DEFENSE LOGISTICS AGENCY

FISCAL YEAR (FY) 2006/2007 BUDGET ESTIMATES

FEBRUARY 2005

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

BUDGET JUSTIFICATION FOR PROGRAM ELEMENTS

OF THE

DEFENSE LOGISTICS AGENCY

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

FISCAL YEAR (FY) 2006/FY 2007 BUDGET ESTIMATES

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DEFENSE LOGISTICS AGENCY
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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
FISCAL YEAR (FY) 2006/FY 2007 BUDGET ESTIMATES
PROGRAM ELEMENT SUMMARY (R-1)
(Dollars in Thousands)

Program Element Number	Title	Budget Activity	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate
0603712S	Logistics R&D Technology Demonstration	03	123,936	142,559	22,360	19,163
0603713S	Distribution Process Owner Technology Development and Implementation	03	0	0	10,000	15,000
0603805S	Dual Use Application Programs (NCMS/CTMA)	03	3,710	0	0	0
0305840S	Electronic Commerce	05	2,332	2,171	0	0
0605798S	Defense Technology Analysis	06	5,148	7,126	5,393	5,498
0708011S	Industrial Preparedness/ ManTech	07	45,894	39,455	18,219	18,484
0708012S	Logistics Support Activities	07	35,401	11,128	2,900	2,871
	TOTAL - DIRECT		215,421	202,439	58,872	61,016

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				R-1 Item Nomenclature: Logistics R&D Technology Demonstration 0603712S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	122.936	142.559	22,360	19.163	20.110	20.564	21.036	21.602
Project # 1: Material Acquisition: Electronics (FY 2006-2011 realigned to IP/Mantech BA 7)	9.571	9.961	0.000	0.000	0.000	0.000	0.000	0.000
Project # 2: Weapon System Sustainment (formerly Aging Aircraft Sustainment Technology)	6.023	5.178	5.388	5.469	5.557	5.652	5.765	5.888
Project # 3: Medical Logistics Network (MLN) (formerly Virtual Reality Medical Assembly)	1.902	2.882	2.947	2.955	2.968	3.002	2.919	2.977
Project # 4: Competitive Sustainment (CS)	0.976	1.170	0.000	0.000	0.000	0.000	0.000	0.000
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
Project # 6: Diminishing Manufacturing Source Data (DMS)	2.473	0.978	0.000	0.000	0.000	0.000	0.000	0.000
Project # 7: Supply Chain Management (SCM)	3.375	3.382	3.187	3.453	2.438	2.585	2.833	3.024
Project # 8: Agent Based Logistics Processes	0.000	0.000	0.000	0.000	1.650	1.700	1.734	1.769
Project # 9: EMASS (Completion Project)	1.265	0.479	0.000	0.000	0.000	0.000	0.000	0.000
Project #10: Other Congressionally added programs	20.381	36.517	0.000	0.000	0.000	0.000	0.000	0.000
Project #11: Continuous Acquisition & Lifecycle Support (CALS)	3.831	3.913	4.000	0.000	0.000	0.000	0.000	0.000
Project #12: Strategic Distribution & Reutilization (SDR)	0.000	0.000	3.000	3.100	3.050	3.100	3.162	3.225
Project #13: Energy Readiness Program (ERP)	0.000	0.000	1.493	1.846	2.112	2.195	2.246	2.295
Project #14: Defense Logistics Information Research (DLIR) (formerly titled Electronic Commerce under PE 0305840S)	0.000	0.000	2.345	2.340	2.335	2.330	2.377	2.424

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 3	R-1 Item Nomenclature: Logistics R&D Technology Demonstration 0603712S

A. Mission Description and Budget Item Justification: The DoD logistics vision calls for providing flexible, cost effective and prompt materiel support, logistics information and services, achieving the leanest possible infrastructure and the employment of the best commercial and government sources and practices. The DLA Logistics R&D program will develop and demonstrate high risk, high payoff technology that will provide a significantly higher level of support at lower costs, than would be otherwise attainable. This DLA program is a key part of the Advanced Research Projects Agency (DARPA)/DLA Advanced Logistics Program. Focused Logistics is one of the five basic tenants of Joint Vision 2020. The DLA Logistics R&D program contributes directly to achieving JV 2020's vision of logistics "support in hours or days versus weeks." The objective of the Advanced Logistics Program is a collaborative environment that will allow the DLA Operations community, Logistics planning community, and Transportation Command (TRANSCOM) seamlessly interact on operations planning and execution of wartime operations. In addition, DLA will use the same system in peacetime to significantly reduce Logistics Response Time and reduce the cost of DLA operations while maintaining readiness. The following synopses cover the programs under the DLA Log R&D PE:

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous PB 2005	123.111	27.542	24.905	26.565
Current PB 2006	122.936	142.559	22.360	19.163
Total Adjustments		115.017	-2.545	-7.402
Congressional Increase	-0.175	118.075	4.000	
Program adjustments		-3.058	-0.383	-0.158
Program realignments			-6.162	-7.244

Change Summary Explanation:
FY 04: OSD CIS adjustment of -$0.175 Million.
FY 05: Congressional Additions of $118.075. Reductions of $3.058 (FFRDC, CAAS, DOE , Set Aside and Management Improvement).
FY 06: Additional funding ($4M) for Continuous Acquisition Life Cycle Support. Inflation adjustment of $1.224 Million. Reduction taken for Major Range & Test Facilities ($1.607 Million). Realignments: Material Acquisition project is aligned under Manufacturing Technology PE 070811S (-$10.267 million) and The Defense Logistics Information Research project, formerly Logistics Transformation Demonstration PE 0305840S has been aligned under Logistics R&D Technology Demonstration PE 0603712S (+$2.345 million). New Starts: Strategic Distribution & Reutilization (+$3.000 million) and Energy Readiness Proposal (+$1.606 million). Completed projects: Competitive Sustainment (-$2.356 million) and Emass (-$0.490).
FY 07: Annualization of FY 2006 changes. Additionally, inflation adjustment ($1.528 Million) and Reduction for Major Range & Test Facilities ($-1.686 Million).

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 3	R-1 Item Nomenclature: Logistics R&D Technology Demonstration 0603712S

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Material Acquisition: Electronics (MAE), Project 1				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 1: Material Acquisition: Electronics (MAE)	9.571	9.961	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: 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 $2.9B is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. The commercial suppliers of ICs typically terminate production lines every 18 months, moving on to the next generation of ICs. Because DoD maintains weapons systems much longer than 3 years, this creates an obsolescence problem that can only be overcome through buying excessive inventories of parts before the production lines close 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 these devices. This project develops this capability and will expand it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program. Beginning in FY 2006, this project is aligned with Industrial Preparedness PE 0708011S.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	9.571	9.961	0.000	0.000
RDT&E Articles Quantity – N/A				

The MAE project covers development of IC fabrication technology to continue to expand the capability to emulate succeeding generations of discontinued technology. This will include Low Rate Initial Production of earlier development efforts (e.g., 200K emulation Array) and integration of Advanced Tooling and development of future capabilities (e.g., High Speed/ High Density Emulation Arrays). Technology development will continue to deeper sub-micron (<1.0 um) feature sizes and faster operating speeds. Development of IC design capability and design model library to realize emulation performance and functional requirements outcomes using developed IC fabrication technology. This design capability will address both standard catalog ICs and Application Specific Integrated Circuits (ASICs) and will accommodate both in-house and third-party (principally Original Equipment Manufacture) design requirements. Beginning in FY 06, this project is aligned with Industrial Preparedness PE 0708011S.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Weapon System Sustainment, Project 2					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 2: Weapon System Sustainment	6.023	5.178	5.388	5.469	5.557	5.652	5.765	5.888
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: The mission is to fund efforts to explore, develop, and prototype tools & technologies that both help DLA do their jobs better when it comes to supporting weapon system customers and to help those customers coordinate & collaborate their efforts with DLA. The program will seek to re-define the envelope of future performance while developing high payoff tools and techniques to increase the productivity and effectiveness of DLA's support to the Services.

The program is focused on three areas:

- Parts situational awareness, to provide earlier, more complete visibility into customer parts needs. The program will deliver accurate understanding of the impact of DLA supply performance on military readiness, automatic notification of supply shortfalls vice depot maintenance schedules, and visibility into root causes of irregular parts demands.

- Sustaining engineering, including analyses of materials, components, tooling; reliability analysis and failure trends; creation, maintenance and modernization of technical data; value engineering; reverse engineering; and source qualification.

- Advanced manufacturing of first article parts using cutting edge techniques that are much cheaper and faster than conventional methods, including tool-less manufacturing, high speed machining, and super finishing.

The program has expanded its focus from aviation to all DLA hardware supply chains; the title has been changed to reflect the expanded focus. A congressional addition for the IOWA Waste Reduction Center at the University of Northern Iowa was included in this program for FY 2003/FY 2004.

	FY 2004	FY 2005	FY 2006	FY 2007
Aging Aircraft Sustainment Technolology (AAST) – Weapon System Sustainment (WSS)	5.056	5.178	5.388	5.469
RDT&E Articles Quantity - N/A				

B: Accomplishments/Planned Programs:

Investigate and develop methods and tools for improved parts situation awareness/supply response time in order to employ a more proactive approach to hardware availability and supply. This focus area improves DLA's ability to predict DoD customer needs for increasing fleet maintenance requirements on aging weapons systems. It includes efforts such as the development of various data extraction tools and techniques to access a wide variety of customer and supplier data bases, systems, or networks, extract relevant information, and present that information in a tailored fashion for use by program managers, maintainers, item managers, and buyers. It also includes characterization of items of supply unique to the problems associated with maintenance requirements for aging weapons systems and their impact on DoD customer metrics such as fleet readiness levels, depot repair cycle time and cost

These functions include engineering analyses and assessments of materials, components, tooling, etc. required to manufacture parts; reliability analyses; analyses of failure trends; creation, maintenance and modernization of technical data; value engineering; reverse engineering; manufacture and testing of prototype and first article parts; and qualification of new parts and sources. The Defense Supply Center Richmond's (DSCR's) Sustaining Engineering Center of Excellence was established, successfully demonstrated its value to DLA, and will be continued under DSCR guidance.

Develop, demonstrate and validate new and advanced manufacturing capabilities that can dramatically improve DLA's response to customer needs for parts availability and cost reduction. This includes processes and products to shorten Production Lead Time, reduce parts acquisition and inventory costs or improve parts reliability.

	FY 2004	FY 2005	FY 2006	FY 2007
Star4D Pollution Prevention	0.967	-----	-----	-----
RDT&E Articles Quantity - N/A				

The IOWA Waste Reduction Center at the University of Northern Iowa, in cooperation with the U.S. Environmental Protection Agency, developed a training program for spray technicians known as Spray Technique Analysis and Research (STAR). The STAR 4 Defense (STAR4D) took STAR training techniques and equipment to selected sites to train and educate military painting technicians in FY 2004

C. Other Program Funding Summary:

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Medical Logistics Network (MLN), Project 3					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 3: Medical Logistics Network (MLN)	1.902	2.882	2.947	2.955	2.968	3.002	2.919	2.977
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: Defense Logistics Agency (DLA) has the responsibility to procure Medical Assemblies for the Services, provide requirements management programs, and the implementation of facilitating technologies through the medical logistics supply chain. Medical Assemblies are complex. Tools to manage the infusion of required medical technologies into the force are not optimal. The development of programs to more fully develop medical logistics requirements for war planners is only in the pre-development stage with the dynamic nature of healthcare equipment constantly changing to accommodate new types of form, fit, function, and utility. This program will attempt to utilize technology reduce lead times, reduce the logistics footprint, to reduce overall assembly life-cycle costs, and provide requirements management and business intelligence capabilities to Combatant Commanders.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.902	2.882	2.947	2.955
RDT&E Articles Quantity – N/A				

This effort began in FY 2001 with Joint Application Development (JAD) sessions to formalize requirements. Market analysis will be performed to identify the most appropriate technology to employ, and detailed system specifications will be created. In FY 2004, DLA prototyped an entire field hospital assembly and applied the technology to other processes within DLA. In FY 2005, DLA plans to fully develop an asset, kit, and outfit acquisition and production program that will build on earlier work and incorporate technologies such as Radio Frequency Identification tags and the Medical Air Bridge that will fully integrated into the DLA Energy Readiness Program (ERP).

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Competitive Sustainment (CS), Project 4					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 4: Competitive Sustainment (CS)	0.976	1.170	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: A competitive source selection process was conducted for a manager of an industry coalition to conduct the work. The project conducts industry/Government pilots in the following five areas: 1) effective supply partnerships; 2) significant improvement in quality and access to technical data; 3) a streamlined maintenance process; 4) upgrade strategies for increased reliability and 5) innovative training. The goals are to reduce total costs of spares/replacements, cut the time from requirement to delivery for supplies, and to cut repair cycle.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.976	1.170	0.000	0.000
RDT&E Articles Quantity – N/A				

Risk analysis for disposed material, which may be used by terrorists. This project begins in FY 2004 and is slated for an FY 2005 completion. The following projects are to be completed by FY 2006: Risk analysis for surges in demand and common processes for implementing conditioned based maintenance.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

*Defense Emergency Response Fund (DERF): 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. 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, AWACS, F-16, F-15, F-14, GPS, USQ-113, JAST, 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.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	8.525	8.322	------	------
RDT&E Articles Quantity – N/A				

Center for Nanosciences Innovation efforts are to systematically clarify the feasibility of applying nanoscience and technology to defense requirements.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	10.091	6.168	------	------
RDT&E Articles Quantity – N/A				

Advanced Spray Cooling Technology efforts are to develop standardized advanced spray cooling technology products, demonstrate them in cross-platform migrations, and develop an automated process for integration of spray cooling products into military systems.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	11.873	6.657	------	------
RDT&E Articles Quantity – N/A				

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

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program: (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	29.681	20.559	------	------
RDT&E Articles Quantity – N/A				

Ultra-low Power Battlefield Sensor Communication System (ULBPSCS) efforts are to develop 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.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	7.619	7.538	------	------
RDT&E Articles Quantity – N/A				

Miniaturized Wireless Communications System (Chameleon) efforts are to develop a covert self-contained microsensor package with on-board real-time mission critical information processing and an ultra-sensitive high temperature super-conducting transceiver.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.236	------	------	------
RDT&E Articles Quantity – N/A				

Silicon Germanium Technology efforts are to develop viable methods to replace microcircuits that are used in high performance digital and mixed signal applications for DOD weapon systems.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.187	1.468	------	------
RDT&E Articles Quantity – N/A				

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 including communication and sensor applications. .

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program: (continued)

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	1.237	------	------	------
RDT&E Articles Quantity – N/A				

Commercial-off-the-shelf (COTS) Microelectronics Sustainment efforts are to archive an optimal set of robust processes which, together, can solve the obsolescence of a diverse number of circuit functions.

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	0.990	------	------	------
RDT&E Articles Quantity – N/A				

Functional Decomposition of Application Specific Integrated Circuits (ASIC) efforts are to develop the processes necessary to fabricate replacement processor components in DMEA's Flexible Foundry. The scope of the effort will include developing the ability to design, simulate, operate and test newly developed, complex designs without having to prototype the hardware.

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	0.700	------	------	------
RDT&E Articles Quantity – N/A				

Integration and Assimilation of Hard and Soft Core Intellectual Property efforts develop methods for using existing hard cores as building blocks for complex chips, incorporating hard cores with soft cores in a single design, and fabricating these designs in the Flexible Foundry.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program: (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	.979	------	------
RDT&E Articles Quantity – N/A				

Advanced Microelectronic Feature Size Migration efforts are to implement a comprehensive growth plan for increasing the functional density of digital, analog, and mixed-signal semiconductor processes to provide long-term support of advanced microelectronics for military systems.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	-----	.979	------	------
RDT&E Articles Quantity – N/A				

Advanced Microelectronic Yield Enhancement efforts are to develop an enhanced ability to produce prototypes and low-volume production of non-industry supported microcircuits for use in military and defense applications by increasing the number of yielding devices per wafer lot and reducing the amount of time needed to produce good first-pass process runs.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	2.496	------	------
RDT&E Articles Quantity – N/A				

Miniature Tunable Radio Frequency (RF) Front End efforts are to develop a complete suite of tunable hardware and software that leads to families of miniature, tunable RF front ends that enable communication devices that are much smaller, consumes less battery power and solves many of the problems facing military communications today.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	.979	------	------
RDT&E Articles Quantity – N/A				

High Temp Superconductor (HTS) Transceiver efforts are to develop and demonstrate the key building blocks leading to the development of an HTS transceiver, which will enable very pure, linear, efficient wireless signal production as well as reception, not possible with any other technology.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program: (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	5.825	------	------
RDT&E Articles Quantity – N/A				

Long-Term Support of Microelectronic Technology Research efforts are to ensure rapid insertion of transformational technologies into fielded weapon systems by providing the necessary development, manufacturing engineering, and long-term support structure.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	1.958	------	------
RDT&E Articles Quantity – N/A				

Nano-structured Carbon for Radiation Shielding of Microelectronics efforts are to develop carbon nanotubes and fullerenes for light-weight radiation shielding of microelectronics, allowing the use of non-radiation hardened electronics in severe radiation environments such as space.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	2.937	------	------
RDT&E Articles Quantity – N/A				

Optical Manufacturing for Extreme UV Lithography efforts are to develop optical and electronic manufacturing technologies, design and process optimization approaches, and associated hardware and software facilities that provide a revolutionary Integrated Telescope Electronics Assembly (ITEA) solution capable of significantly reducing the overall size, weight, and power of Next Generation strategic and tactical missile seeker and sensor systems.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	3.329	------	------
RDT&E Articles Quantity – N/A				

Ruggedized Military RFID Tags efforts are to develop military-capable RFID tags that are rugged, long range, low cost, possess low-power non-volatile memory and operate under extremes of temperature and radiation.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Defense Microelectronics Activities (DMEA), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 5: Defense Microelectronics Activities (DMEA)	73.139	78.099	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program: (continued)

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	2.912	------	------
RDT&E Articles Quantity – N/A				

Secure Digital Coherent Optical Communications efforts are to develop secure optical/RF 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.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	2.056	------	------
RDT&E Articles Quantity – N/A				

Smart Scan Radio Frequency Identification (RFID) Tag Reader efforts are to develop a smart scanning RFID tag reader (SSTR) to address DOD requirements. This SSTR will also consolidate all antenna and reader hardware in one unit and provide the system integrator with equipment that will help the network to adapt to the required RF environment to obtain a 100% read rate.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	------	2.937	------	------
RDT&E Articles Quantity – N/A				

Superlattice Nanotechnology efforts are to develop and characterize Silicon Carbide (SiC) wafers grown from SiC templates using low-temperature processes with minimum defects that will form the basis for the next generation of RF and radiation-hardened microelectronics.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Diminishing Manufacturing Source Data (DMS), Project 6					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 6: Diminishing Manufacturing Source Data (DMS)	2.473	0.978	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: As aircraft, ships, and other vehicles are being expected to operate much longer than originally designed, the supply of parts for these systems has become a significant problem. When systems and components can no longer be obtained they are called diminishing manufacturing source (DMS) problems. Throughout the military, there are literally hundreds of independent operations attempting to solve steadily worsening DMS problems. Because these operations are very "stove-piped" in their existence, they do not share information across weapon systems, even though many parts are common. The only method to decrease this ever expanding cost to solve DMS problems would be to have a central repository of part solutions, shared across all weapon systems and all services. In order to create a central repository of military parts, a very large data warehouse will need to be created and populated with solutions to these DMS part problems.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	2.473	0.978	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2004 Accomplishments: An initial predictive tool was made available to government users through the Diminishing Manufacturing Sources and Material Shortages (DMSMS) program Center of Excellence (COE) website. An increased utilization of the website has been documented since the deployment of this predictive tool. Additional capabilities include a centralized resource for solutions and a library of reference material addressing obsolescence. A DMSMS discussion forum was established September 2004.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Supply Chain Management (SCM), Project 7					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 7: Supply Chain Management (SCM)	3.375	3.382	3.187	3.453	2.438	2.585	2.833	3.024
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: The DLA mission is to get the right item, at the right time, to the right place, at the right price, every time, in support of America's war fighter. To accomplish its mission DLA must use an integrated combat logistics solution that is coordinated among the services and across DoD to meet all combat support requirements in peace and war. 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 assembling supply chains to shorten lead times and reduce costs. The Agency must ensure that outsourcing strategies are coordinated, performance measures are in place to measure effectiveness, and the organizational structure promotes successful supply chain management and incorporate the latest electronic commerce initiatives into its supply chain.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
SCM/DSCT	3.375	3.382	3.187	3.453
RDT&E Articles Quantity - N/A				

Our program will initiate approximately 12 Supply Chain Management Projects for DLA and the Services, which are in the following areas as they emerge from our current transformation efforts: supplier facing, customer facing, DLA Direct, customer Direct, and process enhancement.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Agent Based Logistics Processes, Project 8					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 8: Agent Based Logistics Processes	0.000	0.000	0.000	0.000	1.650	1.700	1.734	1.769
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: Project will develop plans and tools for flexible responses to changing supplier and demand data. It will provide the ability to link into war planning systems to address the capability of the industrial base to meet National Emergency Requirements. Project planned to start in FY 2008.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.000	0.000	0.000	0.000
RDT&E Articles Quantity – N/A				

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number eMASS (Completion Project), Project 9					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project # 9: eMASS (Completion Project)	1.265	0.479	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: Enterprise Mission Assurance Support System (eMASS) is a comprehensive, enterprise-wide capability that automates all major information assurance processes including certification and accreditation, vulnerability management, incident response, and Information Assurance (IA). A resource planning and management, circuit connection management, contingency planning, and IA command and control. eMASS will provide a single IA exchange standard across the DoD Global Information Grid (GIG) and will be an implementation of Security Assertion Markup Language (SAML), an XML based exchange standard. eMASS is being developed through a partnership with Command, Control, Communications and Intelligence (C3I), and will vet the policy requirements of an emerging family of IA policies called the 8500 series.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.265	0.479	0.000	0.000
RDT&E Articles Quantity – N/A				

Complete fully functional eMASS prototype in EXtensible Mark-up Language (XML) schema and Extensible Stylesheet Language Transformation (XSLT) style sheets. Complete SAML exchange standard for certification and accreditation security assertions. Fully integrate eMASS with the Open Vulnerability Assessment Language (OVAL) standard by developing an exchange standard with the Mitre Corporation Outpost automated toolset.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Other Congressionally added programs, Project 10					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #10: Other Congressionally added programs	20.381	36.517	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: Congressionally added programs that reflect a range of related advanced technologies.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	20.381	36.517	0.000	0.000
RDT&E Articles Quantity – N/A				

These programs are in the execution phase and execution is underway unless otherwise noted.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Continuous Acquisition & Lifecycle Support (CALS), Project 11				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #11: Continuous Acquisition & Lifecycle Support (CALS)	3.831	3.913	4.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: The Joint Logistics Commanders documented an interoperability requirement for the development and deployment of Interactive Electronic Technical Manuals (IETM) in a memorandum for the Deputy Undersecretary of Defense (DUSD) (Logistics) from Joint Logistics Commanders, 10 June 1997, and assigned responsibility to the Tri-Service Interactive Electronic Technical Working Group. This initiative provides technical support to the working group to accomplish several tasks in support of their mission. Total electronic asset identification and application are not possible without automation of the DoD Type Designation System and development of a link between Weapon Systems and the Federal Logistics Information System. CALS IETM researches into the application of Electronic Commerce and Electronic Data Interchange (EC/EDI) standards for business process application. The Department of Defense's (DoD) organizational infrastructure, legal regulatory policy, and business practices are constantly being transformed to support "change." As we move from a Cold War posture to one of dynamic multiple conflicts, our war fighters must face a wide range of scenarios. To meet this ever expanding challenge in the 21st century, timely, accurate, and secure information technology support is emerging as not only important to our nation, but as the critical discriminator to maintain our freedom (i.e., Information Superiority).

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.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Continuous Acquisition & Lifecycle Support (CALS), Project 11					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #11: Continuous Acquisition & Lifecycle Support (CALS)	3.831	3.913	4.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A								

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	3.831	3.913	4.000	0.000
RDT&E Articles Quantity – N/A				

- Continue to employ CALS in developing architectures to govern the modernization of integrated supply chain information systems.
- Continue to integrate CALS technologies with dynamic product models.
- Reengineer logistics processes based on CALS modernization technologies.
- Employ CALS in developing architectures to govern the modernization of integrated supply chain information systems.
- Electronic Commerce and Electronic Data Interchange (international standards, international business processes like transportation and procurement, Accredited Standards Committee (ASC) X12, United Nations (UN)/Electronic Data Interchange For Administration Commerce and Transport (EDIFACT), and EXtensible Markup Language [XML]-Electronic Data Interchange [EDI]).

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Strategic Distribution & Reutilization (SDR), Project 12				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #12: Strategic Distribution & Reutilization (SDR)	0.000	0.000	3.000	3.100	3.050	3.100	3.162	3.225
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: The Strategic Distribution and Reutilization project addresses the need of the Combatant Commanders to have effective, efficient logistics support by adapting emerging commercial technology to the military environment and working with the combatant commands to ensure the new technology and processes are integrated into operational plans.
Focused Logistics is one of the five focus areas of Joint Vision 2020. Compared to Operation Desert Strom, Operation Iraqi Freedom (OIF) is much more efficient and effective. However, over $1 billion in material shipped could not be accounted for in theater, and operational plans came very close to being limited by the logistics systems' ability to match the pace of operations. The ever increasing operational demands on the logistics system require a new generation of technology for logistics operations. The scope of the project covers force buildup and closure, sustainment and retrograde, i.e., returning or disposing of material from an operation.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.000	0.000	3.000	3.100
RDT&E Articles Quantity – N/A				

Planning has begun for the program and it is anticipated that a Broad Agency Announcement will be issued in second quarter of FY 2005 for an FY 2006 award. The current planning is for four thrusts: 1) node management – optimizing the flow through the choke points; 2) Virtual Bin System for austere warehousing operations; 3) mobile, ruggedized depot equipment; 4) reutilization/disposal of items from operations.

C. Other Program Funding Summary: The Distribution Process Owner (DPO) Technology Development and Implementation Project in U.S. Transportation Command is a complementary program that is focused on the integration and transportation components of Focused Logistics.

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 3				Project Name and Number Energy Readiness Program (ERP), Project 13				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #13: Energy Readiness Program (ERP)	0.000	0.000	1.493	1.846	2.112	2.195	2.246	2.295
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: Tailor Point-of-Sale (POS) capability to leverage Radio Frequency Identification (RFID) initiatives sponsored by Service customers through Commercial off-the-shelf (COTS) or Government-developed software and COTS hardware platforms meeting POS deployability criteria for strategic and tactical situations. Explore additive-based, at the skin of aircraft, dispensing technologies to eliminate the production and storage of specialty aviation fuel. Develop convergences between the Fuel Accounting System (FAS) and Business Systems Modernization (BSM) systems.

Continue to investigate and implement plans for use of hydrogen as a fuel in the battlefield.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.000	0.000	1.493	1.846
RDT&E Articles Quantity – N/A				

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 3			Project Name and Number Defense Logistics Information Research, Project 14					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project #14: Defense Logistics Information Research	0.000	0.000	2.345	2.340	2.335	2.330	2.377	2.424
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification: A departmental management initiative to optimize available resources and promote the achievement of net-centricity directed realignment of RDT&E funds from the Defense Information Systems Agency (DISA) to the Defense Logistics Agency (DLA) beginning in FY 2004. This logistics transformation demonstration program is one of a variety of key information technology tools and is an Information Technology (IT) enterprise initiative to improve operational capability and transform business processes, while promoting interoperability, as part of the President's Management Agenda eGovernment initiative for Integrated Acquisition. This program was classified as Electronic Commerce PE 0305840S until FY 2006, when the program title changed and was realigned to Logistics R&D Technology Demonstration PE 0603712S.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.000	0.000	2.345	2.340
RDT&E Articles Quantity – N/A				

Developed and chartered an Integrated Project Team (IPT) for the Defense Logistics Information Research. Developing a Broad Agency Announcement (BAA) and Acquisition Strategy for FY 2006 – FY 2011. The BAA focuses on the following thrusts : enhancement of the Federal Catalog and related logistics information; enhanced mapping of commercial and government taxonomies; development of methodologies for automated/intelligent data cleansing and knowledge extraction; development of data representation and distribution preferences; research and development of next generation of electronic commerce and automated sourcing; development of sense and respond logistics; and development of distributed tools for supplier relationship management.

C. Other Program Funding Summary: N/A

Exhibit R-2a, RDT&E Project Justification						Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide, BA 3				Project Name and Number: Distribution Process Owner (DPO) Technology Development and Implementation (PE0603713S)			
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
	-	10.0	15.0				
Project 1: Capability-based Logistics	-	1.5	2.0	-	-	-	-
Project 2: Deployment & Distribution Velocity Mgmt	-	7.0	9.0	-	-	-	-
Project 3: Sense and Respond / Protection	-	1.0	1.0	-	-	-	-
Project 4: Cross Domain Intuitive Planning and Execution	-	0.5	3.0	-	-	-	-

A. Mission Description and Budget Item Justification: Global War on Terrorism lessons learned indicate that current distribution and logistic processes remain outdated and are not capable of providing required war fighter support in an agile, efficient, economical manner. Designation of USTRANSCOM as the Distribution Process Owner and shift within the Department to transform the distribution and logistics processes, demand 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 war fighter logistical support. The centralization of distribution and logistics research and development will facilitate the development/fielding of transformational operational enhancements to validated distribution/logistic capability gaps through the transition of mature/promising technologies providing required mission support to combatant commanders and other customers of DoD's distribution and transportation systems in the areas of capability-based logistics, deployment/distribution velocity management, sense & respond, protection, and collaborative planning/execution/information sharing/decision support tools.

B. Accomplishments/Planned Program:

	FY 05	FY 06	FY 07
Accomplishment/Effort/Subtotal Cost	0	10.0	15.0
RDT&E Articles Quantity – N/A			

Exhibit R-2a, RDT&E Project Justification	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide, BA 3	Project Name and Number: Distribution Process Owner (DPO) Technology Development and Implementation (PE0603713S)

Planned accomplishments by project area are as follows:

- Project 1: Development of distribution flow predictive capabilities, migration of transportation/logistics processes into a centralized global distribution process, enhanced coalition/commercial information sharing, and development of 4th Party Logistics (industry best practice) capabilities.
- Project 2: Development of end-to-end mode determination/optimization planning and execution capabilities, demonstration of specialized cargo platforms for transporting military unit equipment on conventional container ships to free DOD sealift assets to address other lift shortfalls, refinement of at sea selective discharge of cargo from container ships, development of sub-pallet approach to return 463L pallets into air cargo flow process, and demonstration of signal processing system and refinement of image processing system to enable direct aerial delivery to distributed forces in complex battlefield.
- Project 3: Modification of existing COTS detection system to produce low-cost, hand-held cargo explosive detectors and develop next-generation total asset visibility capabilities.
- Project 4: Transformation of current methods used to gather, manage and display distribution/transportation command and control information, leverage state-of-the-art supply chain methodologies to generate optimal end-to-end transportation schedules, and enhanced tools to support war-gaming, exercises, planning, execution and programmatic analysis in an integrated logistics common operating picture.

C. Other Program Funding Summary: N/A

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA # 3				R-1 Item Nomenclature: DUAL USE APPLICATIONS PROGRAM (DUAP) 603805S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	3.710	-----	-----	-----	-----	-----	-----	-----
National Center for Manufacturing Sciences (NCMS)/Commercial Technology & Maintenance Activities (CTMA)	3.710	-----	-----	-----	-----	-----	-----	-----

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 04	FY 05	FY 06	FY 07
Previous PB 05	3.710	-----	-----	-----
Current PB 06	3.710			
Total Adjustments	-------			
Program Adjustments	-------			

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 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA # 03				Project Name and Number – DUAL USE APPLICATIONS PROGRAM (DUAP) 603805S				
Cost ($ in millions)	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Total PE Cost	3.710	-----	-----	-----	-----	-----	-----	-----
National Center for Manufacturing Sciences (NCMS)/Commercial Technology & Maintenance Activities (CTMA)	3.710	-----	-----	-----	-----	-----	-----	-----

A. Mission Description and Budget Item Justification 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.

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	3.710	-----	-----	-----
RDT&E Articles Quantity – N/A				

B. FY 2004 Accomplishments: (3.710)

- Provide engineering, scientific, analytical, and managerial support to the Office of the Deputy Undersecretary of Defense (ODUSD), Science & Technology (S&T) in developing strategies and plans to exploit and develop technology. (0.350)
- 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. (1.140)
- 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. (0.600)
- 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. (1.620)

Exhibit R-2, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 5			R-1 Item Nomenclature: Electronic Commerce, 0305840S					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	2.332	2.171						
EC (eMall Sustainment)	2.332	2.171						

A. Mission Description and Budget Item Justification: A departmental management initiative to optimize available resources and promote the achievement of net-centricity directed realignment of RDT&E funds from the Defense Information Systems Agency (DISA) to the Defense Logistics Agency (DLA) beginning in FY 2004 to sustain specific tools and applications, subsequent to the termination of the Joint Electronic Commerce Program Office (JECPO). This program supports e-Mall enhancement. This logistics transformation demonstration program is one of a variety of key information technology tools and is an Information Technology (IT) enterprise initiative to improve operational capability and transform business processes, while promoting interoperability, as part of the President's Management Agenda eGovernment initiative for Integrated Acquisition.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous PB 05	2.335	2.345	0.000	0.000
Current PB 06	2.332	2.171		
Total Adjustments	-.003	-.174		
Program Adjustment	-.003	-.174		

Change Summary Explanation:

FY 2004: OSD CIS adjustment of -$0.003 Million

FY 2005: Includes the following reductions: $0.127 Million for IT, $0.007 Million for Management improvement, $0.014 Million for Set Aside and $0.026 Million for CAAS/FFRDC

FY 2006-FY 2007- This program was renamed Defense Logistics Information Research (DLIR) and placed under the Logistics R&D Technology Demonstration PE 0603712S.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-2a, RDT&E Project Justification								Date: September 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 5				Project Name and Number - Electronic Commerce, 0305840S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 1: EC (eMall Sustainment)	2.332	2.171						
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: A departmental management initiative to optimize available resources and promote the achievement of net-centricity directed realignment of RDT&E funds from the Defense Information Systems Agency (DISA) to the Defense Logistics Agency (DLA) beginning in FY 2004 to sustain specific tools and applications, subsequent to the termination of the Joint Electronic Commerce Program Office (JECPO). This program support enhancement. This logistics transformation demonstration program is one of a variety of key information technology tools and is an Information Technology (IT) enterprise initiative to improve operational capability and transform business processes, while promoting interoperability, as part of the President's Management Agenda eGovernment initiative for Integrated Acquisition.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	2.332	2.171		
RDT&E Articles Quantity – N/A				

FY 2004 ACCOMPLISHMENTS:

- Completed 17 Customer driven system change request approved by the Joint Requirements Board. These include: new navigation bar, picture link, automatic save, time zone identification, automatic notification of contract end date, audio text, ability for co-ownership of shopping cart, special permission code for visibility of multiple accounts, ability to submit order changes, enhanced credit card order capability, Power Shopping, Improved sending Cart process, Contract Number Search capability, Foreign Currency, Improved Express stores, collaborative task ordering, and foreign military sales access.

FY 2005 PLANS:

- Institute known customer driven system change request approved by the Joint Requirements Board. These include: quantity discount calculator, custom pack and ship, ability to add attachments to and order, courtesy copy address book, rule check for exceeding quantity limits, ability to sort cart by supplier, ability to reply to all when updating statuses, improved status descriptions, improved cart naming conventions, stock out report capability.
- Consolidation of production servers to one site. Conversion to EBXML and Web Logic with new Architectural Design.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 5	R-1 Item Nomenclature: Electronic Commerce, 0305840S

A. Project Cost Breakdown
EC (eMall Sustainment)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
A. Manufacturing Process Support Costs	2.332	2.171	0.000	0.000

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				2.332	2.171	0.000	0.000		
1. Raytheon	Contract	02/2003							
2. PartNet	Contract	02/2003							
3. SCRA*	Contract	02/2003							
4. IBM	Contract	02/2003							

*South Carolina Research Authority

Exhibit R-4, Schedule Profile																																	
Date: February 2005																																	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 5					Program Element Number and Name 0305840S Electronic Commerce												R-1 Item Nomenclature: Electronic Commerce, 0305840S																	
Fiscal Year	**2004**				**2005**				**2006**				**2007**				**2008**				**2009**				**2010**				**2011**			
	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**
DOD EMALL version 6.0																																	

Exhibit R-4a, Schedule Detail							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 5	Program Element Number and Name 0305840S Electronic Commerce				R-1 Item Nomenclature: Electronic Commerce, 0305840S			
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
DOD EMALL version 6.0		3Q						

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA # 06				R-1 Item Nomenclature: DEFENSE TECHNOLOGY ANALYSIS (DTA) 0605798S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	5.148	7.126	5.393	5.498	5.621	5.722	5.838	5.957
Project 1: DoD Technology Analysis Office (DTAO)	4.399	4.391	4.665	4.780	4.910	5.016	5.122	5.234
Project 2: Technology Integration	0.749	0.740	0.728	0.718	0.711	0.706	0.716	0.723
Project 3: Commodity Management System Consolidation (CMSC)	-------	1.995	------	------	------	------	------	------

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 (S&T) program and ensuring that the technology being developed is affordable and minimizes systems development risk. S&T is defined as consisting of Basic Research, Exploratory Development, and Advanced Technology.

Project 2: Technology Integration (TI) 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). TI 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 (CMSC) 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 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA # 06			R-1 Item Nomenclature: DEFENSE TECHNOLOGY ANALYSIS (DTA) 0605798S					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	5.148	7.126	5.393	5.498	5.621	5.722	5.838	5.957
Project 1: DoD Technology Analysis Office (DTAO)	4.399	4.391	4.665	4.780	4.910	5.016	5.122	5.234
Project 2: Technology Integration	0.749	0.740	0.728	0.718	0.711	0.706	0.716	0.723
Project 3: Commodity Management System Consolidation (CMSC)	-------	1.995	------	------	------	------	------	------

B. Program Change Summary:

	FY 04	FY 05	FY 06	FY 07
Previous PB 05	5.035	7.279	5.393	5.498
Current PB 06	5.148	7.126	5.393	5.498
Total Adjustments	.133	-0.153		
Congressional Adjustment				
Program Adjustment	.133	-0.153		

Change Summary Explanation:

FY 05: Reflects OSD CIS adjustment of $0.133 Million.
FY 05: Reductions include: CAAS/FFRDC - $0.087 Million, Management Improvement - $0.022 Million, and Set Aside - $0.044 Million

C. Other Program Funding Summary: N/A

D. Acquisition Strategy. N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – Defense Technology Analysis Office (DTAO), Project 1				
Cost ($ in millions)	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 1 DTAO	4.399	4.391	4.665	4.780	4.910	5.016	5.122	5.234
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

This program element 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 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	4.399	4.391	4.665	4.780
RDT&E Articles Quantity – N/A				

FY 2004 Accomplishments: (4.286)

- Provided engineering, scientific, analytical, and managerial support to the Office of the Deputy, Undersecretary of Defense (ODUSD) for Science and Technology (S&T) in developing strategies and plans to exploit and develop technology. (0.350)
- 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. (1.140)
- 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. (0.600)
- 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. (2.329)

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – Defense Technology Analysis Office (DTAO), Project 1				
Cost ($ in millions)	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 1 DTAO	4.399	4.391	4.665	4.780	4.910	5.016	5.122	5.234
RDT&E Articles Quantity - N/A								

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	4.399	4.391	4.665	4.780
RDT&E Articles Quantity – N/A				

FY 2005 Plans: (4.391)

- Provide engineering, scientific, analytical, and managerial support to the Office of the Deputy of Undersecretary of Defense (ODUSD) for Science and Technology (S&T) in developing strategies and plans to exploit and develop technology. (0.350)
- 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. (1.200)
- 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. (0.600)
- 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. (2.241)

FY 2006 Plans: (4.665)

- Provide engineering, scientific, analytical, and managerial support to the ODUSD(S&T) in developing strategies and plans to exploit and develop technology. (0.360)
- 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. (1.300)
- 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. (0.650)
- 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. (2.355)

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – Defense Technology Analysis Office (DTAO), Project 1				
Cost ($ in millions)	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project #1 DTAO	4.399	4.391	4.665	4.780	4.910	5.016	5.122	5.234
RDT&E Articles Quantity - N/A								

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	4.399	4.391	4.665	4.780
RDT&E Articles Quantity – N/A				

FY 2007 Plans: (4.780)

- Provide engineering, scientific, analytical, and managerial support to the Office of the Deputy, Undersecretary of Defense (ODUSD) Science and Technology (S&T) in developing strategies and plans to exploit and develop technology. (0.360)
- 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. (1.350)
- 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. (0.700)
- 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. (2.370)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A. This project line funds small ($100K-$700K) technical support efforts. Performers and levels of effort vary among in-house/interdepartmental activities, FFRDCs, academia, and private industry.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – Technology Integration, Project 2				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 2 Technology Integration	0.749	0.740	0.728	0.718	0.711	0.706	0.716	0.723
RDT&E Articles Quantity - N/A								

A. Mission Description and Budget Item Justification:

#002. Technology Integration (TI) 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). TI 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. TI 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 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.749	0.740	0.728	0.718
RDT&E Articles Quantity – N/A				

FY 2004 Accomplishments: (0.749)

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. (0.335)

- 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. (0.224)
- Sought opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (0.190)

FY 2005 Plans: (0.740)

- 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. (0.350)
- 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. (0.200)
- Seek international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals. (0.190)

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – Technology Integration, Project 2				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 2 Technology Integration	0.749	0.740	0.728	0.718	0.711	0.706	0.716	0.723
RDT&E Articles Quantity - N/A								

FY 2006 Plans: (0.728)

- 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. (0.350)
- Foster international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (0.178)
- Seek opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (0.200)

FY 2007 Plans: (0.718)

- 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. (0.300)
- Foster international bilateral and multilateral cooperative agreements in high value science & technology areas with allies, nonaligned nations and former Soviet Block nations. Establish data exchange agreements, engineer and scientist exchange program visits, international technology assessments and new cooperative programs. (0.208)
- Seek opportunities for international cooperation in high priority S&T. Conduct intradepartmental coordination to achieve goals as necessary. (0.210)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A. This project line funds small ($100K-$500K) technical support efforts. Performers and level of effort vary among in-house/interdepartmental activities, FFRDCs, academia, and private industry.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 6				Project Name and Number – – Commodity Management System Consolidation (CMSC), Project 3				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 3 CMSC	0	1.995	0	0	0	0	0	0
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.

B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
Accomplishment/ Effort/Subtotal Cost	0	1.995	0	0
RDT&E Articles Quantity – N/A				

FY2005 Plans:

- 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 ($0.357 million)
- Expand prototype for DVD Multi-Media Laboratory project (.400 million)

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				R-1 Item Nomenclature: Manufacturing Technology, 0708011S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	45.894	39.455	18.219	18.484	19.076	19.475	19.967	20.313
Project 1: Combat Rations (CR)	1.990	1.972	2.000	2.007	2.010	2.020	2.030	2.040
Project 2: Apparel Research Network (ARN)	3.997	3.822	3.742	3.727	4.000	4.140	4.366	4.427
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	3.249	2.292	1.205	1.308	1.434	1.469	1.498	1.528
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.939	1.918	1.013	1.116	1.238	1.267	1.292	1.318
Project 5: Customer Value Industrial Plant Equipment (CV:IPE)	1.170	0.776	-----	-----	-----	-----	-----	-----
Project 6: Classified Programs (CP)	4.660	-----	-----	-----	-----	-----	-----	-----
Project 7: Laser Additive Manufacturing (LAM)	2.375	-----	-----	-----	-----	-----	-----	-----
Project 8: Twelve Screw Extruder for Fuel Cell Technology (FCT)	1.484	-----	-----	-----	-----	-----	-----	-----
Project 9: Supply Chain Management (SCM)	4.749	-----	-----	-----	-----	-----	-----	-----
Project 10: Other Congressionally Added Programs (OCAs)	3.462	16.186	-----	-----	-----	-----	-----	-----
Project 11: Defense Microelectronics (DMEA)	16.819	12.489	-----	-----	-----	-----	-----	-----
Project 12: Material Acquisition Electronics (MAE) *formerly under Log R&D BA3*	0.000	0.000	10.259	10.326	10.394	10.579	10.781	11.000

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	R-1 Item Nomenclature: Manufacturing Technology 0708011S

A. Mission Description and Budget Item Justification: Manufacturing Technology (ManTech) reduces costs and lead times, and increases quality, by developing and applying advanced manufacturing technology. DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Apparel Research Network (ARN), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), and Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST) - in addition to congressionally added programs. Copper Based Casting Technology, Defense Supply Chain Technology, Laser Additive Manufacturing, Twelve Screw Extruder, Other Congressionally Added programs for Next Generation Manufacturing Technology and Small Business Technical Procurements. Congress also added funding in FY 2004 for Spray Cooling Manufacturing for DMEA to continue its work with the services to increase service familiarity with this advanced technology.

B. Program Change Summary:

	FY 2004	FY 2005	FY 2006	FY 2007
Previous PB 05	45.871	11.005	10.391	10.418
Current PB 06	45.894	39.455	18.219	18.484
Total Adjustments	.023	28.450	7.828	8.066
Congressional Additions		29.275		
Program adjustments	.023	-0.825	0.019	-0.012
Program realignment			7.847	8.054

Change Summary Explanation:

FY 2004: Reflects OSD adjustment of $0.023 Million for CIS correction.

FY 2005: Adjustments include Congressional Additions of $29.275 Million and reductions for Management Improvement ($0.122 Million), Set aside ($0.245 Million) and FFRDC/CAAS ($0.458 Million)

FY 2006: Reflects a net increase of $7.847 Million. Project decreases offset by the realignment of Material Acquisition Electronics (MAE) Project (formerly under Logistics R&D Technology Demonstration BA 3) to the Manufacturing Technology (BA7) program element. Program adjustments are a reduction of $0.019 Million for Contract Support.

FY 2007 Annualization of FY 2006 changes and a program reduction of $0.012 Million for contract support.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number - Combat Rations, Project 1					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 1: Combat Rations	1.967	1.972	2.000	2.007	2.010	2.020	2.030	2.040
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: The program partners identify problems and develop new technology for implementation in their plants. This occurs after demonstrations conducted at a University site, unifies the civilian and military manufacturing processes to expand the base. The Joint Steering Group of users, designers, and buyers assures that selected projects contribute to the DLA mission. DLA buys about $200 million worth of Combat Rations annually. The product is military unique. The limited industrial base production is pushed to its limits producing variety and quantities needed for surge, and has been dependent on orders from Government to remain viable. This initiative ensures that DLA will have an industrial base to continue to support war fighters with needed combat rations.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.967	1.972	2.000	2.007
RDT&E Articles Quantity – N/A				

Develop and implement improved retort rack materials and design; implement ultra-sonic sealing for MRE; develop and implement streamline inspection criteria for operational rations. Evaluate commercial items for introduction into ration program, aid in extending the shelf life of combat rations.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown									Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Combat Rations, Project 1					
A. Project Cost Breakdown **Combat Rations**									
Project Cost Categories				FY 2004	FY 2005	FY 2006	FY 2007		
a. Manufacturing Process Support Costs				1.967	1.972	2.000	2.007		
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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				1.967	1.972	2.000	2.007	Cont	Cont
Ameriqual	Cost, No Fee	12/01/2001	Partner						
Georgia, Univ of	Cost, No Fee	12/01/2001	Partner, STP*						
NCFST	Cost, No Fee	12/01/2001	Partner, STP						
Ohio State Univ	Cost, No Fee	12/01/2001	Partner, STP						
R&D Associates	Cost, No Fee	12/01/2001	Partner, STP						
Rutgers	Cost, No Fee	12/01/2001	Partner, STP						
SOPAKCO	Cost, No Fee	12/01/2001	Partner, STP						
Stegner	Cost, No Fee	12/01/2001	Partner, STP						
Sterling	Cost, No Fee	11/25/2001	Partner						
TEES (TAMU)	Cost, No Fee	12/01/2001	Partner, STP						
Tennessee, Univ of	Cost, No Fee	12/01/2001	Partner, STP						
Wornick	Cost, No Fee	12/01/2001	Partner,						
Washington State Univ	Cost, No Fee	12/01/2001	Partner, STP						
Rutgers Demo Site	Cost, No Fee	12/01/2001	Partner, STP						
Government Furnished Property: None.									*STP = "Short Term Project"

Exhibit R-4, Schedule Profile			Date: February 2005
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, Project 1	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
Initial Review, Disposition of Candidate Projects, initial award of delivery orders																																
Initial Review, Disposition of Candidate Projects, initial award of delivery orders																																
Follow on assessment of candidate Projects, acceptance of qualified subjects by JSG.																																
Continuing award of delivery orders, start performance																																
Conduct workshops to review projects, evaluate new candidate proposals, initiate qualified projects																																
Conduct IPRs to manage and control progress, assure that results are achieved and implemented when applicable																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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, Project 1				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
BAA Preparation and Issue				1-4Q	1-4Q			
BAA Closing and Evaluations					1-4Q			
Contracts Awarded					1-4Q			
Kick Off Meeting, Joint Planning Sessions	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
-- Selection and Award of Demo Site					1-4Q			
-- Arrangements for Facilitation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Initial Review and Disposition of Candidate Projects, initial award of delivery orders	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Follow on assessment of candidate Projects, acceptance of qualified subjects by JSG.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Continuing award of delivery orders	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Conduct workshops to review projects, evaluate new candidate proposals, initiate qualified projects	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Conduct IPRs to manage and control progress, assure that results are achieved and implemented when applicable	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Apparel Research Network (ARN), Project 2				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 2: Apparel Research Network (ARN)	3.997	3.822	3.742	3.727	4.000	4.140	4.366	4.427
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: The Department of Defense, through the Defense Logistics Agency, purchased $2.0 billion of clothing and textile items in 2003. The lead-time is up to 15 months and the current inventory acquisition value over $1 billion. ARN is a Manufacturing Technology program to improve the responsiveness of the industrial base that supplies the clothing items to the Military Services. It enables the small business apparel producers to access state-of-the-art supply chain management technologies through its R&D and technology transfer mechanism. It allows the military clothing supply chain to have asset visibility and decision support at retail, wholesale and manufacturing levels. The goal of this program is to reduce the lead-time from 6 months to 6 weeks and to reduce the inventory and inventory carrying costs by 50%. This reduction further reduces the cost to the customer.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
AAVS	1.557	1.302	1.262	1.251

ARN Asset Visibility System (AAVS) – a data repository that integrates data from existing DoD systems, Services' legacy systems, manufacturers' data and 3D scan data collected from ARN developed systems with decision support via a web-based interface.

Plans include:

- Successfully implemented for recruit clothing supply chain up to end-item manufacturers.
- Further extension of AAVS fiber and textiles and non-recruit clothing items.

	FY 2004	FY 2005	FY 2006	FY 2007
VIM-ASAP	0.600	1.300	1.262	1.232

Virtual Item Manager – ARN Supply-chain Automated Processing (VIM-ASAP) – VIM is the system-wide user interface for all user access. ASAP is a web-based system that pulls from the data collected in the AAVS Datamart for military clothing manufacturers. ASAP receives electronic orders, captures work in progress and finished goods inventories, prepares shipping documents, transmits invoices and receives payments electronically.

Plans include:

- Successful implementations at selected group of defense clothing manufacturers.
- Connecting to DoD Wide Area Work Flow (WAWF) as the front end interface to WAWF-RA (Receipt and Acceptance).
- Expanding to include other commodities – Defense Supply Center Richmond.
- Future implementation of Balance Inventory Flow Replenishment to level manufacturing production capabilities.

Exhibit R-2a, RDT&E Project Justification				Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7		Project Name and Number - Apparel Research Network (ARN), Project 2		
	FY 2004	FY 2005	FY 2006	FY 2007
VIM -IRM	1.840	1.220	1.218	1.244

Virtual Item Manager – Integrated Retail Module – VIM/IRM is the system-wide user interface for all user access. The IRM pulls and pushes data to the AAVS Datamart to provide a fully integrated system, from 3-D full body scanning to size selection issue database, with powerful inventory management tools for DLA/DSCP wholesale item managers as well as DLA's customers - the service item managers - to view and manage inventory and supplies throughout the supply chain.

Plans include:

- Successful implementations at Marine Corp Recruit Depot (MCRD) San Diego and Parris Island.
- Successful implementations at (5) Army, and (1) Air Force Recruit Training Centers.
- Further expansion to DLA organizational clothing and individual equipment (OCIE) sites and Army Central Issue Facilities (CIF) and. Army Ft. Carson CIF pilot for developing the modernized OCIE/CIF operation.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Apparel Research Network (ARN), Project 2

A. Project Cost Breakdown

Apparel Research Network

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	3.997	3.822	3.742	3.727

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
Note: All contracts are Fixed Cost or Cost Plus Fixed Fee				3.997	3.822	3.742	3.727	Cont	Cont
PDIT	Cost Plus Fixed Fee/Contractor	03/2002							
Clemson Univ	Cost Plus Fixed Fee/Contractor	03/2002							
AdvanTech	Cost Plus Fixed Fee/Contractor	03/2002							
Univ of Louisiana	Cost Plus Fixed Fee/Contractor	03/2002							
Dan River	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 2005
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Apparel Research Network (ARN), Project 2	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
ARN Asset Visibility System (AAVS) ▪ Expand Supply Chain to OCIE, and Fiber & Fabric Items																																
Virtual Item Manager - ARN Supply Chain Automated Processing (VIM-ASAP) ▪ Leveraging WAWF ▪ Balanced Inventory Flow Replenishment ▪ Expanding to include other commodities																																
Virtual Item Manager – Integrated Retail Module (VIM-IRM) • Additional Army CIF & DLA OCIE sites • Army Ft. Carson CIF Pilot																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Apparel Research Network (ARN), Project 2				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
ARN Asset Visibility System	1-4Q	1-4Q	1-4Q	1-3Q				
▪ Expand supply chain to Organizational Clothing & Individual Equipment and Textiles & Fiber	1-4Q	1-4Q	1-4Q	1-3Q				
Virtual Item Manager - ARN Supply Chain Automated Processing (VIM-ASAP)	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
▪ Leveraging WAWF	1-4Q	1-4Q	1-4Q					
▪ Balanced Inventory Flow Replenishment System	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
▪ Expanding to include other commodities		3-4Q	1-4Q	1-4Q	1-4Q			
Virtual Item Manager – Integrated Retail Module (VIM-IRM)	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
▪ Additional Army CIF and DLA OCIE sites	3-4Q	1-4Q	1-4Q	1-4Q	1-4Q			

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
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 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	3.249	2.292	1.205	1.308	1.434	1.469	1.498	1.528
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: About 6% of all weapon system spare parts are made from castings, but they account for about 10% of all backorders, due to obsolete and incomplete technical data packages, and atrophied supply chains. The decrease the FY 2006 and FY 2007 request from the FY 2005 estimate is due to certain R&D initiatives being transferred to regular business processes.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Collaborative Problem Solving	1.521	1.563	0.795	0.623

Collaborative problem solving environments have been prototyped with several of the Military Service Engineering Support Activities. Each environment is custom designed to reflect the needs of the weapon system and the processes used by the Services. Collaborative teams include representatives of DLA, the Services and prime and subcontractors. Efforts have been focused on over 500 different weapon systems parts that have caused backorder problems. This model of providing solutions to vexing spare parts sourcing problems will be further developed and deployed throughout the DoD as resources and opportunities permit.

	FY 2004	FY 2005	FY 2006	FY 2007
Casting Technology for Cost Reduction	1.728	0.729	0.410	0.685

Casting technology for cost reduction is under development at several sites, including simulation of size, position and type of cast steel porosity and its effect on service life; development of a foundry tooling database; enhancement of die casting visualization software to reduce trial and error; melting and molding process improvements for seal rings used in armored vehicles; investigation of cheaper tooling materials for short run production; improved prediction of patternmakers shrink which will reduce production time. FY 2004 includes congressional funding for Copper Based Casting Technology ($0.990 million); and Agency base funding for casting technology ($0.738 million).

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
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 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	3.249	2.292	1.205	1.308

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
ATI	Cost Share	06/23/2000	N/A	3.249	2.292	1.205	1.308	Cont	Cont
ARL	Cost Plus Fixed Fee/ Contractor	TBD							

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																Date: February 2005
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	**2004**				**2005**				**2006**				**2007**				**2008**				**2009**				**2010**				**2011**			
	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**
Collaborative Problem Solving																																
Casting Technology for Cost Reduction																																
Copper Based Casting Technology for Energy Efficient Electric Motors																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Collaborative Problem Solving	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Casting Technology for Cost Reduction	1-4Q	1-4Q	1-4Q	1-2Q				
Copper Based Casting Technology for Energy Efficient Electric Motors	2-4Q	1-4Q						

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
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 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.939	1.918	1.013	1.116	1.238	1.267	1.292	1.318
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: About 6% of all weapon system spares are made from forgings but forgings account for 10% of all backorders, due to obsolete and incomplete technical data packages and atrophied supply chains. The decrease in FY 2006 and FY 2007 request from the FY 2005 estimate is due to certain R&D initiatives being transferred to regular business processes.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Collaborative Problem Solving	1.292	1.308	0.727	0.736

This program develops and demonstrates innovative solutions to forged spare parts problems by building collaborative teams with DLA and the Military Services. It also develops fast, cheap tooling technology. Tooling is a major lead-time driver for small quantity forging production. Collaborative problem solving environments have been prototyped with several of the Military Service Engineering Support Activities. Each environment is custom designed to reflect the needs of the weapon system and the processes used by the Services. Collaborative teams include representatives of DLA, the Services and prime and subcontractors. Efforts have been focused on over 50 different weapon systems parts that have caused backorder problems. This model of providing solutions to vexing spare parts sourcing problems will be further developed and deployed throughout the DoD as resources and opportunities permit.

	FY 2004	FY 2005	FY 2006	FY 2007
Forging Technology for Lead Time Reduction	0.647	0.610	0.286	0.380

Forging technology for lead-time development is under development at several sites. Rapid low cost tooling will be developed based on a spray metal technique; lean manufacturing demonstrations in a job shop forging environment will be used to prototype new practices for faster forging; a database of forging dies will be developed and fielded.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
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 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	1.939	1.918	1.013	1.116

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
ATI	Cost Share	02/09/2001	N/A	1.939	1.918	1.013	1.116	Cont	Cont

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																																Date: February 2005
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	**2004**				**2005**				**2006**				**2007**				**2008**				**2009**				**2010**				**2011**			
	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**
Collaborative Problem Solving																																
Forging Technology for Lead Time Reduction																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Collaborative Problem Solving	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			
Forging Technology for Lead Time Reduction	1-4Q	1-4Q	1-4Q	1-4Q				

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Customer Value Industrial Plant Equipment (CV:IPE), Project 5				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 5: Customer Value Industrial Plant Equipment (CV:IPE)	1.170	0.776	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: Industrial Plant Equipment (IPE) is used by maintenance depots, air logistics centers and on bases and ships everywhere to maintain weapons. When this equipment becomes worn, it can either be rebuilt or replaced with new. It's not unusual for rebuilt equipment to be 40% cheaper than new equipment. Rebuilds also save money because they use the same foundations and utility connections. Rebuilds can be challenging because there is little standardization, spare parts can be hard to get, and old equipment can conceal hidden defects. Rebuild times can stretch out, which is a risk factor to maintenance activities, because large machines can have unique capabilities and cannot be kept offline for long periods.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Lean Manufacturing Principles	1.170	0.776	0.000	0.000

This project applies lean manufacturing principles to the overhaul of IPE. Lean manufacturing is a methodology that looks at every process step from the end consumer's viewpoint. If it doesn't add value, it is a candidate for elimination. Lean manufacturing has a toolbox of methods that will be applied to rebuilding IPE, including standard work, visible processes, capable processes, and empowered workforce.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Customer Value Industrial Plant Equipment (CV:IPE), Project 5

A. Project Cost Breakdown

Customer Value Industrial Plant Equipment (CV:IPE)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	1.170	0.776	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				1.170	0.776	-----	-----		
Various	COST PLUS FIXED FEE		03/2002						

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2005
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 Value Industrial Plant Equipment (CV:IPE), Project 5	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
Baselining Current Processes																																
Develop Standard Templates																																
New Methods for Project Initiation & Risk Management Plans																																
Rapid Design of Control Systems																																
Parametric Estimating Models for Rapid Cost Estimates																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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 Value Industrial Plant Equipment (CV:IPE), Project 5				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Baselining Current Processes	1-4Q	1-4Q						
Develop Standard Templates	1-4Q	1-4Q						
New Methods for Project Initiation & Risk Management Plans	1-4Q	1-4Q	1-4Q					
Rapid Design of Control Systems	1-4Q							
Parametric Estimating Models for Rapid Cost Estimates	1-4Q	1-4Q	1-4Q					

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Classified Programs (CP), Project 6				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 6: Classified Programs (CP)	4.660	0.000	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: N/A

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	4.660	0.000	0.000	0.000

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Laser Additive Manufacturing (LAM), Project 7				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 7: Laser Additive Manufacturing (LAM),	2.375	0.000	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 program will develop a rapid manufacturing capability that produces high performance military and commercial components via laser additive manufacturing. It will be executed to realize as many applications as possible across the services and also support the DLA mission. The Laser Additive Manufacturing (LAM) process has the ability to produce components with properties bridging between the high end of castings and the low end of forgings. The major advantages are a reduced cycle time of up to 75%, reduced cost, elimination of forging dies and casting molds, inserts and fixtures, and reduced machining requirements.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	2.375	0.000	0.000	0.000

A joint advisory board will be constituted to provide oversight. Initial applications are planned for components of aerospace systems including fighters, and helicopters, and missiles. A portion of the program will also focus on repairs. Weapon system contractors such as Boeing and Lockheed Martin will be participating to assure the smooth transition of the technology. Aerospace components have been selected for transition. A qualification matrix has been developed. Prototype parts will be processed and qualified. A test matrix to qualify repair parts will be developed. Technology for non-aerospace applications will also be developed. The technology will be transitioned to as many parts as possible. F-15 Pylon ribs are now flying as a result of previous year's work. Pylon panels are planned for the C-17 and have been approved for use.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Laser Additive Manufacturing (LAM), Project 7

A. Project Cost Breakdown

Laser Additive Manufacturing (LAM)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	2.375	-----	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				2.375	-----	-----	-----		
Aeromet Corp	Section 845 Prototype Agreement	27 Sep 02							

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2005
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Laser Additive Manufacturing (LAM), Project 7	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
Establish Tri-service joint advisory board.																																
Select target aerospace components for transition	■	■	■	■	■																											
Develop a qualification matrix for the parts	■	■	■	■																												
Process prototype parts and qualify the process, material, and the part	■	■	■	■	■	■	■	■																								
Research DOD parts that can be repaired at a reduced cost versus procurement of new parts	■	■	■	■	■	■	■																									
Establish a test matrix for repair parts to qualify the repair	■	■	■	■	■	■	■	■																								
Produce and qualify prototype parts	■	■	■	■	■	■	■	■																								
Develop technology for non-aerospace applications	■	■	■	■	■	■	■	■																								
Transition LAM	■	■	■	■	■	■	■	■	■																							

Exhibit R-4a, Schedule Detail							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Laser Additive Manufacturing (LAM), Project 7				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Establish Tri-service joint advisory board.								
Select target aerospace components for transition								
Develop a qualification matrix for the parts	1-4Q		1-4Q					
Process prototype parts and qualify the process, material, and the part	1-4Q		1-4Q					
Research DOD parts that can be repaired at a reduced cost versus procurement of new parts	1-4Q		1-4Q					
Establish a test matrix for repair parts to qualify the repair	1-4Q	1-4Q	1-4Q					
Produce and qualify prototype parts	1-4Q	1-4Q	1-4Q					
Develop technology for non-aerospace applications	1-4Q	1-4Q	1-4Q					
Transition the LAM process for as many parts as possible	1-4Q	1-4Q	1-4Q					

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 8: Twelve Screw Extruder for Fuel Cell Technology (FCT)	1.484	0.000	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: A critical part of the organization mission focuses on the leveraging of commercial technology to develop advanced manufacturing technology to support military ground vehicle alternative propulsion technology development and advanced materials design and applications. Enhancements in materials alloying technology are critical to efficient and economical production of 'Fuel Cell' alternative propulsion technology, and to the development and application of light weight, fuel efficient and durable materials structures and components.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	1.484	0.000	0.000	0.000

Under FY 2003 funding, the program demonstrated the capability of the 12 Screw Extrusion material alloying process to efficiently, effectively and economically alloy materials necessary to manufacture critical components of Fuel Cell alternative propulsion power generation equipment. Under FY 2004 program funding, the Twelve Screw Extrusion process will be used to fabricate Fuel Cell power generation 'stacks' to provide the electro-chemical reaction necessary to convert fuel into emission free electrical power for ground vehicle applications. In addition, the program will leverage other technology initiatives to demonstrate the capability to alloy/mix developmental materials for fabrication into lightweight, durable ground vehicle and material transport structures. DLA is executing the FY 2003 contract and scoping the FY 2004 phase with the additional funds.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8

A. Project Cost Breakdown

Twelve Screw Extruder for Fuel Cell Technology (FCT)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	1.484	-----	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				1.484	-----	-----	-----		
U.S. Army TACOM	MIPR	July 03							

Government Furnished Property: None.

Exhibit R-4, Schedule Profile		Date: February 2005
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8

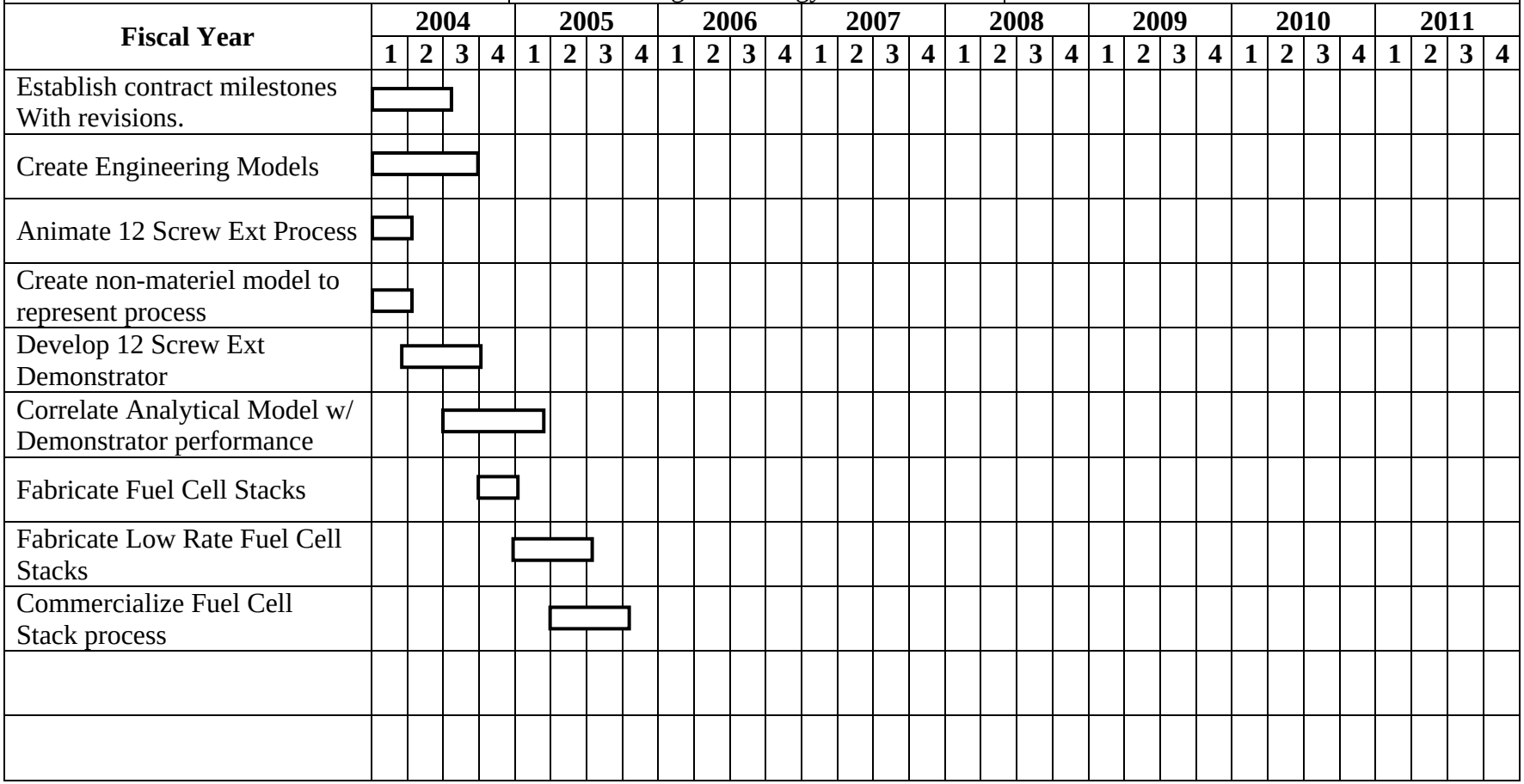

Exhibit R-4a, Schedule Detail							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Establish contract milestones With revisions.	1-2Q							
Create Engineering Models	1-2Q							
Animate 12 Screw Ext Process	1-4Q							
Create non-materiel model to represent process	1-4Q							
Develop 12 Screw Ext Demonstrator	1-4Q							
Correlate Analytical Model with Demonstrator performance	3-4Q							
Fabricate Fuel Cell Stacks	4Q	1Q						
Fabricate Low Rate Fuel Cell Stacks		1-3Q						
Commercialize Fuel Cell Stack process		2-4Q						

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Supply Chain Management (SCM), Project 9				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 9: Supply Chain Management (SCM)	4.749	0.000	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 DLA mission is to get the right item, at the right time, to the right place, at the right price, every time in support of America's war fighter. To accomplish its mission DLA must use an integrated combat logistics solution that is coordinated among the Services and across DoD to meet all combat support requirements in peace and war. There is a need for the Agency to stay abreast of the latest supply chain management principles and techniques that will improve the supply availability of DLA-managed items by optimizing supply chains to shorten lead times and reduce costs. The Agency must ensure that outsourcing strategies are coordinated, that performance metrics are in place to measure effectiveness, that the organizational structure promotes successful supply chain management and that the latest electronic commerce initiatives are incorporated into its supply chain.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	4.749	0.000	0.000	0.000

Concurrent Technologies Corporation (CTC) has initiated some 33 Supply Chain Management projects for DLA and the Services since the inception of this program in FY 2002.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Supply Chain Management (SCM), Project 9

A. Project Cost Breakdown

Supply Chain Management (SCM)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	4.749	-----	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
Concurrent Technology	TBD	TBD		4.749					

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2005
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology	Project Name and Number - Supply Chain Management (SCM), Project 9	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
SCM Integration Planning Order					■	■	■	■																								
Virtual Data Mart					■	■	■	■																								
Equipment Readiness (MERIT & Multi-Service MERIT)					■	■	■	■																								
Supply Chain Visualization -- Source Readiness (MERIT applied to manufacturers) -- Map-enabled SPIDERS					■	■	■	■																								
DLIS Advanced Cataloging -- NCS an ISO Standard -- eOTD-based demos					■	■	■	■																								
RFID Technology Assessment					■	■																										
TDX -- Rapid manufacturing -- Diminishing manufacturing sources -- Robust/ready small manufacturing base					■	■	■	■																								

Exhibit R-4a, Schedule Detail							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Supply Chain Management (SCM), Project 9				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
SCM Integration Planning Order	2-4Q	1-4Q	1-4Q	1-2Q				
Virtual Data Mart	1-4Q	1-4Q						
Equipment Readiness (MERIT & Multi-Service MERIT)	1-4Q	1-4Q						
Supply Chain Visualization	1-4Q	1-4Q	1-4Q					
DLIS Advanced Cataloging	1-4Q	1-4Q	1-4Q	1-2Q				
RFID Technology Assessment	1-4Q	1-4Q						
BSM Configuration and Technical Notification program Multi-Service CaTNP	1-4Q	1-4Q						
TDX	1-4Q	1-4Q	1-4Q					

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number - Other Congressionally Added Programs (OCAs), Project 10					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 10: Other Congressionally Added Programs (OCAs)	3.462	16.186	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity- N/A								

A. Mission Description and Budget Item Justification: Congressional adds. Programs are managed to the maximum extent possible to meet Defense needs and to fulfill Congressional expectations. FY 05 adds are still in requirements definition phase.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	3.462	16.186	-----	-----

FY 2004: Execution is underway on the following programs:

- Next Generation Manufacturing Technology ($2.217M)
- Small Business Technical Procurement ($1.245M)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Other Congressionally Added Programs (OCAs), Project 10

A. Project Cost Breakdown

Other Congressionally Added Programs (OCAs)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	3.462	16.186	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
TBD				3.462	16.186	-----	-----		

Government Furnished Property: None.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 11: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling,	16.819	12.489	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity- N/A								

*Defense Emergency Response Fund (DERF): 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 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	16.819	12.489	-----	-----

FY 2004 Plans (16.819)

- Develop key manufacturing processes and engineering design tools needed for low cost, high volume fabrication and assembly.
- Analyze vendor base and qualification activities necessary to establish a solid supplier base for all key system components
- Implement the above into a pilot line and develop the processes needed to enable transition into a low-cost manufacturing base to ensure a reliable supply
- Develop tools needed to support rapid in-field maintenance and logistics.

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 11: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling,	16.819	12.489	-----	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A								

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11

A. Project Cost Breakdown

Manufacturing Engineering of Spray Cooling

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	16.819	12.489	-----	-----

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
Isothermal	CPFF	Mar 04		16.819	12.489				

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2005
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 11	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
Key mfg. processes and tools																																
Vendor base and qualification																																
Implement pilot line and process																																
Develop in-field support tools																																
Rapid prototype capability																																
Failure analysis closed-loop feedback																																
Implement strategic manufacturing partnerships																																
Develop advanced logistics capabilities																																
Advance lean manufacturing initiative																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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 11				
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Key mfg. processes and tools	3-4Q	1-4Q						
Vendor base and qualification	3-4Q	1-4Q						
Implement pilot line and process		1-4Q						
Develop in-field support tools	3-4Q	1-4Q						
Rapid prototype capability		3-4Q	1-3Q					
Failure analysis closed-loop feedback		2-4Q	1-3Q					
Implement strategic manufacturing partnerships		2-4Q	1-3Q					
Develop advanced logistics capabilities		2-4Q	1-4Q					
Advance lean manufacturing initiative		3-4Q	1-4Q					

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number - Material Acquisition: Electronics (MAE), Project 12					
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project 12: Material Acquisition: Electronics (MAE)	-----	-----	10.259	10.326	10.394	10.579	10.781	11.000
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 $2.9B is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. The commercial suppliers of ICs typically terminate production lines every 18 months, moving on to the next generation of ICs. Because DoD maintains weapons systems much longer than 3 years, this creates an obsolescence problem that can only be overcome through buying excessive inventories of parts before the production lines close 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 these devices. This project develops this capability and will expand it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program. Prior to FY 2006, Material Acquisition Electronics was aligned under Logistics R&D Technology Demonstration, PE 0603712S.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	-----	-----	10.259	10.326

The MAE project covers development of IC fabrication technology to continue to expand the capability to emulate succeeding generations of discontinued technology. This will include Low Rate Initial Production of earlier development efforts (e.g., 200K emulation Array) and integration of Advanced Tooling and development of future capabilities (e.g., High Speed/ High Density Emulation Arrays). Technology development will continue to deeper sub-micron (<1.0 um) feature sizes and faster operating speeds. Development of IC design capability and design model library to realize emulation performance and functional requirements outcomes using developed IC fabrication technology. This design capability will address both standard catalog ICs and Application Specific Integrated Circuits (ASICs) and will accommodate both in-house and third-party (principally OEM) design requirements.

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost				
RDT&E Articles Quantity – N/A	-----	-----	-----	-----

The congressionally added Microelectronics Testing Technology/Obsolescence Program will test, evaluate, and assess wide range microelectronics components that comprise so many of today's sophisticated military and commercial systems.

C. Other Program Funding Summary:

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Material Acquisition: Electronics (MAE), Project 12

A. Project Cost Breakdown

Material Acquisition: Electronics (MAE)

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	-----	-----	10.259	10.326

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				-----	-----	10.259	10.326		
Sarnoff Corp. LMI ARINC SPAWARSYSCEN									

Government Furnished Property: None.

Exhibit R-4, Schedule Profile			Date: February 2005
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 12	

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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.																																
Perform base array designs required to fill GA.																																
Update design library.																																
Develop prototypes for test and insertion.																																
Develop Low Rate Initial Production (LRIP) capability																																
Transition new microcircuit designs to LRIP																																
Perform process review																																
Plan required process improvements.																																
Implement process improvements.																																
Monitor and adjust process improvements																																

Exhibit R-4a, Schedule Detail							Date: February 2005	
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 12			
Schedule Profile	**FY2004**	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Perform Gap Analysis (GA)of Commercial Technology.			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
Update design library.			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
Develop Low Rate Initial Production (LRIP) capability			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
Perform process review			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
Implement process improvements.			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

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			R-1 Item Nomenclature: Logistics Support Activities 0708012S				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	35.401	11.128	2.900	2.871	2.871	2.874	2.888	2.906
Project # 1: Logistics Support Activities	35.401	11.128	2.900	2.871	2.871	2.874	2.888	2.906

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

B. Program Change Summary

	FY 2004	FY 2005	FY 2006	FY 2007
Previous PB 05	35.401	11.389	6.901	6.900
Current PB 06		11.128	2.900	2.871
Total Adjustments		-0.261	-4.001	-4.029
Program Adjustments			-0.040	-0.069
Program Transfer to Air Force			-3.961	-3.960

Change Summary Explanation:
FY 2005: Reductions include: Management Improvement of $0.034 Million, Set Aside of $0.069 Million and CAAS/FFRDC of $0.158 Million
FY 2006: Reduction is a result of the transfer of the Defense Policy and Analysis Office funding of $3.961 Million to the Air Force and a contract support reduction of $0.040 Million
FY 2007: Reduction is a result of the transfer of the Defense Policy and Analysis Office funding of $3.960 Million to the Air Force and a contract support reduction of $0.069 Million

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Logistics Support Activities, Project 1

A. Project Cost Breakdown

Logistics Support Activities

Project Cost Categories	FY 2004	FY 2005	FY 2006	FY 2007
a. Manufacturing Process Support Costs	35.401	11.128	2.900	2.871

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 2004	FY 2005	FY 2006	FY 2007	Budget to Complete	Total Program
				35.401	11.128	2.900	2.871	Cont	Cont

Government Furnished Property: N/A.