielectric devices with high performance digital processing circuits, high voltage generation circuits and control electronics on a common substrate. Preliminary investigations indicate that tunable dielectric devices and RF CMOS on sapphire substrates are compatible while maintaining high levels of performance. Critical to success is the control cross contamination of the materials used in each process. ($1.974)

- Short Cycle Radio Frequency (RF) System on a Chip (RFSoC) Design efforts are to develop an approach to seamlessly integrate all RF and digital subsystem and chip-level design tools which could shorten design time by up to 90% and result in single-chip RFSoC. with parts count, assembly steps, size, and costs reduced by 50-90% as compared to existing RF solutions based on non-integrated discrete components. ($1.480)

- Development for Low Cost High Temp Superconductor (HTS) Receiver Manufacturing efforts are to develop and demonstrate the key low cost fabrication techniques to reduce the manufacturing cost of the HTS receiver dramatically, more than a factor of ten, which will enable very pure, linear, efficient, cost-effective wireless signal reception, not possible with any other technology. The Low Cost HST has met or exceeds several of the program goals. For example, the transition from magnesium oxide substrates to sapphire was successful. The issues of dissimilar material expansion were controlled and performance on sapphire is virtually the same as magnesium oxide. The manufacturing cost saving by moving to sapphire alone is 50% of the receiver unit cost. Other cost reductions were achieved in cryocooler redesign. ($2.517)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Advanced Power Management for Wireless Systems efforts are to demonstrate autonomous on-demand power (ODP) systems, where an ODP system automatically determines an application's need and delivers energy appropriately, this includes creating electrical and mechanical designs, algorithms, and embedded software development. ($4.195)

- Molecular Electronics efforts are to engineer and synthesize new materials (molecules) for applications in silicon devices by applying advancements in molecular engineering, materials science and polymer chemistry to address challenges with integrated circuit integration and developing high-reliability semiconductor solutions. ($0.987)

- The Advanced Beam Steering Program efforts are developing next generation beam steering technology. By combining existing technology with novel smart materials, a faster more robust technology will be available for insertion into numerous platforms for increased Warfighter capability. ($0.987)

- Advanced Dynamic Technology Optics Program efforts will begin to develop a new class of smart materials that will provide nanosecond switching speed shutter devices and variable index of refraction devices. These devices will be operated with a microelectronics controller system to ensure that delay in signal processing within the microelectronics will not delay or hamper speed of the device operation. ($0.987)

- Advanced Filter Program efforts are to begin combining new materials with existing optic technology for a nanosecond speed switchable band block/band pass technology over a wide wavelength range. This will provide instantaneous band blocking of damaging radiation of rapidly varying intensity and rapidly varying wavelength to provide an enhanced level of protection for numerous DoD and Homeland defense systems. ($0.987)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Foliage-penetrating Acoustically Cued Imagery Sensor efforts are developing a miniature digital acoustic array subsystem, imaging subsystem, sensor controller, Line Of Sight (LOS) and Non-LOS communications subsystem, Global Positioning System, chute and payout subsystem, and power subsystems that can be cued to take pictures automatically, compress, encrypt, and infiltrate the image for further analysis and situational awareness at a remote location. Through research and experimentation develop an approach for a jungle based unattended sensor network. Utilize advanced processing and network control to integrate an array of jungle capable sensor for use in high density foliage environments. Develop a prototype and conduct a proof of concept demonstration ($3.355)

- Semiconductor Photomask Technology Initiative efforts are to accelerate the development of state-of-the-art mask making tools and the formation of a domestic mask blank source for future applications in the 45 nanometer and below regime. ($4.195)

- Ruggedized Integrated Battlefield Server efforts are developing and field testing, in the Operation Enduring Freedon area of operations, a spray-cooled ruggedized battlefield server collection management toolset..($9.870)

- Superlattice Nanotechnology efforts are developing and characterizing Silicon Carbide (SiC) wafers grown from SiC templates using low-temperature processes and molecular beam epitaxy with minimum defects that will form the basis for the next generation of radio frequency and radiation-hardened microelectronics. ($2.963)

- Secure Digital Coherent Optical Communications efforts are developing secure optical/radio frequency architecture and operational concepts, study key performance-enhancing algorithms and protocols, and demonstrate key components leading to a secure, high-performance optical communications in fiber, air, and space. ($1.678)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2006 Accomplishments:

- Advanced Power Management for Wireless Systems efforts are demonstrating autonomous on-demand power (ODP) systems, where an ODP system automatically determines an application's need and delivers energy appropriately, this includes creating electrical and mechanical designs, algorithms, and embedded software development. $1.382)

- Miniaturized Wireless Communications System (Chameleon) efforts are developing a covert self-contained microsensor package with on-board real-time mission critical information processing and an ultra-sensitive high temperature super-conducting transceiver. Designed, developed, and demonstrated a miniature sensor system to be used by soldiers on patrol that gathers audio, video, and GPS data. This data is critical to development of an overall situational awareness of the activities of the local population as seen first hand by the soldiers. ($6.217)

- Ultra-low Power Battlefield Sensor Communication System (ULBPSCS) efforts are developing a netted battlefield sensor system with a combination of ultra-sensitive receivers, ultra-low power miniature sensors, advanced manufacturing processes, and a real-time mission critical distributed information system. Developed algorithms for detection and tracking of personnel and vehicles, miniaturization of hardware, and system power consumption optimization in support of a netted battlefield sensor system with a combination of ultra-sensitive receivers, ultra-low power miniature sensors, advanced manufacturing processes, and a real-time mission critical distributed information system. ($14.806)

- Advanced Lithography efforts are developing reticles using advanced x-ray photolithography techniques capable of being used in a stepper to produce geometrical line-widths equal to or less than 70 nanometers (nm) and upgrade existing stepper system stages for 70 nm applications. (3.346)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- The Advanced Beam Steering Program efforts are developing next generation beam steering technology. By combining existing technology with novel smart materials, a faster more robust technology will be available for insertion into numerous platforms for increased Warfighter capability. FY07 efforts will investigate and develop proof of concept advance beam steering devices using both lenslet and ionorefractive technologies and demonstrate the applicability of these technologies to the beam steering problem. ($0.996)

- Advanced Dynamic Technology Optics Program efforts will begin to develop a new class of smart materials that will provide nanosecond switching speed shutter devices and variable index of refraction devices. These devices will be operated with a microelectronics controller system to ensure that delay in signal processing within the microelectronics will not delay or hamper speed of the device operation. The FY07 efforts will develop, fabricate, characterize and demonstrate electronically tunable optical filters. ($0.996)

- Advanced Filter Program efforts are to begin combining new materials with existing optic technology for a nanosecond speed switchable band block/band pass technology over a wide wavelength range. This will provide instantaneous band blocking of damaging radiation of rapidly varying intensity and rapidly varying wavelength to make a nanosecond speed switchable band block/band pass technology optical switch to provide an enhanced level of protection for numerous DoD and Homeland defense systems. The FY07 program will investigate and perform theoretical modeling of the Rapid Optical Shutter in order to provide a more thorough understanding of the quantum physics governing the performance of the devices ($0.996)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Advanced Surface Radar Technologies efforts are to support development and adaptation of electronic components to new form factors by expanding surface ship radar electronics miniaturization and packaging methodologies to demonstrate low cost, scalable radar designs. Candidate electronics will be evaluated for potential benefit to supporting the Navy's next generation surface ship radar systems. Presently, the Navy's surface radar systems are monolithic in their design/implementation, requiring the Service to purchase new radar systems (or extensively upgrade existing systems) for any change in the threat they face. New innovations derived from DOD airborne radar development are promising lower cost, modular surface ship radar designs that can be quickly and inexpensively scaled to meet the Service's needs. ($5.529)

- Feature Size Migration are efforts at DMEA's Foundry to provide the fabrication technology, infrastructure modifications and facilitization to build microelectronics with increased functional density using digital, analog and mixed signal processes for military systems in DMEA's foundry. ($4.533)

- Forbes Field Air National Guard (ANG) Regional Defense Command Integration Center efforts are to perform a baseline survey and analysis of ANG capabilities and threats and to correct deficiencies, redundancies and technology gaps relating to emergency disaster management amongst the distributed mission systems of these ANG organizations. ($1.992)

- Foliage-penetrating Acoustically Cued Imagery Sensor efforts are developing a miniature digital acoustic array subsystem, imaging subsystem, sensor controller, Line Of Sight (LOS) and Non-LOS communications subsystem, Global Positioning System, chute and payout subsystem, and power subsystems that can be cued to take pictures automatically, compress, encrypt, and infiltrate the image for further analysis and situational awareness at a remote location. Miniaturization through advanced packaging and design of the prototypes to achieve covertness for the system. Conduct further jungle environment experiments to refine the design and expand the operational characteristics of the system. ($3.586)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Locust Miniature Air Vehicle (MAV) Enhancement efforts are to upgrade the Locust's already exceptional capability to provide full digital communication and video link, ground control station interoperability, increased flight duration, and true multiple plane interoperability. The Locust is an 18 inch unmanned air vehicle (UAV) that is launched by hand. With a range of 5km (3mi) and a flight time approaching 1 hour, the Locust carries an onboard video camera for surveillance. The Locust is completely autonomous and requires no user interaction after launch. ($1.992)

- Mode 5/Mode S Identification Friend or Foe (IFF) System Technology Development efforts are to accelerate technology development and planned implementation of the Mode 5/Mode S Identification Friend or Foe (IFF) System for the Navy's E-2D Advanced Hawkeye (AHE) aircraft. Accelerated technology development of this system in FY07 would help to ensure that all deliverable IFF systems for the E-2D will have Mode 5/Mode S incorporated prior to delivery, significantly shortening the deployment cycle for this capability while allowing for synergy with all phases of program production. Early implementation of Mode 5/Mode S would benefit program risk reduction through analysis and testing while realizing cost savings. ($0.996)

- Superlattice Nanotechnology efforts are developing and characterizing Silicon Carbide (SiC) wafers grown from SiC templates using low-temperature processes and molecular beam epitaxy with minimum defects that will form the basis for the next generation of radio frequency and radiation-hardened microelectronics. The researchers are developing growth techniques for fabricating 3C-SiC and 4H-SiC superlattices on Silicon substrates. In addition, they will characterize the material by fabricating and analyzing power devices using the SiC wafers. This will lead to developing large SiC epitaxial substrates with processes comparable in cost to standard Silicon wafers. ($1.992)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Semiconductor Photomask Technology Initiative efforts are to accelerate the development of state-of-the-art mask making tools and the formation of a domestic mask blank source for future applications in the 45 nanometer and below regime. ($3.586)

- University Materials Characterization and Metrology Center efforts are to identify the chemical and structural elements of materials and devices, as well as chemical, optical, electrical, and physical principles in measurement science and to be an enabler to the nanotechnology industry by providing expertise, training, and making available shared diagnostics equipment. The FY07 efforts will research advanced materials for semiconductor nanowire synthesis, characterization and device development for electronics, thermoelectric cooling and chemical sensing. ($0.996)

- DMEA Core Research 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).and to ensure rapid insertion of transformational technologies into fielded weapon systems by providing the necessary development, manufacturing engineering, and long-term support structure. Research and assess the potential impact to DoD operational systems caused by decreasing microelectronics feature sizes and increasing complexity and develop a mitigation or solution strategy; define and execute a viable long-term solution strategy for access to technologies and processes that are key enablers in the strategy. Proactively determine and develop the potential benefits of utilizing advances in science and technology (e.g., microelectronics, optoelectronics, nanosciences, molecular electronics, etc) to solve DoD microelectronics support issues. Develop and test advanced science and technology applications to acquire in-depth knowledge that is critical in developing solutions to weapons system performance and support problems. Evaluate, and integrate key commercial microelectronics foundry processes and innovative advanced engineering, design, and fabrication process tools to enhance the DMEA capabilities to provide solutions for weapon systems performance and support problems. ($15.940)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Ultra-High Energy Micro Fuel Cell efforts are to evolve fuel cell components to reduce size and weight. The core fuel cell engine will be reduced by design optimization and advanced materials. Electrode materials will be developed to allow the use of advanced high energy liquid fuels to increase performance. The evolution will be focused to make the fuel cell manufacturable in high volume. ($2.590)

- Secure Digital Coherent Optical Communications efforts are developing secure optical/radio frequency architecture and operational concepts, study key performance-enhancing algorithms and protocols, and demonstrate key components leading to a secure, high-performance optical communications in fiber, air, and space. FY07 efforts are to further develop architectures and operational concepts from prior phases into a functional transceiver prototype to demonstrate key sub-system concepts needed to meet the goals of a secure, high-performance optical communications approach for fiber, air, and space. ($2.386)

- Chameleon Miniaturized Wireless Communications System Efforts are developing a covert self-contained microsensor package with on-board real-time mission critical information processing and an ultra-sensitive high temperature super-conducting transceiver. FY07 efforts include another round of major sensor miniaturizations; e.g. reduce by a factor of 10 to 20. To achieve a focused product; three aspects of the Chameleon software must be addressed; 1) the software must be transitioned from a demonstration prototype to field quality product; 2) the data link reliability must be addressed to communicate sensor findings to the command and control; 3) addition of a real-time data streaming mode to augment the current store and forward strategy. ($8.947)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Ultra-low Power Battlefield Sensor Communication System (ULBPSCS) efforts are developing a netted battlefield sensor system with a combination of ultra-sensitive receivers, ultra-low power miniature sensors, advanced manufacturing processes, and a real-time mission critical distributed information system. Transition prototype hardware and software to a production ready status. Complete all qualification testing, and support the execution of a military utility assessment to ensure the system is ready for transition to a military user. Coordinate with military user on the interface of the system into the existing C4ISR network. Develop training and operation material for the military user. ($14.912)

- Spintronics Memory Storage Technology efforts are to achieve a breakthrough in magnetic random access memory (MRAM) technologies together with companion programs in electronics packaging and advanced materials in order to develop a technology that will be produced domestically and will transition from the lab to the battlefield in a timely and cost effective manner ($7.953)

- California Center for Nanoscience Innovation for Defense (CalCNID) efforts are to systematically clarify the feasibility of applying nanoscience and technology to defense requirements. The universities conduct advanced technology research on nanoscale material and devices with applications in electronics, spintronics, nanophotonics, nanosensors and nanobiology. They investigate the feasibility of applying nanoscience and technology to defense requirements. ($9.544)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

B. Accomplishments/Planned Program:

FY 2007 Plans

- Silicon 28 Deposition Methodology Project efforts are for a technical and business feasibility analysis for military and commercial applications of silicon-28 (Si-28). A Si-28 gas separation process was demonstrated under a previous Silicon-28 Deposition Methodology project. The study would determine the economic feasibility of the separation process to provide pure Si-28 for military and commercial applications. For example, electronic switches for advanced combat vehicle systems which are being made using advanced silicon-carbide materials. ($0.994)

- Network Micro-Sensors Technology Testbed at University of Texas at Dallas (UTD) efforts are to create a national test bed asset at the UTD for networked micro-sensors technology. Networked micro-sensors technology for use in reconnaissance, surveillance, and tactical applications is a pressing national and border security issue. The technology is planned for use in the Future Combat Systems, U.S. border monitoring, and shipping container security at U.S. ports. Development of this critical technology requires robust testing capabilities, which currently do not exist in the U.S. FY07 plans include developing testbed requirements, developing the systems architecture for the testbed, and developing the hardware and software architecture for the testbed. ($1.093)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA #3				Microelectronics Technology Development and Support Program Element: 0603720S				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Defense Microelectronics Activity (DMEA)	118.383	92.554	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A								

E. Major Performers:

Signal Technology Corp, Plano TX, Signal Technology Corp is the designer of the low power radio (RF communications) and the algorithms associated with radio operation and sensor network formation in several projects. Signal serves as the lead system integrator, which includes overall responsibility for design, integration, and test of the technologies/subsystems. May 2007

University of California at Riverside, Riverside CA, The University of California Riverside (UCR) is performing research in nanotechnology, including spintronics, and the relevant nanomaterials and nanodevices necessary to make applications using this technology a reality. UCR is collaborating with industry and other universities to further the knowledge base in the nanoscience and to transition the research to industry for applications that can be relevant to DoD needs. Sep 2007

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				R-1 Item Nomenclature: Program Title: Dual Use Applications Program (DUAP) Program Element: 0603805S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	10.200	0	0	0	0	0	0	0
Project 1: National Center for Manufacturing Sciences (NCMS)/Commercial Technology & Maintenance Activities (CTMA)	10.200	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

The Commercial Technology and Maintenance Activities (CTMA) program is a cooperative agreement between National Center for Manufacturing Sciences (NCMS) and the Deputy Under Secretary of Defense for Logistics and Materiel Readiness to co-sponsor technology development, deployment and validation with DoD organic maintenance activities and NCMS member companies. NCMS is a not-for-profit collaborative research consortium of North American corporations. It is the largest cross-industry consortium in the United States (240 member companies with an annual R&D project portfolio exceeding $80 million). The primary goals of the program are to transfer best commercial technologies and best practices to DoD maintenance activities via NCMS member companies. By partnering with NCMS members, the DoD maintenance activities are able to assess the benefits of new manufacturing technologies in their own facilities, working with industry leaders in solving manufacturing problems through collaboration. The Department of Army, Defense Supply Service Washington (DSSW) is the contracting office for the program. The statement of work in the CTMA contract, DASW01-98-0002, remains essentially unchanged since the original contract was issued in FY 1998, and subsequent year funding has been added to the contract by modification.

B. Program Change Summary:

	FY 06	FY 07	FY 08	FY 09
Previous PB 07	0.00	0.00	0.00	0.00
Current BES	10.200			
Total Adjustments	10.200			
Reprogrammings	10.200			

Change Summary Explanation:

FY 06: Reprogrammings: These funds were a congressional addition to the FY 2006 President's Budget under Operations and Maintenance, Defense-Wide, Commercial Technology for Maintenance Activities. These funds were intended for the Commercial Technology for Maintenance Activities for the Research, Development, Test and Evaluation, Defense-Wide. An Internal Reprogramming Action - DD 1415-3 was prepared and approved.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 3				R-1 Item Nomenclature: Program Title: Dual Use Applications Program (DUAP) Program Element: 0603805S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	10.200	0	0	0	0	0	0	0
Project 1: National Center for Manufacturing Sciences (NCMS)/Commercial Technology & Maintenance Activities (CTMA)	10.200	0	0	0	0	0	0	0

C. Other Program Funding Summary: N/A

D. Acquisition Strategy. N/A

E. Performance Metrics:
Repair Cost Reduction-DoD Wide, Total Repair Cycle Days Eliminated, Total Industry Investment Obtained, Number of Industry Technology Providers Involved, Number of DoD Maintenance Activities Involved, Number of CTMA Projects Funded, Funding Obligation Dates, Contract Award Dates.

	Exhibit R-2, RDT&E Budget Item Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				R-1 Item Nomenclature: Program Title: Deployment and Distribution Enterprise Technology Program Element: PE0603713S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	0	0	25.000	30.000	30.000	30.000	30.000	30.000
Project 1: Capabilities Based Logistics	0	0	5.612	2.500	2.500	2.500	2.500	2.500
Project 2: Deployment and Distribution Velocity Management	0	0	10.035	9.000	5.400	4.470	4.593	4.333
Project 3: Cross Domain Intuitive Planning	0	0	1.680	3.218	4.542	4.090	4.100	4.083
Project 4: End-to-End Visibility	0	0	0.820	3.000	2.930	3.840	4.594	3.586
Project 5: Distribution Planning and Forecasting	0	0	1.550	2.350	3.227	3.839	3.750	3.585
Project 6: Joint Transportation Interface	0	0	3.808	6.977	8.175	7.792	7.213	8.080
Project 7: Distribution Protection/Safety/Security	0	0	1.495	2.955	3.226	3.469	3.250	3.833

A. Mission Description and Budget Item Justification: Global War On Terrorism (GWOT) lessons learned and daily operations indicate that current distribution and logistics processes remain outdated and are rarely capable of providing required warfighter support in an agile, efficient and economical manner. Designation of United States Transportation Command (USTRANSCOM) as the Distribution Process Owner (DPO) and shift within the Department to transform the distribution and logistics processes, demands the examination and improvement of the entire supply chain. Unpredictable and extended global distribution routes, limited visibility of sustainment requirements, force packaging limitations, lift constraints, complex supply chains, as well as non-networked battlefield command and control (C2), planning, and decision support tools impede timely warfighter logistical support. The centralization of distribution and logistics intermodal research and development facilitates the development/fielding of transformational enhancements to validated distribution capability gaps. The USTRANSCOM RDT&E program explores and matures promising technologies to enhance support to combatant commanders and other customers of Department of Defense's (DOD's) distribution and transportation systems.

B. Program Change Summary:

	FY 06	FY 07	FY 08	FY 09
Previous PB07	0	0	0	0
Current FY08 BES	0	0	25.000	30.000
Total Adjustments	0.000	0.000	25.000	30.000

Change Summary Explanation: FY08- FY13 PBD705 continues funding through FY2013

	Exhibit R-2, RDT&E Budget Item Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				R-1 Item Nomenclature: Program Title: Deployment and Distribution Enterprise Technology Program Element: PE0603713S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	0	0	25.000	30.000	30.000	30.000	30.000	30.000
Project 1: Capabilities Based Logistics	0	0	5.612	2.500	2.500	2.500	2.500	2.500
Project 2: Deployment and Distribution Velocity Management	0	0	10.035	9.000	5.400	4.470	4.593	4.333
Project 3: Cross Domain Intuitive Planning	0	0	1.680	3.218	4.542	4.090	4.100	4.083
Project 4: End-to-End Visibility	0	0	0.820	3.000	2.930	3.840	4.594	3.586
Project 5: Distribution Planning and Forecasting	0	0	1.550	2.350	3.227	3.839	3.750	3.585
Project 6: Joint Transportation Interface	0	0	3.808	6.977	8.175	7.792	7.213	8.080
Project 7: Distribution Protection/Safety/Security	0	0	1.495	2.955	3.226	3.469	3.250	3.833

C. Other Program Funding Summary: Displayed on R-2a.

D. Acquisition Strategy: N/A for budget activity 3.

E. Performance Metrics/Major Performers: Displayed on R-2a.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Capabilities Based Logistics, Project 1				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 1: Capabilities Based Logistics	0	0	5.612	2.500	2.500	2.500	2.500	2.500
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

The Department requires procedures and technologies which provide enterprise-level capabilities critical to the distribution system to improve performance of the end-to-end DOD supply chain in direct support of the full range of military operations. Ability to rapidly respond to customers' changing demands, with a reliably high level of service. These needs include: capabilities which enhance any supply or transportation mission (aeromedical, air refueling, joint logistics over-the-shore, seabasing); analysis, tailoring and implementation of selected best enterprise-level practices from industry; and tools/procedures to optimize transportation plus supply (distribution) plans and schedules in support of an entire operation. This project addresses the required mission support to combatant commanders and other customers in the area of capability-based logistics.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	5.612	2.500
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments: Node Management and Deployable Depot (NoMaDD) Advanced Concept Technology Demonstration (ACTD). Developed and demonstrated initial spirals of Node Management tools to monitor strategic-to-tactical movement of Class I supplies (food) and containers. Define requirements and initiate development of capabilities for other classes of supply and retrograde. An initial Limited User Evaluation was conducted for Node Management in Apr-May 06.

FY08 Plans: Continue spiral development and demonstration of NoMaDD capabilities. Support overall transition activities to include Doctrine, Organization, Training, Materiel, Leadership/education, Personnel, and Facilities (DOTMLPF) change recommendations.

C. Other Program Funding Summary: USTRANSCOM's funds support Program Management Office (PMO) Battle Command Sustainment Support System (BCS3) and Tapestry Solutions. Funds modified existing Tapestry Solutions contract, with other expenses paid from OSD and Defense Logistics Agency (DLA) sources. Funds also support DLA's NoMaDD ACTD program under PE # 0603712S. Also providing $0.5M to Defense Distribution Center (DDC) for demonstration of NoMaDD capabilities in Bright Star.

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:	FY08 Estimated Award Date/$:
Tapestry Solutions	San Diego, CA	Software Development (NoMaDD/BCS3)	Nov 06/$1.985M	Nov 07/$2.750M
Stanley/LMI	Alexandria, VA	RDT&E program support	Oct 06/$0.416M	Oct 07/$0.416M
MITRE	Ft Monmouth, NJ	RDT&E program support	Oct 06/$0.500M	Oct 07/$0.500

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Deployment and Distribution Velocity Management, Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Deployment and Distribution Velocity Management	0	0	10.035	9.000	5.400	4.470	4.593	4.333
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

DOD requires procedures/technologies targeted at optimizing throughput at the nodes and through the conduits of the deployment and distribution supply chains, from origin to point of use and return to include: inventory management enhancers (includes node cargo management/tracking); materiel handling innovations (including methods of reducing handling); improved physical access to nodes (includes aircraft all-weather visual systems); port throughput enhancements (includes in-port time reduction methods); and innovative delivery methods (for example, precision airlift, autonomous re-supply). This project addresses required mission support to combatant commanders and other customers of DOD's distribution and transportation systems in the area of deployment/distribution velocity management.

B. Accomplishments/Planned Program:

	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/ Effort/Subtotal Cost	0	0	10.035	9.000
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments:

- Analyze joint multi-modal/service compatible platforms that permit the efficient, seamless and continuously visible movement of supplies through the distribution system addressing intermodal exchange and battlefield distribution issues
- Engineering and programmatic planning for development of a unique, FedEx-like Transportation Tracking Number (TTN) to increase assurance of planned vs. actual tracking of unit movements required by Combatant Commanders in the Joint Operational Planning and Execution System (JOPES)
- Assess feasibility of using specialized cargo platforms for transporting military unit equipment on conventional container ships
- Develop a system capable of selectively retrieving/discharging cargo at sea from container ships

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Deployment and Distribution Velocity Management, Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Deployment and Distribution Velocity Management	0	0	10.035	9.000	5.400	4.470	4.593	4.333
RDT&E Articles Quantity - N/A								

FY 08 Plans:

- Develop capability for Service/Joint watercraft to rapidly/independently conduct vessel offload operations at austere seaports of debarkation
- Continue to develop a cost effective method of transporting and storing military cargo for rapid deployment using conventional container ships
- Develop prototype vehicle with a self-contained port opening and sustainment C2 capability
- Design, create and test prototype air skid based mechanisms to move cargo and vehicles, including Medium Tactical Vehicle Replacement and Twenty-foot Equivalent Units in an environment equivalent to an LMSR cargo hold in conditions up to Sea State 5
- Develop an Austere Sea Port Evaluation and Classification Tool for analyzing shorelines for watercraft deployments to underdeveloped locations

C. Other Program Funding Summary: $0.498M FY06 and $2.694M FY07 to Army for the Joint Modular Intermodal Distribution System (JMIDS) Joint Capabilities Technology Demonstration (JCTD) (PEs 0633001/0665805 refer).

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:	FY08 Estimated Award Date/$:
ITLT Solutions Inc.	Jacksonville, FL	Contrail/Beam System Dev	Mar 07/$1.0M	Oct 07/$2.0M
Benedict Engineering	Tallahassee, FL	Selective Retrieval Prototype Design, Build and Demo	Nov 06/$1.500M	
SAIC	Crane, IN	JMIDS Support	Oct 06/$2.693M	
MITRE Corporation	Ft Monmouth, VA	Engineering and development of Transportation Tracking Number	Nov 06/$0.240M	Oct 07/$0.240M
ORNL	Oak Ridge, TN	Construct vehicle prototype of port opening and sustainment C2 vehicle		Nov 07/$0.5M
To Be Determined	TBD	Construct prototype and conduct Experimentation/integration for Transportation Tracking Number	Mar 07/$1.172M	Oct 07/$1.475M
Booz-Allen Hamilton	McLean, VA	Vessel Off-Load Tech		Oct 07/$2M
TBD	TBD	Air-skid Prototype Development		Oct 07/$2.8M

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Cross Domain Intuitive Planning and Execution, Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Cross Domain Intuitive Planning and Execution	0	0	1.680	3.218	4.542	4.090	4.100	4.083
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Procedures/technologies which improve decision-making and collaboration within the supply chain, from the planning stage to real-time execution and retrograde operations, without need for highly specialized operators of the tools. Projects in this area address following areas: decision support tools for any echelon of the supply chain or decision-maker, distribution process simulations and models for analysis and training, distribution demand forecasting/execution monitoring tools, on-line training, automated decision-maker support (e.g., queuing, alerting, recommended courses of action), automated status monitoring with information fusion and drilldown capability, and resilient C2 infrastructure capabilities. This project will provide required mission support to combatant commanders and other distribution/transportation customers in the area of collaborative planning/execution/information sharing/decision support tools.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	4.820	5.428	1.680	3.218
RDT&E Articles Quantity – N/A				

FY 06 Accomplishments:

- Develop a database and query tool which enables international exchange of airlift (military and commercial) and sealift (military and commercial) schedules to support Coalition Task Force operations
- Explore scalability of web service technology to globally share command and control and transportation info with all (Joint, Service) users Expand current modeling capabilities to perform quantitative programmatic analysis of all aspects of distribution end-to-end process
- Expand geospatial awareness through the fusing of existing information into a logistics common operating picture
-

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Cross Domain Intuitive Planning and Execution, Project 3				
Cost ($ in millions)	FY 2006	FY2007	FY2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project 3: Cross Domain Intuitive Planning and Execution			1.680	3.218	4.542	4.090	4.100	4.083
RDT&E Articles Quantity - N/A								

FY08 Plans:

- Develop database/query tool to exchange air and sealift schedules to support Coalition Task Force operations enhancing logistics information exchange between coalition partners
- Continue to develop capability to model, within Joint Flow and Analysis System for Transportation (JFAST), the strategic air refueling of all joint service combat aircraft, including the USTRANSCOM/AMC inter-theater airlift fleet

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY07 Award Date/$:	FY08 Estimated Award Date/$:
BBNT Solutions	Cambridge, MA	Developing Inter-theater model and Interface between models	Dec 06/$0.654M	
Federated Software Group	St. Louis, MO	Develop software to allow for optimizing operations airlift	Dec 06/$0.688M	
Federated Software Group	St. Louis, MO	Explore scalability of web services and visualization capabilities in the Single Mobility System	Feb 07/$0.610M	
Federated Software Group	St. Louis, MO	Explore scalability of web services in Global Decision Support System 2	Feb 07/$0.610M	
Computer Sciences Corporation	Fairview Heights, IL	Explore scalability of web services in Global Air Transportation Execution System (GATES)	Dec 06/$0.500M	
Booz-Allen Hamilton	McLean, VA	Developing software to allow info exchange between U.S. and Coalition logistic systems		Oct 07/$1.00M
DPRA	Knoxville, TN	Develop JFAST model to include air refueling	Feb 07/$0.377M	Oct 07/$0.430M

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – End-to-End Visibility, Project 4				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 4: End-to-End Visibility	0	0	0.820	3.000	2.930	3.840	4.594	3.586
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

The warfighter requires end-to-end visibility of all aspects of the projection and sustainment of forces and equipment to enable operations. This requires technology investigation into next generation Automated Information Technology (AIT)/Total Asset Visibility (TAV) technologies and/or container security to improve end-to-end distribution visibility and enhance planning and execution and transform sustainment operations. Includes the development of the ability to determine immediate, reliable, and accurate shipment status through system access or event management. Develop an over-arching process and system architecture which will automate and integrate existing and innovative new programs across the supply chain to provide complete In Transit Visibility (ITV) data.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	0.820	3.000
RDT&E Articles Quantity – N/A				

FY 06 Acomplishments: N/A

FY 07 Plans: N/A

FY 08 Plans: Develop automatic system that captures container numbers without relying on additional tagging, human intervention, battery life, and ambiguous dynamic, non-static, associations of tag numbers within a database.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: TBD

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Distribution Planning and Forecasting, Project 5				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 5: Distribution Planning and Forecasting	0	0	1.550	2.350	3.227	3.839	3.750	3.585
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

There is a lack of collaborative distribution planning, based on an understanding of aggregated customer requirements, for optimizing the end-to-end distribution process. Planning, forecasting and collaboration are insufficiently advanced to fully synchronize people, processes and assets to execute planned operations. Automated tools should be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems. This project investigates the need for flexible end-to-end enhanced modeling and simulation and collaborative decision support tools.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	1.550	2.350
RDT&E Articles Quantity – N/A				

FY 06 Acomplishments: N/A

FY 07 Plans: N/A

FY 08 Plans: Commence two year effort to build a highly configurable, agile Distribution Process Nodal Model (DPNM) capable of expressing ansd analyzing complex and detailed distribution processes to support operational planning and execution.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:

Contractor:	Location:	Description of Work	FY08 Estimated Award Date/$:
BBNT Solutions	Cambridge, MA	Develop operational distribution planning tool	Nov 07/$1.550M

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Joint Transportation Interface, Project 6				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 6: Joint Transportation Interface	0	0	3.808	6.977	8.175	7.792	7.213	8.080
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Synchronizing strategic/theater delivery capabilities to meet increasingly dynamic customer needs. Transportation information exchange across the DOD is inhibited by the disparity of systems, differing data standards, and insufficient interfaces. Queries and retrieval of status and shipment information cannot be executed due to lack of connectivity between the various components of the supply chain. Required is the ability to maintain situational awareness of movements at macro/micro (drill down) levels, with associated force and sustainment cargo on board; to track force packages progress, and rapidly determine the impact of any delays or changes to sailing progress and arrival at port of debarkation; and to conduct "what -if" impact assessment of possible changes to delivery asset's course, speed or departure/arrival information as it relates to force or force package delivery/impact of any change on the closure of force packages in theater. The ability of USTRANSCOM to supply transportation support for homeland defense and/or disaster relief depends on effective ways to link with other governmental and civilian agencies. Also need to explore the many barriers across the Joint Deployment and Distribution Enterprise (JDDE), to include non-DOD government entities, coalition partners, non-government organizations, and commercial industry, which can create confusion/conflict or detract from the optimization of the JDDE.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	3.808	6.977
RDT&E Articles Quantity – N/A				

FY 06 Acomplishments: N/A

FY 07 Plans: N/A

FY 08 Plans:

- Commence multi-year development/integration of systems for Common Operational Picture for Distribution and distribution-related Deployment (COP D2) that will mitigate effect of multiple, overlapping functional legacy systems and business processes, and provide timely, relevant, and actionable information to enhance the warfighters' level of confidence in joint distribution processes
- Commence multi-year development of an automated data quality analysis capability linked to the Enterprise Data Warehouse (EDW) that will enable end-to-end analysis of data quality and system performance
- Commence two-year registry design effort to research the Service Oriented Architecture (SOA) to develop techniques of employment that fit the needs of USTRANSCOM, test those techniques and evaluate how best to operationalize this technology

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Joint Transportation Interface, Project 6				
Cost ($ in millions)	FY 2006	FY2007	FY2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project 6: Joint Transportation Interface	0	0	3.808	6.977	8.175	7.792	7.213	8.080
RDT&E Articles Quantity - N/A								

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers:

Contractors:	Location:	Description of Work	FY08 Estimated Award Date/$:
TBD	TBD	System integration	Oct 07/$3.85M
TBD	TBD	Developing database/linking to EDW	Oct 07/$1.408M
TBD	TBD	Designing the SOA Registry	Oct 07/$1.42M

	Exhibit R-2a, RDT&E Project Justification						Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 5				Project Name and Number – Distribution Protection/Safety/Security, Project 7				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Distribution Protection/Safety/Security	0	0	1.495	2.955	3.226	3.469	3.250	3.833
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

The Theater Commander has not always been able to provide the appropriate security in a timely manner during deployment. In some cases there are insufficient security assets to oversee convoy security in-country; therefore, all movement requirements are competing for the same limited resources. Additionally need to explore new, portable methods of detecting hazardous/asymmetric materials in very small quantities to support safe logistics operations. Also explore technologies to enhance the capability to deliver personnel/materiel to anti-access/austere airfields and seaports.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	1.495	2.955
RDT&E Articles Quantity – N/A				

FY 06 Acomplishments: N/A

FY 07 Plans: N/A

FY 08 Plans:

- Improve accuracy of airdropped cargo/supplies through higherf idelity wind field information into Joint Precision Airdrop System-Mission Planner (JPADS-MP) increasing payload accuracy and providing greater offset for delivery aircraft
- Increase technology level readiness (TRL) level of Wireless Gate Release System (WGRS) prototype to provide required capability and facilitate transition activites

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Contractors:	Location:	Description of Work	FY08 Estimated Award Date/$:
Draper Lab	Cambridge, MA	Enhance JPADS-MP capabilities	Nov 07/$0.175M
Wamore Inc.	Prescott, AZ	Refine/test WGRS	Nov 07/$1.120M

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				R-1 Item Nomenclature: Program Title: Logistics R&D Technology Demonstration Program Element: 0603712S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	0	0	4.000	0	0	0	0	0
Project 8: Continuous Acquisition Lifecycle Support (CALS)	0	0	4.000	0	0	0	0	0

A. Mission Description and Budget Item Justification: The central idea of the Focused Logistics Joint Functional Concept "is to build sufficient capacity into the sustainment pipeline, exercise sufficient control over the pipeline from end to end, and provide a high degree of certainty to the supported joint force commander that … sustainment and support will arrive where needed and on time." The Defense Logistics Agency (DLA) R&D program helps achieve this vision by pioneering advanced logistics concepts and business processes that provides the leanest possible infrastructure, the use of the best commercial and government sources, and the application of business practices . The Logistics R&D program develops and demonstrates high risk, high payoff technology that will provide a significantly higher level of support at lower costs, than would be otherwise attainable. The program has a proven track record of implementation and benefits. DLA's overall R&D program has demonstrated positive net present value and a positive return on investment.

B. Program Change Summary:

	FY 2006	FY 2007	FY 2008	FY 2009
Previous PB 07	0.000	0.000	0.000	0.000
Current BES	0.000	0.000	4.000	0.000
Total Adjustments	0.000	0.000	+4.000	0.000

Change Summary Explanation:
FY 2008: PBD 704 adds $4.000 for Continuous Acquisition and Life Support/Integrated Digital Data Environment, Center for Logistics Architecture Programs (CALS).

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 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number Continuous Acquisition Lifecycle Support (CALS), Project #8				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project #8: Continuous Acquisition & Lifecycle Support	0	0	4.000	0	0	0	0	0
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

Information and information technology impact almost every functional component of the DoD, from tactical units to the supply lines that support them. In fact, Joint Vision 2020's central goal is the capability of collecting, processing, and disseminating a steady flow of information to U.S. forces, while exploiting or denying an adversary's ability to access that information.

To this end, the DoD has embarked on a set of critical and ambitious programs. These programs are to insure that information technology plays a key role in achieving war fighter superiority in the 21st century. Embodied in the DoD 2020 logistics vision are integrated supply chains focused on meeting war fighter requirements at the point of need. This, in turn has caused the DoD to insure that all automated information systems have a degree of "interoperability".

The main goal of the DoD's Information Technology initiatives is a shared data environment. This environment supports the DoD 2020 Logistics Vision and all five key logistics initiatives. It provides users the capability to employ automated tools that accomplish tasks more effectively and efficiently and that exchange current and accurate information in a timelier manner across enterprises.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0	0	4.000	0
RDT&E Articles Quantity – N/A				

FY 2008 Plans ($4.000):

- On-going support to the Joint Logistics Vision 2020.
- Continuation of the DoD Future Logistics Enterprise (FLE) initiative.
- Supply Chain Management and Operational Reference Modeling implementation
- DoD Enterprise Modeling and Performance Based Logistics
- Net Centric Enterprise Services

  DoD Corrosion Exchange Initiative

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6			Project Name and Number Continuous Acquisition Lifecycle Support (CALS), Project #8				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project #8: CALS	0	0	4.000	0	0	0	0	0
RDT&E Articles Quantity - N/A								

C. Acquisition Strategy: N/A

D. Major Performers: N/A

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				R-1 Item Nomenclature: Program Title: Defense Technology Analysis (DTA) Program Element: 0605798S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	6.991	7.947	0.000	0.000	0.000	0.000	0.000	0.000
Project 1: DoD Technology Analysis Office (DTAO)	4.598	4.841	0.000	0.000	0.000	0.000	0.000	0.000
Project 2: Technology Integration (TI)	0.717	0.715	0.000	0.000	0.000	0.000	0.000	0.000
Project 3: Commodity Management System Consolidation (CMSC)	1.676	2.391	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification:

This program element provides mission support to the Office of the Deputy Under Secretary of Defense (Science and Technology) (ODUSD(S&T)). It covers a wide range of studies and analyses in support of the RDT&E program and impacts the Department's decision to fund efforts to sustain operations for general R&D.

Project 1: The Defense Technology Analysis Office is responsible for providing engineering, scientific, and analytical support to the ODUSD(S&T) in its responsibility for direction, overall quality, and content of the Science and Technology program and ensuring that the technology being developed is affordable and minimizes systems development risk. Science and Technology is defined as consisting of Basic Research, Exploratory Development, and Advanced Technology.

Project 2: Technology Integration activities advance international S&T cooperation of specific projects of bilateral or multilateral interest. It provides the management support for U.S. participation in NATO's Research and Technology Organization (RTO) and "The Technical Cooperative Program" (TTCP). Technology Integration oversees coordinates, and reviews RTO and TTCP activities in which the U.S. has an interest including ongoing and proposed collaborative programs, technical symposia and conferences, and standard operating procedures.

Project 3: The Commodity Management System Consolidation and Integration team is charged with transitioning Commodity Systems to support the DOD Logistics Transformation Vision. This plan includes reducing response time, operational costs, and inventory and enhances customer satisfaction. To support this, the existing commodity management systems, in use by the Defense Logistics Agency (DLA), must migrate to a common operating environment, which utilizes shared data, and business rules that are accessible to DLA, its customers and its suppliers. Requirements include: 1) Development of an automated parts ordering tool allowing a technician working off an Interactive Electronic Technical Manual (IETM) to requisition parts interactively from the technical manual, 2) Perform a Business Case Analysis (BCA) to determine economic feasibility of the use of Freight on Board (FOB) origin contracts in the Distribution Planning and Management System (DPMS), 3) Research and perform digital (DVD) Conversion. 4) Other studies that will aid DLA in the transition to a paperless enterprise.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				R-1 Item Nomenclature: Program Title: Defense Technology Analysis (DTA) Program Element: 0605798S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	6.991	7.947	0.000	0.000	0.000	0.000	0.000	0.000
Project 1: DoD Technology Analysis Office (DTAO)	4.598	4.841	0.000	0.000	0.000	0.000	0.000	0.000
Project 2: Technology Integration (TI)	0.717	0.715	0.000	0.000	0.000	0.000	0.000	0.000
Project 3: Commodity Management System Consolidation (CMSC)	1.676	2.391	0.000	0.000	0.000	0.000	0.000	0.000

B. Program Change Summary:

	FY 06	FY 07	FY 08	FY 09
Previous PB07	6.991	5.577	5.704	5.807
Current BES	6.991	7.947	0.000	0.000
Total Adjustments		2.391	-5.704	-5.807

Change Summary Explanation:
FY07: CMSC Funding
FY08 and FY13 PBD 704 eliminates funding. .

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 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Defense Technology Analysis Office (DTAO), Project 1				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 1. Defense Technology Analysis Office (DTAO)	4.598	4.841	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:

This project provides engineering, scientific and analytical support to the Office of the Deputy Under Secretary of Defense (Science and Technology) (ODUSD(S&T)) in its responsibility for direction, overall quality, and content of the Science and Technology (S&T) program and ensures that the technology being developed is affordable and minimizes system development risk. The primary purpose of this program element is to facilitate the development of the S&T program and conduct assessments and analyses of the S&T program to ensure maximum utilization of Research and Development funds to accomplish the overall objectives of the S&T program. Funds are required for technical and analytical support, equipment, supplies, travel, and publications.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	4.598	4.841	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($4.598)

- Provided engineering, scientific, analytical, and managerial support to the Office of the Deputy Under Secretary of Defense (Science and Technology) (ODUSD(S&T)) in developing strategies and plans to exploit and develop technology. (0.750)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in conducting analyses, developing policies, making recommendations, and developing guidance for science and technology plans and programs. (1.245)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in reviewing proposed and approved science and technology programs and make recommendations to optimize effectiveness of the DoD investments in science and technology. (0.910)
- Provided engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in oversight of science and technology issues and initiatives and responding to Congressional special interests. (1.693)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Defense Technology Analysis Office (DTAO), Project 1				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 1. Defense Technology Analysis Office (DTAO)	4.598	4.841	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

FY 2007 Plans: ($4.841)

- Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in developing strategies and plans to exploit and develop technology. (0.782)
- Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in conducting analyses, developing policies, making recommendations, and developing guidance for science and technology plans and programs. (1.400)
- Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in reviewing proposed and approved science and technology programs and make recommendations to optimize effectiveness of the DoD investments in science and technology. (0.909)
- Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in oversight of science and technology issues and initiatives and responding to Congressional special interests. (1.750)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Technology Integration, Project 2				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 2: Technology Integration	0.717	0.715	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:

Technology Integration activities advance international science and technology (S&T) cooperation of specific projects of bilateral or multilateral interest. It provides the management support for U.S. participation in NATO's Research and Technology Organization (RTO) and "The Technical Cooperative Program" (TTCP). Technology Integration oversees, coordinates and reviews RTO and TTCP activities in which the U.S. has an interest including ongoing and proposed collaborative programs, technical symposia and conferences, and standard operating procedures. This effort will leverage Tri-Service S&T dollars through new and ongoing international partnerships. Technology Integration also provides selective funding support for administration, travel, conferences, and technical evaluations related to RTO activities carried out by the Services and other organizations.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	0.717	0.715	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($0.717)

- Through an international technology watch effort, identify ongoing and proposed S&T efforts that could complement efforts or fill shortfalls in meeting U.S. S&T requirements, objectives and goals. (0.100)
- Fostered international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Then establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (0.361)
- Sought opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (0.256)
- Foster international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Established data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (0.358)
- Seek international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals. (0.260)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Technology Integration, Project 2				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 2: Technology Integration	0.717	0.715	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

FY 2007 Plans: ($0.715)

- Through an international technology watch effort, identify ongoing and proposed S&T efforts that could complement efforts or fill shortfalls in meeting U.S. S&T requirements, objectives and goals. (0..097)
- Fostered international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Then establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (0.358)
- Seek international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals. (0.260)

. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Commodity Management System Consolidation, Project 3				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 3: Commodity Management System Consolidation (CMSC)	1.676	2.391	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 Commodity Management System Consolidation (CMSC) and Integration team is charged with transitioning Commodity Systems to support the DOD Logistics Transformation Vision. This plan includes reducing response time, operational cost, and inventory, and enhancing customer satisfaction. To support this, the existing commodity management systems, in use by the Defense Logistics Agency (DLA), must migrate to a common operating environment, which utilizes shared data, and business rules that are accessible to DLA, its customers and its suppliers. Requirements include: 1) Development of an automated parts ordering tool allowing a technician working off an Interactive Electronic Technical Manual (IETM) to requisition parts interactively from the technical manual, 2) Perform a Business Case Analysis (BCA) to determine economic feasibility of the use of Freight on Board (FOB) origin contracts in the Distribution Planning and Management System (DPMS). 3) Research and perform digital (DVD) Conversion. 4) Other studies that will aid DLA in the transition to a paperless enterprise.

Successes with developing the IETM parts ordering tool include fielding at pilot sites in Air Force and Navy locations. Ongoing research includes seeding the project at each of the remaining Services and fostering the development and expansion across the Service. Expanding the Knowledge Management Capability will enable DLA to better serve the warfighter.

The recently completed BCA facilitated DLA in developing and managing a strategy for transitioning FOB Origin contacts. In addition, DLA gained knowledge about the impact that the transition to FOB Origin will have on vendor operations and how these might affect the vendor's acceptance of the system. The ability to aggregate freight may have a significant impact on the supplier's distribution network.

The research and digital conversion project has yielded the development of a multimedia laboratory for the evaluation and testing of alternatives. The laboratory simulates the DLA media environment value chain through production, management, and delivery of rich media content. This simulation will permit the integration and optimization of emerging media technologies and organizational processes across the multimedia supply chain.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 6				Project Name and Number – Commodity Management System Consolidation, Project 3				
Cost ($ in millions)	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Project 3: Commodity Management System Consolidation (CMSC)	1.676	2.391	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	1.676	2.391	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($1.676)

- Develop Ordering "Leave-in Place" Prototype for the Army (.838 million)
- Expand Ordering "Leave-in-Place" Prototype for the Air Force (.400 million)
- Expand Knowledge Management Capabilities ($0.318 million)
- Expand prototype for DVD Multi-Media Laboratory project (.120 million)

FY 2007 Plans ($2.391)

- Develop Ordering "Leave-in Place" Prototype for the Army
- Expand Ordering "Leave-in-Place" Prototype for the Air Force
- Expand Knowledge Management Capabilities)
- Expand prototype for DVD Multi-Media Laboratory project

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: West Virginia ManTech located in Fairmont West Virginia. Development of an automated parts ordering tool allowing a technician working off an Interactive Electronic Technical Manual (IETM) to requisition parts interactively from the technical manual to the retail supply system. This capability will extend to DOD EMALL. A one year option phase was exercised on 3/31/06.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				R-1 Item Nomenclature: Program Title: Manufacturing Technology Program Element: 708011S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	35.867	33.570	20.114	20.627	20.978	21.475	21.880	22.207
Project 1: Combat Rations (CR)	1.970	1.998	1.964	1.986	1.981	2.005	2.045	2.078
Project 2: Customer Driven Uniform Manufacturing (CDUM) (Previously called Apparel Research Network)	3.689	3.713	3.908	4.070	4.261	4.352	4.439	4.509
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	2.388	1.303	2.601	2.644	2.662	2.702	2.732	2.756
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	.999	1.112	1.210	1.245	1.261	1.296	1.321	1.343
Project 5: Material Acquisition: Electronics (MAE)	10.113	10.550	10.431	10.682	10.813	11.120	11.343	11.521
Project 6: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling	4.190	0	0	0	0	0	0	0
Project 7: Other Congressionally Added Programs (OCAs)	12.518	14.894	0	0	0	0	0	0

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	R-1 Item Nomenclature: Program Title: Manufacturing Technology Program Element: 708011S

Mission Description and Budget Item Justification:

The Defense Logistics Agency (DLA) Manufacturing Technology (ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. ManTech:

- Provides the crucial link between invention and product application to speed technology transitions.
- Matures and validates emerging manufacturing technologies to support low-risk implementation in industry and DoD facilities, e.g. depots and shipyards.
- Addresses production issues early by providing timely solutions.
- Reduces risk and positively impacts system affordability by providing solutions to manufacturing problems before they occur.

DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Customer Driven Uniform Manufacturing (CDUM), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST), and Material Acquisition: Electronics (MAE). Defense Microelectronics Activity (DMEA) is an Office of the Secretary of Defense program that received Congressionally Directed funds in this Program Element. DLA is not involved with execution of this program. Other Congressional Adds (OCA) programs are Congressionally Directed efforts.

B. Program Change Summary:

	FY 2006	FY 2007	FY 2008	FY 2009
Previous PB07	34.667	18.748	19.358	19.763
Current BES	35.867	33.570	20.114	20.627
Total Adjustments	+1.200	+14.822	+.756	+.864

Change Summary Explanation:

FY 2006: $1.200 moved to the PRO-ACT project from the Log R&D program to provide a critical level of research activity.
FY 2007: $14.894 in Congressional Adds. -$.071 withheld by OSD.
FY 2008: $1.200 moved to the PRO-ACT project from the Log R&D program. Fiscal guidance cut of $.444.
FY 2009: $1.200 moved to the PRO-ACT project from the Log R&D program. Fiscal guidance cut of $.336.

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 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Combat Rations (CR), Project 1				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 1: Combat Rations	1.970	1.998	1.964	1.986	1.981	2.005	2.045	2.078
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification:

In FY 2005 the Defense Supply Center Philadelphia (DSCP) sold $3.9B in subsistence goods and services to the Department of Defense, making it DSCP's largest supply chain. Sales in subsistence continue to grow, largely due to requirements for operations Iraqi Freedom and Enduring Freedom. The Combat Rations Program is focused on improving the manufacturing technologies related to the production and distribution of the combat rations that are at the forefront of these operations, including Meals Ready to Eat (MREs) as well as unitized group rations. The objectives are increased readiness, improved quality, increased ration variety, decreased cost. The CORANET program engages all elements of the supply chain including producers, military services, Army Natick, USDA, FDA, DLA, DSCP and academia to research and transition improved technologies for operational rations. To insure technology validation and transition, the CORANET program also maintains a demonstration site.

B. Accomplishments/Planned Program:

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	1.970	1.998	1.964	1.986
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($1.970)
- Quality Improvement Cheese Spread-Improved formulations for MRE item to reduce discoloration and improve shelf life ($.126)
- Ultra High Pressure Processing Eggs-Improved processing and formulation for MRE egg entrees to increase soldier acceptance ($.490)
- Acceptance Test for Retort Pouch Material-Reduced cost and weight of packaging materials. ($.203)
- Identify, define, review and implement research activities ($0.651)
- Demonstration site ($0.500)-

FY 2007 Plans: ($1.998
- Technology Transition Retort Racks-Validation and transition of technology for reduced defects and failures in retort racks ($.397
- Technology Transition Ultra Sonic Seal-Validation and Transition of Technology to reduce seal defects in the MRE pouch. ($.200
- Microbial Studies MRE Shelf Stable Pocket Sandwich-Acceptance of microbiological growth data by regulatory agencies ($.225)
- Knurled Seal Heat Bar Technology-Improved strength and increased production yield for MRE pouches ($.211)
- Oxygen Absorbing Packaging Materials-Elimination of scavenger sachets and improved shelf life ($.315)
- Identify, define, review and implement research activities ($0.250)
- Demonstration site ($0.400)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Combat Rations (CR), Project 1				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 1: Combat Rations	1.970	1.999	1.964	1.986	1.981	2.005	2.045	2.078
RDT&E Articles Quantity- N/A								

FY 2008 Plans: ($1.964)
- Identify, define, review and implement research activities ($0.500)
- Demonstration site ($0.400)
- New Short Term Projects and Partner support ($1.064)

FY 2009 Plans ($1.986)
- Identify, define, review and implement research activities ($0.500)
- Demonstration site ($0.400)
- New Short Term Projects and Partner support ($1.086)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown									Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Combat Rations (CR), Project 1					
A. Project Cost Breakdown **Combat Rations**									
Project Cost Categories				FY 2006	FY 2007	FY 2008	FY 2009		
a. Manufacturing Process Support Costs				1.970	1.999	1.964	1.986		
B. Budget Acquisition History and Planning Information Performing Organizations									
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
				Cont	Cont	Cont.			
Ameriqual	Cost, No Fee	12/2001	Partner						
Georgia, Univ of	Cost, No Fee	12/2001	Partner, STP*						
NCFST	Cost, No Fee	12/2001	Partner, STP						
Ohio State Univ	Cost, No Fee	12/2001	Partner, STP						
R&D Associates	Cost, No Fee	12/2001	Partner, STP						
Rutgers	Cost, No Fee	12/2001	Partner, STP, Demo						
SOPAKCO	Cost, No Fee	12/2001	Partner, STP						
Sterling	Cost, No Fee	11/2001	Partner						
TEES (TAMU)	Cost, No Fee	12/2001	Partner, STP						
Tennessee, Univ of	Cost, No Fee	12/2001	Partner, STP						
Wornick	Cost, No Fee	12/2001	Partner						
Wash State U	Cost, No Fee	12/2001	Partner, STP						
Michigan State U	Cost, No Fee	7/2006	Partner						
Virginia Tech	Cost, No fee	7/2006	Partner						
Diversapak	Cost, No Fee	7/2006	Partner						
Truitt	Cost, No Fee	7/2006	Partner						
Oregon Freeze Dry	Cost, No Fee	7/2006	Partner						
				1.970	1.999	1.964	1.986		
Government Furnished Property: None.								*STP = "Short Term Project"	

Exhibit R-4, Schedule Profile			Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Combat Rations (CR), Project 1	

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Quality Improvement Cheese Spread	X	X	X	X	X	X																										
Ultra High Pressure Processing Eggs	X	X	X	X	X	X																										
Acceptance Test for Retort Pouch Material	X	X																														
Technology Transition Retort Racks					X	X	X	X	X	X																						
Microbial Studies MRE Shelf Stable Pocket Sandwich					X	X	X	X	X	X																						
Knurled Seal Heat Bar Technology					X	X	X	X	X	X																						
Oxygen Absorbing Packaging Materials					X	X	X	X	X	X																						
New Short Term Projects									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Demonstration Site	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Identify, define, review and implement research activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Combat Rations (CR), Project 1				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Quality Improvement Cheese Spread	1-4Q	1-2Q						
Ultra High Pressure Processing Eggs	1-4Q	1-2Q						
Acceptance Test for Retort Pouch Material	3-4Q							
Technology Transition Retort Racks		1-4Q	1-2Q					
Microbial Studies MRE Shelf Stable Pocket Sandwich		1-4Q	1-2Q					
Knurled Seal Heat Bar Technology		1-4Q	1-2Q					
Oxygen Absorbing Packaging Materials		1-4Q	1-2Q					
New Short Term Projects			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Demonstration Site	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Identify, define, review and implement research activities	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Customer Driven Uniform Manufacturing	3.689	3.713	3.908	4.070	4.261	4.352	4.439	4.509
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification:

The Department of Defense, through the Defense Logistics Agency, purchased $2.6 billion of clothing and textile items in 2004. The lead-time is up to 15 months and the current inventory acquisition value is over $1 billion. The current focus of Apparel Research Network (ARN) is Customer Driven Uniform Manufacturing (CDUM). ARN-CDUM explores the application of advanced manufacturing and information technologies to the end-to-end management of non-recruit clothing (NRC). Each NRC supply chain has unique requirements not typically found in apparel industrial operations. ARN-CDUM will experiment with ways to help manufacturers meet the requirements specific to NRC (i.e. raw material tracking). It will also explore ways to account for NRC after it has left the wholesale system. The benefits will include improved asset visibility, accountability, and shelf-life management throughout an items' life cycle, reduced item cost, reduced operational costs, and improved readiness. Experimentation will identify promising technical solutions, prototype alternative solutions, and validate user requirements.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	3.689	3.713	3.908	4.070
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($3.689)
- Non-recruit clothing (NRC) business process baseline analyses, New Start ($0.445)
- Radio Frequency Identification Device (RFID)/Advanced Identification Technology (AIT) pilots for the NRC supply chain including Joint Service Lightweight Integrated Suite Technology (JSLIST), Individual Body Armor, and the Advanced Combat Uniform (ACU), New Start ($1.150)
- Life cycle management for NRC, New Start ($1.080)
- Extend from end-item manufacturers to fabric suppliers ($1.014)

FY 2007 Plans: ($3.713)
- Expansion, enhancement and refinement of RFID/AIT initiatives. ($.986)
- Expansion, enhancement and refinement of non-recruit clothing initiatives. ($2.727)

FY 2008 Plans: ($3.908)
- RFID/AIT Prototype Demonstrations. ($1.908)
- NRC Prototype Demonstrations. ($2.000)

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 2: Customer Driven Uniform Manufacturing	3.689	3.713	3.908	4.070	4.261	4.352	4.439	4.509
RDT&E Articles Quantity- N/A								

FY 2009 Plans ($4.070)
- Expanded RFID/AIT Prototype Demonstrations ($2.070)
- Expanded NRC Prototype Demonstrations ($2.000)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: AdvanTech, Inc., Annapolis, MD. Award Date 3/2003, Cost Plus Fixed-Fee (CPFF), 3 Year base, 2 two year options. Contractor performs research and development in the area of supply chain management and integration.

Product Data Integration Technologies, Inc. (PDIT), Inc., Long Beach, CA, Award Date 3/2002, CPFF, 3 year base, 2 two year options. Contractor performs research and development in the area of data base development for real time asset visibility and automated processing of electronic transactions.

Human Solutions NA, Inc., Dearborn, MI, Award Date 3/2002, CPFF, 3 year base, 2 two year options. Contractor performs research and development in the area of 3D body scanning integration into supply chain management systems.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2

A. Project Cost Breakdown

Customer Driven Uniform Manufacturing

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	3.689	3.713	3.908	4.070

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
				3.689	3.713	3.908	4.070		
PDIT	Cost Plus Fixed Fee/Contractor	03/2002							
AdvanTech	Cost Plus Fixed Fee/Contractor	03/2002							
Human Solutions	Cost Plus Fixed Fee/Contractor	03/2002							

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7									Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology												Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2															
Fiscal Year	**2006**				**2007**				**2008**				**2009**				**2010**				**2011**				**2012**				**2013**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
NRC business process baseline analyses.			x	x	x	x	x	x	x	x	x	x																				
RFID/AIT pilots for the NRC supply chain including JSLIST, Individual Body Armor and the ACU			x	x	x	x	x	x	x	x	x	x																				
Life cycle management for NRC			x	x	x	x	x	x	x	x	x	x																				
Extend from end-item manufacturers to fabric suppliers			x	x	x	x	x	x	x	x	x	x																				
Expansion, enhancement and refinement of RFID/AIT initiatives							x	x	x	x	x	x	x	x	x	x	x	x	x	x												
Expansion, enhancement and refinement of non-recruit clothing (NRC) initiatives							x	x	x	x	x	x	x	x	x	x	x	x	x	x												
RFID/AIT prototype demonstration											x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
NRC prototype demonstrations											x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Non-recruit clothing (NRC) business process baseline analyses.	3-4Q	1-4Q	1-4Q					
RFID/AIT pilots for the NRC supply chain including JSLIST, Individual Body Armor and the ACU	3-4Q	1-4Q	1-4Q					
Life cycle management for NRC	3-4Q	1-4Q	1-4Q					
Extend from end-item manufacturers to fabric suppliers.	3-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Expansion, enhancement and refinement of RFID/AIT initiatives		3-4Q	1-4Q	1-4Q	1-4Q			
Expansion, enhancement and refinement of non-recruit clothing initiatives		3-4Q	1-4Q	1-4Q	1-4Q			
RFID/AIT prototype demonstrations			3-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-2Q
NRC prototype demonstrations			3-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-2Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Procurement Readiness Optimization-Advanced Casting Technology	2.388	1.303	2.601	2.644	2.662	2.702	2.732	2.756
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: Weapon system spare parts which use castings are responsible for a disproportionate share of backorders. Cast parts are 2% of National Stock Numbered parts but represent 4% of all backorders, and when only the oldest backorders are considered, up to 19% of them are castings. This program develops methods and technology to improve the supply of weapon system spare parts which use castings. The Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT) program takes a systems view and considers not only the Defense Logistics Agency (DLA) perspective but also the Military Service Engineering Support Activities (ESA) which DLA works with to solve technical issues, as well as the industrial supply base. The program has three components: Castings Advanced Systems Technology – Integration Team (CAST-IT); Enterprise Integration; and Foundry R&D.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	2.388	1.303	2.601	2.644
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments: ($2.388)

- CAST-IT solutions for resolving 1285 backordered parts from land, sea and maritime supply chains. These solutions ranged from developing new sources, to developing new technical data packages, solid models and simulation. Relationships with ESA partners were built.
- Solicitation for cast parts are being separately posted on the program's web site, now foundries can easily see parts they can make.
- Foundry R&D:
    - Integrated design of steel castings for service performance – multi-axial fatigue analyses from finite element simulation on test specimens and cast components were completed, and the results compared with test data
    - Rapid tooling – additional parts have been made on rapid tooling, and durability tests completed
    - Quality improvement – worked with American Society for Testing and Materials (ASTM) to complete the digital radiographic standard for aluminum castings
    - Environment for die casting design and evaluation – finalized the functions that allow a user (design, die maker, die caster) to rapidly set up the construction of runner, gate and overflow geometries needed to complete a bases die design, given a solid model, in a few minutes
    - Short run tooling advisor – final report completed
    - Integrated dimensional engineering for short-run castings – final changed completed in the Pattern Allowance Advisor

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 3: Procurement Readiness Optimization-Advanced Casting Technology	2.388	1.303	2.601	2.644	2.662	2.702	2.732	2.756
RDT&E Articles Quantity- N/A								

FY 2007 – 2009 Plans:

There are three research elements: rapid acquisition, quality, and cost effectiveness of cast spare parts. Rapid acquisition will provide DLA with solutions to improve manufacturing speed and predictability, tools for capturing castings process data, and processes for applying casting solutions to small lot and short lead time procurements. Quality will develop DLA tools for improving technical data, tools for best value source selection, processes to qualify new materials and processes, tools to identify good casting applications, and improved standards. Cost effectiveness will develop casting applications to reduce cost.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: Competitive Broad Agency Announcement (BAA) evaluations complete

E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3

A. Project Cost Breakdown

Procurement Readiness Optimization—Advanced Casting Technologies (PRO-ACT)

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	2.388	1.303	2.601	2.644

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
				2.388	1.303	2.601	2.644		
AdvanTech, Inc	Cost Share Contract	6/23/00	12.585						
AdvanTech, Inc	Cost share	10/1/05	14.442						

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7									Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3										
Fiscal Year	**2006**				**2007**				**2008**				**2009**				**2010**				**2011**				**2012**				**2013**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
New Program - will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing and buying weapon systems spares through advanced casting technology.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
New Program - will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing and buying weapon systems spares through advanced casting technology.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology	.999	1.112	1.210	1.245	1.261	1.296	1.321	1.343
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification:

Weapon system spare parts which use forgings are responsible for a disproportionate share of DLA backorders. Forged parts are 3% of National Stock Numbers (NSNs) but 6% of backorders. This program develops methods and technology to improve the supply of forged parts. This program takes a holistic view of the problem and attacks root causes inside DLA, at DLA's engineering support activity partners in the Services, and at DLA forging suppliers. The program has three thrusts: Business Enterprise Integration to improve supply support approaches; FORGE-IT to develop and improve technical problems; and R&D which develops new technology for forging suppliers, including new methods for making forge dies (typically the longest lead time item) and for simulation of metal flow inside the forge die (to eliminate trial and error development of the die).

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	.999	1.112	1.210	1.245
RDT&E Articles Quantity – N/A				

Forging Technology for Lead Time Reduction

FY 2006 Accomplishments: ($0.999)

- Value stream analysis of shop floor and acquisition processes – The Ohio State University – Continued development of Production Flow Analysis Simplification Toolkit for commercial rollout. Development focused on analyzing large datasets (multi routings). Issued 3 commercial licenses for Pro-Fast in 2006.
- Best practices for forging supplier selection and forging tooling database development – University of Toledo, MVTS, Information Handling Systems, and Plexus On Line – Increased the number of forging dies in the National Forging Tooling Database (NFTD) to over 200,000 dies representing over 70 forges in the country.
- Uploaded the United States Air Forces Landing Gear forging tooling data into the NFTD. Targeted other services and weapon systems for data uploads using the free Plexus Upload Tool.
- Deployed the FORGE-IT process in addressing forging technical and enterprise problems. Provided forging procurement assistance to DLA and DOD Services.
  - Rapid Forging Tooling – RSP Tooling Technology set out to "spray up tooling" leveraging Department of Energy developed technology.
  - Accomplishments include deploying the beta machine to build tools 7x7x4 inches up to 100 pounds.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology	.999	1.112	1.210	1.245	1.261	1.296	1.321	1.343
RDT&E Articles Quantity- N/A								

FY 2007 – 2009 Plans: Continue to develop technology for rapid, low cost deployment of forging technology.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: A Broad Agency Announcement (BAA) evaluations complete

E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4

A. Project Cost Breakdown

Procurement Readiness Optimization—Forging Advanced System Technology (PRO-FAST)

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	.999	1.112	1.210	1.245

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
AdvanTech, Inc	Contract	10/13/05	13.006	.999	1.112	1.210	1.245		

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2007
Appropriation/Budget Activity RDT&E, Defense Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4	

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Business Enterprise Integration	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
"FORGE-IT" projects	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
Forging R&D	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
New Forging Program																	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Business Enterprise Integration		1-4Q	1-4Q	1-4Q				
FORGE-IT Projects		1-4Q	1-4Q	1-4Q				
Forging R&D		1-4Q	1-4Q	1-4Q				
New Forging Program					1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7			Project Name and Number - Material Acquisition: Electronics (MAE), Project 5					
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 5: Material Acquisition: Electronics	10.113	10.550	10.431	10.682	10.813	11.120	11.343	11.521
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification:

Develop a capability to emulate most obsolete digital integrated circuits (ICs) in the federal catalog using a single, flexible manufacturing line. DoD has estimated that $2.9 billion is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. Commercial ICs have short Product Life Cycles (often available only 18 months), prior to moving on to the next generation of ICs.

DoD maintains weapons systems much longer, resulting in an obsolescence problem. In order to avoid the excess costs and potential readiness issues associated with buying excessive inventories before commercial availability ceases, or redesigning the next higher assembly to eliminate the obsolete part, DLA (as the manager of 88% of the IC supply class) must have a capability to manufacture IC devices. This project develops that capability and will expand to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program. In the coming years we will also look at the need and feasibility of supporting other classes of obsolete electronics items (such as Circuit Card Assemblies, discrete electronic devices, etc.) managed by DLA in order to best serve our military customers.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	10.113	10.550	10.431	10.682
RDT&E Articles Quantity – N/A				

The Material Acquisition Electronics program continues to cover development and expansion of IC fabrication technology to emulate succeeding generations of discontinued or otherwise non available commercial technology. This includes integration of advanced emulation capability development (e.g., High Speed/ High Density Emulation Arrays) into Low Rate Initial Production capability. Recent shipments included microcircuit devices for C-17, F-15 aircraft, and Navy Phalanx ship board anti missile defense system components. Technology development will continue to deeper sub-micron (<1.0 um) feature sizes and faster operating speeds increasing warfighter support. Development of IC design capability and population of our design model library for efficient IC fabrication technology will continue to expand in order to accommodate both in-house and third-party (principally Original Equipment Manufacturer) design requirements. Continued development of IC characterization capability will enhance emulation from sample parts in cases where original design data is incomplete or not available at all; thus reducing non-procurables. In FY2007 a Broad Area Announcement will seek proposals to support other classes of obsolete electronics as well as IC's managed by DLA.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7			Project Name and Number - Material Acquisition: Electronics (MAE), Project 5					
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 5: Material Acquisition: Electronics	10.113	10.550	10.431	10.682	10.813	11.120	11.343	11.521
RDT&E Articles Quantity- N/A								

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number - Material Acquisition: Electronics (MAE), Project 5

A. Project Cost Breakdown

Material Acquisition: Electronics (MAE)

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	10.113	10.550	10.431	10.682

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
				10.113	10.550	10.431	10.682		
Sarnoff Corp.									
LMI									
ARINC									
SPAWARSYSCEN									

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																			
Date: February 2007																																			
Appropriation/Budget Activity RDT&E, Defense Wide BA: 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology																				Project Name and Number - Material Acquisition: Electronics (MAE), Project 5											
Fiscal Year	**2006**				**2007**				**2008**				**2009**				**2010**				**2011**				**2012**				**2013**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Perform Gap Analysis (GA) of Commercial Technology.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Perform Base array designs required to fill GA.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Update design Library	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Develop prototypes for test and insertion.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Develop Low Rate Initial Production (LRIP) capability.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Transition new microcircuit designs to LRIP.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Perform process review	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Plan required process improvements.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Implement process improvements.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Monitor and adjust process improvements.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Material Acquisition: Electronics (MAE), Project 5			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Perform Gap Analysis (GA)of Commercial Technology.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Perform base array designs required to fill GA.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Update design library.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Develop prototypes for test and insertion.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Develop Low Rate Initial Production (LRIP) capability	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Transition new microcircuit designs to LRIP	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Perform process review	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Plan required process improvements.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Implement process improvements.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Monitor and adjust process improvements	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7			Project Name and Number – Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 6					
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 6: Defense Microelectronics Activity, Mfg Engineering of Spray Cooling	4.190	0	0	0	0	0	0	0
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification

The Defense Microelectronics Activity **(**DMEA) mission is to leverage advanced technologies to extend the life of weapon systems, to solve operational problems (e.g., reliability and maintainability) and to address diminishing manufacturing sources. The DMEA provides technical and application engineering support for the implementation of advanced microelectronics research technologies from design through assembly and installation. The DMEA manages an organic capability to support these strategically important technologies within the DoD. These advanced technologies are translated into solutions for military needs. Spray Cooling Manufacturing Engineering efforts are to develop manufacturing engineering and process tools to support the Department's transition of spray cooling technology from laboratory prototypes to production and to implement advanced manufacturing, logistics, and sustainment philosophies to facilitate the successful deployment of advanced spray cooling technology components and products in weapon system platform applications.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	4.190	0	0	0
RDT&E Articles Quantity – N/A				

FY 2006 Plans: ($4.190)

- Developed a rapid prototyping capability for key manufacturing processes.
- Developed failure analysis closed-loop feedback architecture.
- Implemented strategic manufacturing partnerships necessary to establish a solid supplier base for all key system components.
- Developed the tools needed to support advanced logistics capabilities.
- Advanced a lean manufacturing initiative.
- Improve manufacturability and reliability of the spray cool systems and standard components.
- Continue to implement a quick-turn pilot line and process for seamless transition into low-cost volume manufacturing.
- Continue development of key manufacturing processes and engineering design tools needed for low cost, high volume fabrication and assembly.
- Develop an intelligent test capability for spray cooled electronics that provide qualified, war-ready, line replaceable units in sufficient quantities to meet field requirements for spray cool-equipped weapon systems.

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7			Project Name and Number – Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling,, Project 6					
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 6: Defense Microelectronics Activity, Mfg Engineering of Spray Cooling,	4.190	0	0	0	0	0	0	0
RDT&E Articles Quantity- N/A								

- Develop tools, systems, and the service support capability needed to provide rapid, effective in-field and depot maintenance and the associated total asset visibility that ensures seamless life-cycle support to DoD.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: See R-3

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number – Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 6

A. Project Cost Breakdown

Manufacturing Engineering of Spray Cooling

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	4.190	0	0	0

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
Isothermal Systems Research	CPFF	Sep 06		4.190	0	0	0		

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																Date: February 2007
Appropriation/Budget Activity RDT&E, Defense Wide BA: 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number – Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 6																
Fiscal Year	**2006**				**2007**				**2008**				**2009**				**2010**				**2011**				**2012**				**2013**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Rapid prototype capability	**x**	**x**	**x**	**x**																												
Failure analysis closed-loop feedback	**x**	**x**	**x**	**x**																												
Implement strategic manufacturing partnerships	**x**	**x**	**x**	**x**																												
Develop advanced logistics capabilities	**x**	**x**	**x**	**x**	**x**																											
Advance lean manufacturing initiative	**x**	**x**	**x**	**x**	**x**																											
Improve manufacturability and reliability					**x**	**x**	**x**	**x**	**x**	**x**																						
Implement quick-turn pilot line and process					**x**	**x**	**x**	**x**	**x**	**x**																						
Key mfg. processes and tools					**x**	**x**	**x**	**x**	**x**	**x**																						
Intelligent Test Capability					**x**	**x**	**x**	**x**	**x**	**x**																						
Tools for field and depot maintenance and support					**x**	**x**	**x**	**x**	**x**	**x**																						

Exhibit R-4a, Schedule Detail							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-Wide BA: 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number – Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 6			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Rapid prototype capability	1-4Q							
Failure analysis closed-loop feedback	1-4Q							
Implement strategic manufacturing partnerships	1-4Q							
Develop advanced logistics capabilities	1-4Q	1Q						
Advance lean manufacturing initiative	1-4Q	1Q						
Improve manufacturability and reliability		1-4Q	1-2Q					
Implement quick-turn pilot line and process		1-4Q	1-2Q					
Key mfg. processes and tools		1-4Q	1-2Q					
Intelligent Test Capability		1-4Q	1-2Q					

Exhibit R-2a, RDT&E Project Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7			Project Name and Number - Other Congressionally Added Programs (OCAs), Project 7					
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project 7: Other Congressionally Added Programs (OCAs)	12.518	14.894	0	0	0	0	0	0
RDT&E Articles Quantity- N/A								

Mission Description and Budget Item Justification:
This R2 is for all the Congressionally added programs to the DLA Manufacturing Technology Program.

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishment/ Effort/Subtotal Cost	12.518	14.894	0	0
RDT&E Articles Quantity – N/A				

FY 2006 Accomplishments/Plans:

- **Defense Supply Chain Technology (DSC):** Improve the DOD supply chain through enhanced business processes and tools. Concurrent Technologies Corp, Awarded 05/06 ($6.406)
- **Advanced Manufacturing Technology (AMT):** Fund Purdue to develop the next generation of manufacturing technologies to reduce the cycle time and cost of providing replacement parts to DLA. Purdue University. Awarded 03/06 ($.986)
- **Castings for Improved Defense Readiness (CID):** Machining of castings for lead time reduction and on-time delivery; high performance steels, rapid casting design, casting procurement solution network. Awarded 04/06 ($.986)
- **Complex Optics and Nanometer Scale (CON):** Develop a full systems solution manufacturing capability to deterministically produce high performance optics and other precision surfaces needed for DoD. Awarded 03/06 ($1.972)
- **Copper-base Casting Technology Program (CBC):** Fund development and application of copper-base alloys to make lighter, more efficient components of DoD systems. Copper Development Association. Awarded 03/06 ($1.183)
- **Rapid Qualification of Mfg Parts (RQC):** Develop a process of intensive quenching of cannon and motor parts using water to replace oil as the quenching medium. Awarded 04/06 ($.985)

FY 2007 Plans:

- **Advanced Microcircuit Emulation Program:** ($1.345)
- Copper-Based Castings Technology Program: ($1.993)
- **Lithium Battery Systems for Asset Tracking:** ($1.793)
- **Next Generation Manufacturing Tech Initiative:** ($3.885)
- **Northwest Manufacturing Initiative:** ($2.491)
- **4 Ship Network Training Center**: ($1.943)
- **Joint Diminishing Manufacturing Capabilities**: ($1.445)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: Funds are provided to executing agencies and placed on existing contracts with the intended recipient of the Congressional Addition.

E. Major Performers: See information associated with each project provided under 2006 Plans.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Project Name and Number - Other Congressionally Added Programs (OCAs), Project 7

A. Project Cost Breakdown

Other Congressionally Added Programs (OCAs)

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	12.518	14.894	0	0

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
TBD				12.518	14.894	0	0		

Government Furnished Property: None.

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2007	
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7				R-1 Item Nomenclature: Program Title: Logistics Support Activities Program Element: 0708012S				
Cost ($ in millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	2.859	2.901	2.846	2.866	2.861	2.901	2.959	3.005
Project 1: Classified Project	2.859	2.901	2.846	2.866	2.861	2.901	2.959	3.005

A. Mission Description and Budget Item Justification: This is a classified program.

B. Program Change Summary

	FY 2006	FY 2007	FY 2008	FY 2009
Previous PB07	2.858	2.912	2.913	2.916
Current BES	2.859	2.901	2.846	2.866
Total Adjustments	0.001	-0.011	-0.067	-0.050
Program Adjustments	0.001	-0.011	-0.067	-0.050

Change Summary Explanation:
FY 2006: Contract support increase
FY2007: OSD Withholding
FY 2008: Fiscal Guidance Cut
FY 2009: Fiscal Guidance Cut

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: This is a classified program.

E. Performance Metrics: This is a classified program.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2007
Appropriation/Budget Activity RDT&E, Defense-wide BA: 7	Program Name: Classified Project Project Number: 1

A. Project Cost Breakdown

Logistics Support Activities

Project Cost Categories	FY 2006	FY 2007	FY 2008	FY 2009
a. Manufacturing Process Support Costs	2.859	2.912	2.846	2.866

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2006	FY 2007	FY 2008	FY 2009	Budget to Complete	Total Program
				2.859	2.912	2.846	2.866	Cont	Cont

Government Furnished Property: N/A.