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