

Defense Logistics Agency

Fiscal Year (FY) 2010 Budget Estimates

May 2009



Research, Development, Test and Evaluation, Defense-Wide

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DEFENSE LOGISTICS AGENCY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
Fiscal Year (FY) 2010 Budget Estimates
May 2009

Table of Contents

	<u>Page</u>
Summary by Budget Activity (R-1)	1-1
Summary by Program Element (R-1)	1-2
R-2 Exhibits	
Logistics R&D Technology Demonstration	1-33
Deployment and Distribution Enterprise Technology	1-16
Microelectronics Technology Development and Support	1-15
Dual Use Technology Development and Support	1-2
Small Business Innovation Research	1-3
Defense Technology Analysis	1-2
Industrial Preparedness Manufacturing Technology	1-16
Logistics Support Activities	1-2

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Defense Logistics Agency President's Budget FY 2010 RDT&E Program
Exhibit R-1 Summary

Cost (\$ in Millions)

BA#	Budget Activity	FY 2008	FY 2009	FY 2010	FY 2011
3	Advanced Technology Development (ATD)	118.245	138.240	74.709	
6	RDT&E Management Support	4.347	0.000	0.000	
7	Operational Systems Development	58.885	57.968	23.312	
Total: RDT&E, Defense Logistics Agency		181.477	196.208	98.021	

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Defense Logistics Agency President's Budget FY 2010 RDT&E Program

Exhibit R-1

(Listing by Budget Activity, then Program Element Number)

BA# 3: Advanced Technology Development (ATD)

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)			
				FY 2008	FY 2009	FY 2010	FY 2011
41	3	0603712S	Logistics R&D Technology	54.602	75.929	19.043	
42	3	0603713S	Deployment and Distribution Enterprise Technology- USTRANSCOM	14.905	29.919	29.356	
44	3	0603720S	Microelectronics Technology Development and Support - DMEA	47.138	32.392	26.310	
58	3	0603805S	Dual Use Technology (DUAP) /Commercial Technology for Maintenance Activities (CTMA)	1.600	0.000	0.000	
Total: Advanced Technology Development (ATD)				118.245	138.240	74.709	

BA# 6: RDT&E Management Support

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)			
				FY 2008	FY 2009	FY 2010	FY 2011
146	6	0605502S	Small Business Innovative Research	2.547	0.000	0.000	
149	6	0605798S	Defense Technology Analysis (DTAO)	1.800	0.000	0.000	
Total: RDT&E Management Support				4.347	0.000	0.000	

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Exhibit R-1

Page 1 of 2

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Defense Logistics Agency President's Budget FY 2010 RDT&E Program
Exhibit R-1
(Listing by Budget Activity, then Program Element Number)

BA# 7: Operational Systems Development

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)			
				FY 2008	FY 2009	FY 2010	FY 2011
238	7	0708011S	Industrial Preparedness	56.057	55.130	20.514	
239	7	0708012S	Logistics Support Activities	2.828	2.838	2.798	
Total: Operational Systems Development				58.885	57.968	23.312	

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)					R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	54.602	75.929	19.043						Continuing	Continuing
1: Medical Logistics Network	2.817	2.937	2.642						Continuing	Continuing
2: Weapon System Sustainment	5.272	5.535	5.241						Continuing	Continuing
3: Supply Chain Management	2.595	2.923	2.674						Continuing	Continuing
4: Strategic Distribution & Reutilization (SDR)	3.294	3.503	3.326						Continuing	Continuing
5: Energy Readiness Program (ERP)	2.004	2.146	2.027						Continuing	Continuing
6 : Defense Logistics Information Research (DLIR)	2.216	2.278	2.146						Continuing	Continuing
7: Other Congressional Adds (OCAs)	32.519	56.607	0.000						Continuing	Continuing
8: Continuous Acquisition Lifecycle Support	3.885	0.000	0.000						Continuing	Continuing
9: TENTNET	0.000	0.000	0.987						Continuing	Continuing
Note TENTNET is an FY 2010 new start program. Resourced within the FY 2010 budget.										
A. Mission Description and Budget Item Justification N/A										

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R-1 Line Item #41

Page 1 of 33

UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology
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B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	55.859	19.375	19.043	
Current BES/President's Budget	54.602	75.929	19.043	
Total Adjustments	-1.257	56.554	0.000	
Congressional Program Reductions	0.000	0.000		
Congressional Rescissions	0.000	0.000		
Total Congressional Increases	0.000	56.607		
Total Reprogrammings	0.000	0.000		
SBIR/STTR Transfer	-1.257	0.000		

Congressional Increase Details (\$ in Millions)

Congressional Additions

FY 2009 Congressional Add includes SBIR

FY 2008	FY 2009
32.519	56.607

Change Summary Explanation

TENTNET is an FY 2010 new start program. Resourced within the FY 2010 budget.

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Medical Logistics Network	2.817	2.937	2.642						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

Netcentric Infrastructure and Implementation (NII) The Netcentric Infrastructure and Implementation initiative will provide DOD Medical enterprise with a .NET web service provisioning framework based on Service-Oriented Architecture. A services-based information environment extends effectively to the outer reaches of the network, and allows the timely exchange of data among the various business systems and databases in an efficient and effective manner. Authoritative data sources distributed throughout the Enterprise can be leveraged, and unnecessary replication of data repositories will be reduced. Data services will reach a broader customer base compared to current technical solutions because data access will no longer be limited to the capabilities that are under direct command; rather, the partnering systems will benefit from a global, trusted, and reliable network. Adherence to the guidelines of Netcentric Operations will limit ad hoc design, discourage stovepipe development, and reduce the development lifecycle. Metrics will provide feedback on value added and support the identification of further enhancement of this capability.

Average Cost for Alternate Commercial Product Ordering Program (ACPOP) for Medical and Surgical Items: DLA emphasizes centralized procurement to reduce overall procurement costs. Some medical products are purchased locally although the same items may be available on centralized contracts or through Alternate Commercial Product Ordering Program (ACPOP). This project developed a pilot to compare the average cost per transaction for items purchased through centralized procurement, ACPPOP, and local purchase of items through distributors to determine the cost avoidance for purchases under the different procurement methods. The results of this project will support future DLA initiatives to procure medical supplies in the most cost effective manner.

Controlled Room Temperature Cold Chain Packaging Protocol Development: DLA purchases a large variety of pharmaceutical products requiring special environmental handling from distributor to the battlefield. This project developed a pilot protocol to control packaging and shipping conditions for these medical items. Examples of these products are TamiFlu and Nerve Agent Antidote Auto-Injectors. These procedures will ensure that medical items reach the Warfighter in useable condition. Efforts continue with third party validation of pilot project results.

UNCLASSIFIED

R-1 Line Item #41

Page 3 of 33

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology			PROJECT NUMBER 1	
<p>Frozen Material Packaging Protocol Development This pilot is to develop an Engineered/Third Party validated packaging protocol for frozen materials that can not be shipped on dry ice (-80 degrees C). Protocol adheres to FDA-defined range of -25 to -10 degrees C. DLA Cold Chain Packaging locations only have the option to maintain frozen materials for shipment at Dry Ice temperatures (-80 degrees C), which is frequently too cold for many items due to physical structure weaknesses. As a result, we are forced to "borrow" resources from non-DLA entities to support shipping these types of materials. This protocol allows DLA to use an FDA/USP compliant packaging protocol to move ALL temperature sensitive materials within DLA supply chains.</p> <p>Optimize Source Identification for DoD Readiness Requirements: Optimize identification and integration of best commercially available medical readiness items and provide a proactive approach to NSN management coupled with operational changes in DMLIIS processing, to enable focused and ongoing review and cleanup of NSN sourcing data. Develop and implement system data services that will review and evaluate, by NSN, current FLIS source references and compare against MEDPDB and automatically create source reference change actions (add, update and delete) in the DMLIIS application for review and approval by the NSN management community. Work with Theaters (Warfighters) to identify and standardize relationships between NSNs used in theater, TEWLS and in readiness assemblages, and provide best available commercial items and most advantageous procurement contract. This initiative will enhance bridging the gap between theater requirements and the commercially sourced wholesale supply chain also greatly improving the quality of NSN source reference information with associated impacts in downstream systems. Directly supports DLA Strategic Goals 1 (Warfighter) and Goal 2 (Internal Process).</p>					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2008	FY 2009	FY 2010	FY 2011	
Medical Logistics Network Accomplishments/Plans <i>FY 2008 Accomplishments:</i> - Completed first spiral of Defense Medical Materiel Standardization Program (DMMSp) to improve commonality of medical products used in institutional and operational missions. Identified common process, data-sharing needs, and future actions needed to enable coordinated efforts amongst the 4 Services and 3 standing organizations currently engaged in standardization activities (TRBOs, PEC and DMSB). Developed a governance construct and facilitated the creation of a new program office to consolidate and facilitate functions. Also facilitated the chartering of a Clinical Advisory Council to channel clinical input to the standardization process. The net result will be the eventual stand down of the DMSB staff group as those responsibilities are migrated to the new program office. - Completed Assemblage Life-Cycle Management (ALCM) design subspiral and transitioned to implementation phase. Achieved Force Health Protection Council (2 Star steering group) approval to proceed with identified opportunities and stand up of an action body comprised of Quad Service field operating agencies and Defense Logistics Agency to execute the implementation plan. Resulting processes enable increased standardization of common medical capabilities for similar phases of care,	2.817	2.937	2.642		

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology			PROJECT NUMBER 1
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>and improved interoperability of clinical capabilities and assemblages in joint operations. ALCM supports the MMEA by reducing duplication and redundancy in the Class VIII supply chain for expeditionary operations as well as in management of surge and sustainment requirements. At full implementation an added benefit will be increased interoperability among the 7 organizations currently providing assemblage build which will allow resource leveling and more efficient use of existing capacity.</p> <p>- Integrated process and systems architectural requirements from the MMEA Requirements Work Group into the DML Enterprise Architecture to support surge and sustainment planning. Completed the business case for investment in system development to support this function as a joint service process.</p> <p>- Initiated development of Netcentric Framework Infrastructure and Implementation to provide DoD Medical enterprise with a .NET web service provisioning framework based on Service-Oriented Architecture. This initiative supports the timely exchange of data among the various business systems and databases in an efficient and effective manner throughout the outer reaches of the network. Authoritative data sources distributed throughout the Enterprise can be leveraged, and unnecessary replication of data repositories will be reduced. Data services will reach a broader customer base than through current technical solutions because data access will no longer be limited to the capabilities that are under direct command; rather, the partnering systems will benefit from a global, trusted, and reliable network.</p> <p>- Initiated development and validation of packaging protocol for frozen materials that are within the FDA-defined range of -25 to -10 degrees C. Currently, DLA Cold Chain Packaging locations only have the option to maintain frozen materials for shipment at Dry Ice temperatures (-80 degrees C), which is frequently too cold for many items due to physical structure weaknesses. This protocol allows DLA to use an FDA/USP compliant packaging protocol to move ALL temperature sensitive materials within DLA supply chains.</p> <p><i>FY 2009 Plans:</i></p> <p>- As-Is and To-Be Modeling of proposed and potential Defense Medical Materiel Program Office</p>				

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R-1 Line Item #41

Page 5 of 33

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>(DMMPO) functions, interfaces, and responsibilities to address initial creation, functional structure, and mission for the DMMPO. Provide the process framework for identification of gaps in and redundant or conflicting capabilities providing an analysis process to develop and refine new and revised application(s) requirements.</p> <p>- Initiate a pilot project to refine the to-be standardization processes defined in the DMMSP initiative Category A and C models. In concert with the ALCM working group, incorporate an outcome-based standardization and procurement initiative. This pilot will also leverage those business requirements to design a composite application to provide an integrated information system for the end-to-end process. The pilot will use real world Services' requirements rather than simulated examples.</p> <p>- Initiate proof of principal pilot that leverages operational process models created within the Enterprise Architecture to run a proof of principle demonstrating Business Process Management (BPM) tools use to create Service Oriented Architecture-based web applications within a composite application framework.</p> <p>- Lay the foundational capabilities for sound data management and data sharing, while also implementing tactical capabilities to support the data needs of the warfighter. Develop and institutionalize the Enterprise Data Strategy to incorporate the needs of the medical logistics enterprise, align with DoD, Federal, and other civil agency data and mission support requirements.</p> <p>- Using new and existing architecture models initiate a pilot to perform detailed analysis on the various existing catalogs, data sources, automated systems manipulation, maintenance processes, technologies employed, data structures, data delivery, and management processes to create an end-to-end picture and collaborative process for item identification and sourcing data management.</p> <p>- Initiate the Balanced Scorecard (BSC) high-level strategic objectives and Key Performance Indicators (KPI) of the key governance authorities—ASD(HA) / DASD(FHP&R) and DLA—in the DML enterprise architecture repository. Create cause-and-effect linkages between the strategic objectives of the DML enterprise and these high-level stakeholder objectives in the repository and develop metrics and a management program for the collaborative governance and achievement of DML enterprise objectives.</p>					

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<ul style="list-style-type: none"> - DMLT Initiatives: - Using the Web Services framework developed in FY08, expand web services beyond the pilot web services to internal Medical IT applications. Develop standard procedures to integrate standard repeatable web services and expand the Service Oriented Architecture. Implement and monitor Web Service design and utilization factors to assess the effectiveness of design and implementation. Develop pilot web services with external customers to increase the effectiveness of available web services. - Complete Cold Chain Protocols for the full spectrum of temperature conditions. Coordinate the incorporation of the protocols into DLA shipment procedures and assess the impact of the protocols in operational environments. Conduct equivalency testing for insulated containers and validate insulated container preconditioning protocols. Evaluate the impact of all Chain Protocols on refrigerated storage space for pre-conditioning containers and container size. <i>FY 2010 Plans:</i> - Complete architectural planning for an enterprise-wide DMLSS solution that fulfills the DLA's MMEA responsibility for integration of systems supporting end-to-end Class VIII supply chain management. - Advance total enterprise compliance to statutory and regulatory Enterprise Architecture directives. Continue the build-out of the as-is depiction of the enterprise and align legacy system architecture documentation with enterprise processes. Develop migration plans for legacy systems to comply with transformed enterprise to-be processes. - Complete the pilot to create an end-to-end picture and collaborative process for item identification and sourcing data management. - Complete the Balanced Scorecard (BSC) high-level strategic objectives and Key Performance Indicators (KPI) of the key governance authorities in the DML enterprise architecture repository - Complete proof of principal pilot that demonstrating Business Process Management (BPM) tools used to create Service Oriented Architecture-based web applications within a composite application framework. 				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>- DMLT Initiative funding.</p> <p>- Expand external customer web services pilots to full production Service Oriented Architecture features. Enhance initial web services framework to fully integrate standard repeatable web services and streamline development and fielding procedures. Expand web services to at least 10 unique web services with at least 20 operational system web services.</p>				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics <p>A 12.5% reduction in the number of system interfaces within the Defense Medical Logistics Enterprise from FY 2007 to FY 2010 from 180 to 155. Each System Interface is detailed and managed by the Systems Interface Description (SV-1). Measurement is by count of SV-1. Estimated average annual cost savings per interface are \$150,000, resulting in annual savings to the DML Enterprise of \$3.75 M by FY 2010.</p> <p>Clinger-Cohen Act architecture standards: Total Number of DML Architecture Products Possible—545 Number of DML Architecture Products for FY 2009 goal-357; FY 2010 goal-417. The actual numbers for FY 2006, FY 2007, FY 2008 are 237, 262 and 292, respectively. The percentage of total possible for FY 2006, FY 2007, FY 2008, FY 2009, and FY 2010 are 40%, 44%, 49%, 60% and 70%, respectively.</p> <p>Measurement is by count of architectural products possible for each stakeholder organization and activity area within the Defense Medical Logistics Supply Chain.</p> <p>Cold Chain Protocols Impact is on temperature sensitive shipments. As the new protocols are integrated into DLA procedures, data will be analyzed from business intelligence shipment data to determine the number of shipments regulated by the protocols. The future metric will be the number of shipments specifying any of the protocols.</p>				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology	PROJECT NUMBER 1
<p>NetCentric Framework: Deployed and operational Web Services: Unique Deployed Web Services for FY 2008 goal-0, actual- 0; FY 2009 goal- 5, actual- 3 ; FY 2010 goal-10, actual - 5; FY 2011 goal-20 actual- 8</p> <p>Measurement is by count of each different available and functional Web Services.</p> <p>Use of deployed Web Services: Total Web Services in use for FY 2008 goal-0, actual-0; FY 2009 goal-5; FY 2010 goal- 20; FY 2011 goal- 40. Measurement is cumulative count of each Web Service re-used in a software application within the Defense Medical Logistics Enterprise. Each re-use of an existing Web Service will reduce software development and testing time and insure a consistent data return for identical data to multiple applications.</p> <p>Average Cost for Alternate Commercial Product Ordering Program (ACPOP) for Medical and Surgical Items Cost Differential by ordering method</p> <p>The ACPPOP study identified transaction cost differentials between Prime Vendor, ACPPOP, and local purchase of \$10.69, \$15.37, and \$29.62, respectively. The cost differential of 40% and 175% will be the basis for several initiatives to shift procurement toward Prime Vendor sales. The future metric as these initiatives are implemented will be the cost avoidance generated by this shift toward the Prime Vendor procurement. Measurement will be by type and number of transactions as collected as part of the normal business intelligence function.</p>		

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2: Weapon System Sustainment	5.272	5.535	5.241						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

The program is focused in three initiatives:

- Planning Process Improvement: The program improves elements of current inventory policy models, assesses potential benefits of new technologies and seeks more efficient approaches to deliver customer requirements while reducing inventory and order fulfillment costs.
- Technical/Quality Process Improvement: The program improves internal efficiency and customer satisfaction through new tools and methods to proactively address supply issues resulting from current technical/quality processes.
- Procurement Process Improvement: The program attacks issues or problems associated with particular sub-elements of the procurement process by developing and demonstrating improved tools and procedures to improve process efficiency, cycle time and cost.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Weapon System Sustainment Accomplishments/Plans	5.272	5.535	5.241	
<p><i>FY 2008 Accomplishments:</i></p> <p>- Planning Process Improvement: Accomplishments in this area were led by DLA incorporation of new economic retention rules matched to the Peak Policy, a project completed this year, and by initiation of a project to automate the process of setting peak policies, which today requires heavy involvement by personnel with specialized skills. In addition, improvements were completed in aspects of planning involving lead time demand and stocking policy thresholds which were transitioned to the process owner for use in planned FY 2009 efforts to adjust EBS forecasting settings. The results of these projects will reduce inventory costs, backorders and procurement workload. The next generation inventory model whose feasibility was demonstrated in FY 2007, was approved by the process owner for further development, and a follow-on project was initiated that will confirm the enormous potential to reduce backorders and inventory cost while bringing the technology to the point where it can be</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>transitioned. The capability to much more accurately predict initial wartime spares requirements based on considerations of expected operations profiles was shown to be feasible in a joint project with AMCOM. The results were accepted by the Army, and further development efforts were initiated in another joint project. A project was initiated to address a number of issues affecting supply planning efficiency and effectiveness, including unforecasted demand spikes, high demand orders, long term contracts for items not sole source and backorders from stock redistribution</p> <p>- Technical/Quality Process Improvement: A pilot project was successfully completed on FSC 5340 items at DSCP that demonstrated a business process which, when applied to items that had not been bought in over five years, reduced ALT by 33% and exhibited 36% fewer aged backorders (older than 180 days), 61% more deliveries and 57% fewer unawarded items. The process transitioned to DSCP, where planning is in progress to implement it. An effort was initiated to develop attribute-based parts search and comparison capabilities for the simple user interface to DoD parts database in support of the Tech/Quality process owner and the Defense Standardization Program Office (DSPO). This simple interface will provide a generic capability to make substitution, part selection and item reduction decisions on a wide variety of different commodities. An effort was initiated to develop an automated capability to search Product Quality Deficiency Reports (PQDRs) and identify systemic issues with items or suppliers for management action in order to greatly reduce quality problems. DLA cannot today process and buy parts using the 3-dimensional product models that most suppliers work from and virtually all new products are designed in, and planning was initiated for a project to pilot rules and processes for DLA to use such models on a routine basis. Using such modern product data is expected to result in benefits ranging from increased competition to fewer quality problems and lower parts costs.</p> <p>- Procurement Process Improvement: A tool was completed that allows rapid assessment of the benefits of paying more to shorten lead times in return for a short-term gain in Obligation Authority and therefore flexibility with both single NSNs or groups, and was accepted by the DSCR supplier operations customer, where its first use will be in structuring a new long term contract. An effort was completed that analyzed how the DLA and Boeing processes address solicitations for sole or restricted-source parts, and made recommendations for changes to reduce the number of no-bid situations which were accepted by the appropriate supplier team. Working with Land and Maritime at DSCP, recommendations were made for a pilot to determine whether it makes sense for DLA to procure FMS-only parts through a commercial</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>buying service (CBS) such as the Air Force-managed Parts and Repair Ordering System (PROS) as a way to reduce procurement workload while greatly improving supply support to FMS customers.</p> <p>- Order Fulfillment Process Improvement. This is a new initiative, and planning was initiated in FY 2008 for projects to be funded in FY 2009.</p> <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> • Planning Process Improvement: Projects in this area focus on producing new capabilities which, when implemented, will improve perfect order fulfillment while reducing inventory cost and procurement workload. Accomplishments in this area were led by continued support to DLA efforts to implement the WSSP-developed Peak Policy and matching economic retention rules. These included establishing Peak Policies for eight weapon systems and analyses to answer questions raised by the process owner. A companion project to automate the process of setting peak policies, which today requires extensive effort by personnel with specialized skills, was continued and is on track for successful completion in early FY 2010. Effort continued to mature the next generation inventory model and confirm its enormous potential to reduce inventory costs and unfilled orders. The project is on schedule for completion in mid-FY 2010, plans to transition the technology to routine use at that time are complete, and the initial steps taken. A new capability to more accurately predict initial wartime spares requirements was successfully completed and transitioned for Army use to AMCOM, which cost-shared the project. A project was completed that analyzed the effects of the Stock Transport Order (STO) process that moves material within DLA's distribution depot network, on the number of Unfilled Orders and material losses, and made recommendations to the process owner for actions to ameliorate those effects. Three projects were initiated to develop and demonstrate improvements to specific planning sub-processes and their performance metrics. The first project will emulate the performance of the Manugistics/JDA Demand Classification software and then use that capability to simulate the performance of forecasts that result from changes on Demand Classification parameters for the purpose of evaluating potential improvements. The emulation capability is a complementary capability to an off-line copy of the production Demand Classification software, for which the WSSP program developed the Statement of Objectives and Concept of Operations. Working together under the process owner, the emulation capability can quickly and inexpensively simulate forecasting model improvements, and the off-line 				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 2	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>copy can then validate the changes to the real Demand Classification code before implementation in production. The second project will determine whether it is possible to work with Service program offices to assess which of their planned modification and upgrade activities will reduce future demand for DLA parts and thereby greatly reduce the incidence of DLA stocking items that are no longer needed. The third project will evaluate forecast model accuracy metrics to determine their reliability and validity, determine factually if the models are biased, if so how, and if there predictive factors that would allow either the models to be corrected or adjusted with more fidelity, analyze forecast coverage interval aspects, and recommend improvements to the process owner.</p> <p>• Technical/Quality Process Improvement: Projects in this area focus on resolving issues associated with various T/Q functions that are contributing to sourcing problems, unfilled orders, NSN proliferation and workforce inefficiencies. Accomplishments in this area were led by completion of an effort that successfully developed an attribute-based parts search and comparison capability for a simple user interface to DoD parts database and transitioned it to the Tech/Quality process owner, Defense Standardization Program Office (DSPO) and DLIS stakeholders. This simple interface will provide a generic capability to make substitution, part selection and item reduction decisions on a wide variety of different commodities, and will be used for part standardization, cataloging, part management and sustainment parts research. An effort was completed that developed an automated capability to search Product Quality Deficiency Reports (PQDRs) and identify systemic issues with items or suppliers for management action in order to greatly reduce quality problems. Companion efforts were initiated to create the same capability for Supply Discrepancy Reports (SDR) and to recommend ways to automate aspects of the Quality Notice (QN) resolution process to reduce the excessive time demands on Product Specialists and Packaging Specialists. The root causes of the very high and increasing number of QNs associated with Radio Frequency Identification (RFID) tags was analyzed and recommendations made to the AIT Program Managed for actions to address DLA and supplier issues that will eliminate those causes. In partnership with DLIS, a New Item Entry effort was initiated to identify what improvements could be made to the initial cataloging process that would reduce downstream sustainment problems such as excessive sole source, procurement delays, NSN proliferation, and many others that are fundamentally caused by incomplete or inaccurate information about the NSN at the time of cataloging.</p>				

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UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Procurement Process Improvement: Projects in this area focus on aspects of the procurement domain where improvements to specific sub-processes can have a significant impact on reducing procurement workload, lead time or acquisition cost. The tool that was completed in FY 2008 that allows rapid assessment of the benefits of paying more to shorten lead times was adopted as part of the standard suite of tools used by DORRA to conduct business case analyses and was in support of ICP efforts to structure long term contracts. The current EBS does not archive the internal steps in individual procurement actions in a way that permits analyses for process improvement, and in response to a request by the process owner a project was successfully completed that identified and validated the needs for data collection and archiving and made specific recommendations to the team setting requirements for the new e-procurement system. A project was completed that developed groupings of fastener NSNs to place on long term contracts. The results were accepted by J-7, who recommended them to DSCP for implementation. A project was initiated to pilot the use of a third party military packaging specialist as a way to eliminate the many packaging non-conformances on deliveries from commercial parts manufacturers and the attendant heavy workload to resolve the non-conformances. A project was initiated to assess the feasibility of using RFID or other automatic identification technology to improve GFP inventory accuracy. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> • Planning Process Improvement: The next generation inventory model development will be completed and the transition process initiated, but as the transition process proceeds during FY 2009, it is possible that additional R&D may be required to address specific issues to include a pilot project. The peak policy automation project also will be completed, and a smooth transition is expected to DORRA, which has the responsibility to set the peak policies. The FY2009 starts in emulation, demand reduction and forecast analytics will be completed and transition initiated. FY 2010 will continue the shift in emphasis to supply planning and its interface to demand planning with completion of projects that began in FY 2009. New projects will build on those results and be defined jointly with the planning process and sub-process owners. • Technical/Quality Process Improvement: The automated capability to search SDRs and flag systemic item or supplier issues will be completed and transitioned to daily use at DSCP, with ownership assumed 					

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 2	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>by the Tech/Quality process owner, who will have responsibility concerning subsequent transition to DSCC and DSCR. The project to recommend ways to automate aspects of the Quality Notice (QN) resolution process will be completed and transitioned to the T/Q process owner and the key DSCP stakeholders. The New Item Entry effort to identify what improvements could be made to the initial cataloging process that would reduce downstream sustainment problems will be completed through recommendations to the T/Q process owner and DLIS, and if warranted, a pilot will be defined and initiated to validate the benefits of selected recommendations. Effort will be initiated in partnering with Services to dramatically increase the flow of TDPs containing modern technical data of record for procurement. Other new projects addressing tech/quality problems will be planned jointly with the process owner.</p> <ul style="list-style-type: none"> • Procurement Process Improvement: The pilot of using a third party military packaging specialist as a way to eliminate the many packaging non-conformances on deliveries from commercial parts manufacturers will be continued through the year, generating data on benefits and implementation issues. The project to assess the feasibility of using RFID or other automatic identification technology to improve GFP inventory accuracy will be complete and a pilot project defined to validate the benefits of the recommended approach. Other new projects will be developed jointly with the process owner and initiated. Benefits from projects in this area are reduced procurement workload, acquisition cost and backorders. 				
C. Other Program Funding Summary (\$ in Millions)				
N/A				
D. Acquisition Strategy				
N/A				
E. Performance Metrics				
The metric is percent of completing demonstration projects transitioning per year. In FY 2009, nine demonstration projects were completed, and eight transitioned.				

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 3	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3: Supply Chain Management	2.595	2.923	2.674						Continuing	Continuing
A. Mission Description and Budget Item Justification										
DLA has organized along Supply Chains to provide an integrated, combat logistics solution that is coordinated among the services and across DoD. There is a need for the Agency to stay abreast of the latest supply chain management principals and techniques that will improve the supply availability of DLA-managed items by managing supply chains to shorten lead times and reduce costs. The dynamic nature of DLA's mission requires a flexible R&D mechanism to rapidly take advantage of the evolving supply chain improvements and innovations.										
B. Accomplishments/Planned Program (\$ in Millions)							FY 2008	FY 2009	FY 2010	FY 2011
Supply Chain Management Accomplishments/Plans							2.595	2.923	2.674	
<i>FY 2008 Accomplishments:</i> - Wide Area Workflow Engineering Change Proposal 470 - Reactive and Proactive Battlefield Backorder Breakout Initiative 3I Support - TentNet Industry Practices Baseline <i>FY 2009 Plans:</i> - Possible new start in Construction and Equipment Supply Chain. Light Armored Vehicle Risk Assessment. Imbedded Sole Source Reduction for Aging Backorder Mitigation. <i>FY 2010 Plans:</i> - Supply Chain Initiatives and opportunities continue to develop and pursue emerging Supply Chain Management opportunities as they evolve.										
C. Other Program Funding Summary (\$ in Millions)										
N/A										

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UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology	PROJECT NUMBER 3
<u>D. Acquisition Strategy</u> N/A		
<u>E. Performance Metrics</u> N/A		

UNCLASSIFIED

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 4	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
4: Strategic Distribution & Reutilization (SDR)	3.294	3.503	3.326						Continuing	Continuing

A. Mission Description and Budget Item Justification

This project consists of two thrusts: improvements and extensions to DLA distribution capabilities—especially for deployed warfighters—and technology insertions, such as Item Unique Identification (IUID), to enhance DLA’s de-militarization and reutilization capabilities. The distribution focus is on quickly establishing distribution operations in new theaters of operation, cutting customer wait time and reducing demands on strategic airlift. The reutilization focus is on reducing risks that militarily-sensitive equipment will be sold to potential enemies or other parties that could use the surplus material for nefarious purposes. Transition organizations are DLA’s Defense Distribution Center (DDC) and Defense Reutilization and Marketing Service (DRMS).

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Strategic Distribution & Reutilization (SDR) Accomplishments / Planned Program	3.294	3.503	3.326	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - Completed Node Management and Deployable Depot (NoMaDD) Advanced Concept Technology Demonstration (ACTD). The Military Utility Assessment of the Deployable Distribution Center (DDXX), including Theater Consolidation & Shipping Point (TCSP) and Forward Deployed Warehouse (FDW) capabilities, showed significant benefits for the warfighter. Validated value of a map-based Logistics Common Operating Picture through Limited User Evaluation of Node Management tools based on the Army’s Battle Command Sustainment Support System (BCS3). - Initiated development of web-enabled Node Management capability based on IRRIS platform, collaborating with the USTRANSCOM Common Operating Picture–Deployment and Distribution (COP–D2) Program. Concepts of Operations (CONOPs); Techniques, Tactics, and Procedures (TTPs); and transition plans were refined and executed. - Initiated development of DDXX stock-planning system and integration of DDXX and Defense Reutilization & Marketing Service (DRMS) capabilities. 				

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 4	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Support transition of NoMaDD capabilities, including completion of Node Management development, CONOPS, and demonstration. - Integrate and demonstrate DDXX/DRMS interoperability. - Map DDXX stock planning processes, identifying and addressing inter-Service/Agency process and system gaps and seams. - Define requirements for DRMS' Life-Cycle Reutilization Technology Initiative, including development and assessment of methods and tools necessary to identify and properly manage Service-disposed property. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Extend Node Management capabilities to encompass distribution reports and analytics for the DDXX and DLA Joint Logistics Operations Center. - Develop DDXX stock planning system and initiate DRMS' Reutilization Risk Reduction tool development. - Develop and demonstrate capability to support Humanitarian Assistance and Disaster Relief (HA/DR) requirements, including technologies to enhance materiel receipt and asset visibility for event managers. - Develop means to link Service weapon systems to DRMS reutilization and demilitarization requirements and processes. 				

UNCLASSIFIED

R-1 Line Item #41

Page 19 of 33

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology				PROJECT NUMBER 4		
C. Other Program Funding Summary (\$ in Millions)										
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	Cost To Complete	Total Cost
0603713/USTRANSCOM	1.250	2.000							Continuing	Continuing
D. Acquisition Strategy										
NoMaDD is jointly funded with United States Transportation Command (USTRANSCOM) funding (Program Element 0603713) in FY 2006 (\$1.5M), FY 2007 (\$2M), FY 2008 (\$1.25M), and FY 2009 (\$2.0M). The program was approved as an Office of the Secretary of Defense (OSD) sponsored Advanced Concept Technology Demonstrations (ACTD). OSD contributed \$6M through the ACTD's completion in FY 2008.										
E. Performance Metrics										
Demonstrated military utility through successful NoMaDD ACTD. DDXX transition to begin in FY 2009; Node Management transition to occur in FY 2010 through Army BCS3 and USTRANSCOM IRRIS programs.										

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 5	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<i>FY 2010 Plans:</i> (\$2.165) - Continued PMO support in program implementation and planning (\$.240 PMO), Continued support of Algae Oil to Jet Fuel studies and testing (\$1.425 AED), Continued support of the San Pedro Net-Zero Plus initiative (\$.500 AED).				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N//A				
E. Performance Metrics				
<ul style="list-style-type: none"> • Successful program documentation and support to include timely budget delivery and programmatic details (PMO) • Successful completion of initial assessment/planning/implementatation of a net-zero fuel facility for the defense depot at San Pedro (AED) • Successful incorporation of alternative fuel use (wind, solar, geothermal, hydrogen, waste-to-fuel) at the defense activities (AED) • Meet EISA FY 2007 requirements to reduce the use of petroleum based products in fuel (AED) • Successful completion of testing additional +100 Thermal Stability Additives and incorporation into MILSPEC; certification of additional additives to broaden the supplier base; cost reduction from the current \$65/gal price of additives (TSA) 				

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 5	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
5: Energy Readiness Program (ERP)	2.004	2.146	2.027						Continuing	Continuing

A. Mission Description and Budget Item Justification

- Program Management Office Support (PMO) for developing program strategies and goals, preparing documentation for the program, and performing necessary studies and analysis.
- Alternate Energy Development (AED) to include synthetic fuel specifications and acquisition plan; renewable energy and alternative fuels studies and planning, continued study of the use of hydrogen by DoD, and other directives specified in the Energy Policy Act (EPA) of 2005 and EISA FY 2007.
- Testing and approving of additional +100 Thermal Stability Additives (TSA) for use in Jet Propulsion Fuel (JP-8), and additional additive studies for +100 Low Temperature and Static Dissipater.
- Study and implementation of Automated Information and Data Collection (AIDC) to Defense Energy Supply Center (DESC) business processes, and automated adaptive planning tool to optimize the class III supply chain.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Energy Readiness Program (ERP) Accomplishments/Plans	2.004	2.146	2.027	
<p><i>FY 2008 Accomplishments:</i> (\$2.050) – Continued PMO support in program implementation and planning, Section 526 Study, and Biofuels Implementation Planning (\$.800 PMO), Operational Manager (OM) support to the NoMaDD ACTD (\$.700 AIDC), Biofuels Cross-Contamination Testing (\$.200 AED), Algae Oil to Jet Fuel studies and testing (\$.350 AED).</p> <p><i>FY 2009 Plans:</i> (\$2.152) - Continued PMO support in program implementation and planning (\$.220 PMO), Continued support of Algae Oil to Jet Fuel studies and testing (\$1.132 AED), San Pedro Net-Zero Plus initiative to assess/establish a net-zero energy defense fuel support point (\$.500 AED), Continued support of testing and approval of additional +100 Thermal Stability Additives (\$.300 TSA).</p>				

UNCLASSIFIED

R-1 Line Item #41

Page 21 of 33

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 6	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
6 : Defense Logistics Information Research (DLIR)	2.216	2.278	2.146						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

- Next Generation Automated Electronic Commerce and Sourcing. Focuses on employing the best of breed processes, practices, and technology to enable and/or streamline electronic commerce from the customer's point-of-need to point-of-satisfaction. The DOD EMALL is the single entry point for DOD and other federal customers to find and buy off-the-shelf, finished goods, and services from commercial marketplaces. It offers cross-store shopping, comparison pricing, and best value decision-making where all vendors must meet Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation (DFAR) statutory requirements. The DOD EMALL is primarily composed of three corridors: parts and supplies, information technology, and training.
- Development of Logistics Data Interoperability & Availability. Enhances the functionality and compatibility of data in a complex data environment using supply chain relationships and lifecycle management to allow flexible visibility. The exploration of logistics data solutions to enhance the warfighter's visibility of end item(s) and to show where that item fits in the overall application for an item of supply (i.e. weapon systems or other supporting systems) while showing a comprehensive view of all end items as they relate to all NSNs in the Federal Logistics Information System (FLIS).

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Defense Logistics Information Research (DLIR) Accomplishments/Plans	2.216	2.278	2.146	
<i>FY 2008 Accomplishments:</i> <ul style="list-style-type: none"> • FY 2008 DLIR R&D short-term projects (STPs) had much success! DLIR R&D STP solutions were successful in the proof of concepts against DLIS data. Although the DLIR R&D contracts have expired and the solutions did not move into sustainment, DLIS continues to be aggressive using industries cutting technologies to improve the data within the DLIS systems. 				

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UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 6	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> • Annual Broad Agency Announcement was release August 2008 with two Technical Areas of Interests. Received 29 industry proposals against each of the technical areas of interests. The Source Selection Evaluation Board has evaluated and provided 11 proposals to Defense Supply Contract Philadelphia for cost auditing and source selection authority approval. Anticipate all 11 for contract award using FY 2008/2009 funding. • Continued focus on Technical Solutions Councils to address new technology and methodology in each area: Customer-focused supply chain & logistics data and best-of-breed processes, practices, and technology. Comprehensive supply chain visibility & availability. Logistics data functionality and compatibility to commercial industry data. Environmental and Green programs. Award short-term R&D projects in each reviewed technical area of interest after opportunity briefings. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> • Re-solicit the Broad Agency Announcement (BAA) for new project ideas. The Defense Logistics Information Service (DLIS), as a corporate entity, will review the impact and effectiveness of the Technical Solutions Councils and address possible new technical areas. Continue the focus on capability gap areas such as: Customer-focused supply chain & logistics data and best-of-breed processes, practices, and technology. Comprehensive supply chain visibility & availability. Award new STPs each technical area of interest after industry opportunity briefings. Logistics data functionality and compatibility to commercial industry data. Plan to award additional short-term R&D projects in the technical area of interest. Environmental and Green programs. Award short-term R&D projects in each reviewed technical area of interest after opportunity briefings. 				

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology	PROJECT NUMBER 6
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics DLIR R&D projects are driven by our mission to provide value added data, data products and services to our warfighting customers from the Military Services, Joint and allied communities. We are looking for a combination of delivery of both emerging technologies and the ability to apply those tools to making logistics information available in easy to use and understand formats for our customers. We are focused on more seamless processes to minimize the need for manual labor while maximizing throughput in making more and better data available.		

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 7	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
7: Other Congressional Adds (OCAs)	32.519	56.607	0.000						Continuing	Continuing

A. Mission Description and Budget Item Justification

Congressionally added programs for the Logistics Research and Development (Log R&D) program element, along with explanation, are provided below.

-Aging Systems Sustainment and Enabling Technologies (ASE) - CRANE will oversee this add on behalf of DLA.

-Emerging Critical Interconnection Technology Program (ECI) - Funds provided for the Emerging/Critical Interconnection Technology (ECIT) program. The ECIT program facilitates the emergence of new interconnect technologies within North America and accelerates application into Warfighter applications through industrial and academic extension.

-Parts Backorder Reduction (PBR) - Light Armored Vehicle: Conduct a risk analysis to identify items that could be enhanced by new technology and/or real drivers of logistics that could become obsolete for the Light Armored Vehicle. Warstopper Program: Design and develop a prototype Strategic Material Buffer Management (SMBM) Tool.

-Advanced Mobile Microgrid System (AMS) - Field alternative energy and power management technologies to reduce fuel consumption and convoys required to support Forward Operating Bases.

-Accelerate Defense Supply Chain (ASC) - DORRA will oversee this add on behalf of DLA.

-Biofuels Program (BFP) - DESC will oversee this add on behalf of DLA.

-Defense Fuelcell Locomotive (FCL) - Continuation of Fuel Cell Locomotive work to build, evaluate and report on the performance of a hybrid fuel cell locomotive using the design previously worked under FY 2007 funding. Funding will be applied to complete the integration of a fuel cell switcher locomotive by installing a 350 bar composite wrapped compressed hydrogen storage system, a Direct Current (DC) to DC electric converter to provide necessary voltage requirements for on-board equipment and a power to grid processing unit to conduct testing. The fuel cell switcher locomotive will undergo an initial shake down and demonstration at a government approved location in Southern California. Energy Security and distributed generation will be incorporated into the project design. A final report will be provided on the demonstration results. The first phase of this work is currently being completed under contract number DAAB07-03-D-B006, D.O. 0224. Reimbursable fee will be provided in a separate MIPR.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology	PROJECT NUMBER 7

-High Energy Battery for Unmanned Aerial Vehicles (HEB) - Develop an experimental High Energy lithium rechargeable battery for miniature Unmanned Aerial Vehicles (UAV). The battery will incorporate new cell technology referred to as ANLCC which will combine cathode material developed from research by Argonne National Laboratory and couple it with high capacity carbon material developed by EnerDel. The new cell technology will provide greater energy, safety and service life than existing battery technology.

-Hydrogen Storage Program (HSP) - Conduct Basic/applied Research and Development (R&D) and/or pilot programs in support of the Hydrogen Storage Program (HSP). Conduct basic/applied R&D to advance hydrogen fuel storage, and vehicle integration Technology Readiness Levels (TRLs) and Manufacturing Readiness Levels (MRLs). Reimbursable fee applied in separate MIPR.

-New England Manufacturing Supply Chain Initiative (NEM) - CECOM will oversee this add on behalf of DLA.

-Spray Technique Analysis and Research for Defense (STR) - Reduce pollution and cost of DoD painting operations by improving the efficiency of painters.

-Vehicle Fuel Cell and Hydrogen Logistics Program (VHP) - Conduct Basic/applied Research and Development (R&D) and/or pilot programs in support of the Vehicle Fuel Cell and Hydrogen Logistics Program (VHP). Conduct basic/applied R&D to advance hydrogen fuel cells, hydrogen fuel infrastructure and vehicle integration Technology Readiness Levels (TRLs) and Manufacturing Readiness Levels (MRLs).

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Other Congressional Adds (OCAs) Accomplishments/Plans	32.519	56.607	0.000	
<i>FY 2008 Accomplishments:</i>				
Aging Systems Sustainment and Enabling Technologies (ASE) - CRANE will oversee this add on behalf of DLA.				
-Emerging Critical Interconnection Technology Program (ECI) - Funds provided for the Emerging/ Critical Interconnection Technology (ECIT) program. The ECIT program facilitates the emergence of new interconnect technologies within North America and accelerates application into Warfighter applications through industrial and academic extension.				
-Parts Backorder Reduction (PBR) - Light Armored Vehicle: Conduct a risk analysis to identify items that could be enhanced by new technology and/or real drivers of logistics that could become obsolete for the				

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UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology			PROJECT NUMBER 7	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>Light Armored Vehicle. Warstopper Program: Design and develop a prototype Strategic Material Buffer Management (SMBM) Tool.</p> <p>-Advanced Mobile Microgrid System (AMS) - Field alternative energy and power management technologies to reduce fuel consumption and convoys required to support Forward Operating Bases.</p> <p>-Accelerate Defense Supply Chain (ASC) - DORRA will oversee this add on behalf of DLA.</p> <p>-Biofuels Program (BFP) - DESC will oversee this add on behalf of DLA.</p> <p>-Defense Fuelcell Locomotive (FCL) - Continuation of Fuel Cell Locomotive work to build, evaluate and report on the performance of a hybrid fuel cell locomotive using the design previously worked under FY 2007 funding. Funding will be applied to complete the integration of a fuel cell switcher locomotive by installing a 350 bar composite wrapped compressed hydrogen storage system, a Direct Current (DC) to DC electric converter to provide necessary voltage requirements for on-board equipment and a power to grid processing unit to conduct testing. The fuel cell switcher locomotive will undergo an initial shake down and demonstration at a government approved location in Southern California. Energy Security and distributed generation will be incorporated into the project design. A final report will be provided on the demonstration results. The first phase of this work is currently being completed under contract number DAAB07-03-D-B006, D.O. 0224. Reimbursable fee will be provided in a separate MIPR.</p> <p>-High Energy Battery for Unmanned Aerial Vehicles (HEB) - Develop an experimental High Energy lithium rechargeable battery for miniature Unmanned Aerial Vehicles (UAV). The battery will incorporate new cell technology referred to as ANLCC which will combine cathode material developed from research by Argonne National Laboratory and couple it with high capacity carbon material developed by EnerDel. The new cell technology will provide greater energy, safety and service life than existing battery technology.</p> <p>-Hydrogen Storage Program (HSP) - Conduct Basic/applied Research and Development (R&D) and/or pilot programs in support of the Hydrogen Storage Program (HSP). Conduct basic/applied R&D</p>					

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 7	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>to advance hydrogen fuel storage, and vehicle integration Technology Readiness Levels (TRLs) and Manufacturing Readiness Levels (MRLs). Reimbursable fee applied in separate MIPR.</p> <p>-New England Manufacturing Supply Chain Initiative (NEM) - CECOM will oversee this add on behalf of DLA.</p> <p>-Spray Technique Analysis and Research for Defense (STR) - Reduce pollution and cost of DoD painting operations by improving the efficiency of painters.</p> <p>-Vehicle Fuel Cell and Hydrogen Logistics Program (VHP) - Conduct Basic/applied Research and Development (R&D) and/or pilot programs in support of the Vehicle Fuel Cell and Hydrogen Logistics Program (VHP). Conduct basic/applied R&D to advance hydrogen fuel cells, hydrogen fuel infrastructure and vehicle integration Technology Readiness Levels (TRLs) and Manufacturing Readiness Levels (MRLs).</p>				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

UNCLASSIFIED

R-1 Line Item #41

Page 29 of 33

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 8	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
8: Continuous Acquisition Lifecycle Support	3.885	0.000	0.000						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

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

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Continuous Acquisition Lifecycle Support Accomplishments/Plans	3.885	0.000	0.000	
<i>FY 2008 Accomplishments:</i> <ul style="list-style-type: none"> - Continued support for TC AIMS II Single User Representative and Joint Requirements Support - Defense Collaboration Network/International Collaboration Network (DCN/ICN): - Internet Technologies Support - Continued support for DoD IT Standards Governance Support, the Joint - Logistics Vision 2020 and the DoD FLE Initiative - Continuation of the DoD DISA Net Centric Enterprise Services Web - Continued Services Technology Support -- DoD Leverage Point Modeling and Dynamic Simulation Assessment -- DoD Enterprise Modeling and Performance Based Logistics 				

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UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology		PROJECT NUMBER 8	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>-- Completed DoD Corrosion Exchange Initiative</p> <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Program standing down – closing out the following program actions: - Support for TC AIMS II Single User Representative and Joint Requirements Support - Defense Collaboration Network/International Collaboration Network (DCN/ICN): - Internet Technologies Support -- Support for DoD IT Standards Governance Support, the Joint - Logistics Vision 2020 and the DoD FLE Initiative -- Closing out of the DoD DISA Net Centric Enterprise Services Web - Closing out of the Services Technology Support - DoD Leverage Point Modeling and Dynamic Simulation Assessment -- DoD Enterprise Modeling and Performance Based Logistics -- Completing DoD Corrosion Exchange Initiative <p><i>FY 2010 Plans:</i> N/A</p>				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Percent of program transitioned the current FY – 40%. - Strategic Plan Long-term Performance Targets - Beginning in FY 2009, no additional funding was identified for the CALS program. The program will transition which represents 30% of the program. - Annual Performance Targets - FY 2010: the remaining 30% of the program will complete this transition.				

UNCLASSIFIED

R-1 Line Item #41

Page 31 of 33

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology					PROJECT NUMBER 9	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9: TENTNET	0.000	0.000	0.987						Continuing	Continuing
A. Mission Description and Budget Item Justification TENTNET is an FY 2010 new start program. Resourced within the FY 2010 budget.										
B. Accomplishments/Planned Program (\$ in Millions)							FY 2008	FY 2009	FY 2010	FY 2011
TENTNET Accomplishments/Plans <i>FY 2010 Plans:</i> New Starts: ***Shop Floor Automation (\$551K): This project will demonstrate and document the increased surge capacities and reductions in manufacturing costs that can be achieved by introducing automated seam-welding and material handling equipment into key bottleneck areas in the tent manufacturing process. It will also determine the ROI for full roll-out under various surge scenarios. ***E-Mall Access for TentNet (\$405K): This project will make it possible for MilSpec Tent information to be available to all EMALL users. It will expand the number of tent and shelter products that have rich technical and performance information available on DOD EMALL. The project is structured to benefit the entire tent manufacturing community by making their product more visible and, more importantly, it will improve the quality of product information available to the warfighter. ***Extension of Supply Chain Simulation project (\$44K): This represents additional tasking for an existing project. The project will simulate the capability of the tent supply chain to surge production under varying conditions and requirements. We expect this project to produce an effective decision making tool for J-7 that will allow J-7 to evaluate the effect of placing buffer stocks at various levels within the supply chain.							0.000	0.000	0.987	

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603712S Logistics R&D Technology	PROJECT NUMBER 9
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

UNCLASSIFIED

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM
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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	14.905	29.919	29.356						Continuing	Continuing
1: Capabilities Based Logistics	2.230	6.152	1.540						Continuing	Continuing
2: Deployment and Distribution Velocity Management	6.790	6.591	7.644						Continuing	Continuing
3: Cross Domain Intuitive Planning	1.725	2.548	2.430						Continuing	Continuing
4: End-to-End Visibility	0.000	2.779	4.916						Continuing	Continuing
5: Distribution Planning and Forecasting	0.000	2.750	2.870						Continuing	Continuing
6: Joint Transportation Interface	3.857	7.174	8.831						Continuing	Continuing
7: Distribution Protection/ Safety/Security	0.303	1.925	1.125						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

UNCLASSIFIED

R-1 Line Item #42

Page 1 of 16

UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM
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B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	14.905	30.000	29.356	
Current BES/President's Budget	14.905	29.919	29.356	
Total Adjustments		-0.081		
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases				
Total Reprogrammings				
SBIR/STTR Transfer				
Economic Assumptions		-0.081		

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UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Capabilities Based Logistics	2.230	6.152	1.540						Continuing	Continuing

Note

FY08 funds support Program Management Office (PMO) Battle Command Sustainment Support System (BCS3) and Tapestry Solutions. Funds modified existing Tapestry Solutions contract, with other expenses paid from OSD and Defense Logistics Agency (DLA) sources. Funds also support DLA's NoMaDD ACTD program under PE # 0603712S.

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Capabilities Based Logistics Accomplishments/Plans	2.230	6.152	1.540	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - Continue spiral development and demonstration of NoMaDD capabilities. Support overall transition activities to include Doctrine, Organization, Training, Materiel, Leadership/education, Personnel, and Facilities (DOTMLPF) change recommendations. (supported Hurricane Ike recovery ops) <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Complete Node Management Web/Client development and transition activities. - Fund Office of Research and Technology Applications (ORTA)/Cooperative Research and Development Agreement (CRADA) initiatives. 				

UNCLASSIFIED

R-1 Line Item #42

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM		PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>- Collaboratively demonstrate with the Office of Naval Research (ONR)/OPNAV capability to move half loaded 20FT containers at sea.</p> <p><i>FY 2010 Plans:</i></p> <p>- Continue to fund/support ORTA/CRADA efforts.</p> <p>- Continue collaboration effort with ONR/OPNAV to develop ability to conduct at sea transfer of fully loaded containers within the seabase.</p>				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Critical enterprise-level distribution system capabilities to improve DoD supply chain performance.				

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UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 2	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2: Deployment and Distribution Velocity Management	6.790	6.591	7.644						Continuing	Continuing

Note

FY09 funds supporting ACTD/JCTD initiatives: JMIDS JCTD (PEs 0633001/0665805), JETA-SPOD ACTD (PEs 0602784A/0603804A/0603640M/0604567N/0603750D8Z).

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Deployment and Distribution Velocity Management Accomplishments/Plans	6.790	6.591	7.644	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - Designed, created & began testing prototype mechanisms to move cargo and vehicles, including Medium Tactical Vehicle Replacement & 20FT Equivalent Units in an environment equivalent to an Large Medium Ship Roll-on/Roll-off (LMSR) cargo hold in conditions up to Sea State 5. - Conducted of Joint Modular Intermodal Distribution System (JMIDS) Joint Capabilities Technology Demonstration (JCTD) limited military utility assessment (LMUA) to evaluate intermodal enhancements and increased agility/flexibility in joint distribution system. <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Complete JMIDS JCTD and pursue development of lighter version of Joint Modular Intermodal Container to meet evolving warfighter need. 				

UNCLASSIFIED

R-1 Line Item #42

Page 5 of 16

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM		PROJECT NUMBER 2	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<ul style="list-style-type: none"> - Prototype mechanisms to allow the movement of cargo and vehicles around the cargo hold without having to move vehicles with drivers or use forklifts/other material handling equipment. - Provide end-to-end visibility by linking cargo, mail and passengers transiting to/through the Sea-base. - Commence development of a common joint cargo handling system that meets or exceeds the requirements for multiple joint operational concepts (including major combat, global war of terror, and stability operations). <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Continue development/initial assessment to move cargo/vehicles without use of vehicles with drivers or material handling equipment while at sea. - Continue development/assessment of a common joint cargo handling system that meets or exceeds the requirements for multiple joint operational concepts. 				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Increase force projection and sustainment velocity.				

UNCLASSIFIED

R-1 Line Item #42

Page 6 of 16

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 3	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3: Cross Domain Intuitive Planning	1.725	2.548	2.430						Continuing	Continuing

Note

FY09 funds supporting JFCOM sponsored/DISA supported CDCIE JCTD (PEs 0603828D8Z/PE574E51/0603750D8Z).

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Cross Domain Intuitive Planning Accomplishments/Plans	1.725	2.548	2.430	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - Transitioned enhanced capability to model all distribution scenarios/methods within existing programmatic systems. More accuracy in multi-billion dollar asset procurement decisions. - Complete development and transition capability to model, within Joint Flow and Analysis System for Transportation (JFAST), the strategic air refueling of all joint service combat aircraft, including the USTRANSCOM/Air Mobility Command (AMC) inter-theater airlift fleet. <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Continue efforts to enhance Deployment Distribution Operations Center (DDOC) operations through work flow engineering. 				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM		PROJECT NUMBER 3	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<ul style="list-style-type: none"> - Commence development of cross domain suite of tools for joint warfighter with text chat language, translation, whiteboard, audio and XML guard functionality (Cross Domain Collaborative Info Environment (CDCIE) JCTD). - Commence collaborative effort with USMC to link tactical maintenance status/report to strategic systems. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Continue efforts to enhance DDOC operations through work flow engineering. - Complete development/evaluation of cross domain suite of tools for joint warfighter with text chat language, translation, whiteboard, audio and XML guard functionality (Cross Domain Collaborative Info Environment (CDCIE) JCTD) and commence transition activities. - Continue collaborative effort with USMC to link tactical maintenance status/report to strategic systems. 				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Improve decision-making and collaboration within the supply chain.				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 4	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
4: End-to-End Visibility	0.000	2.779	4.916						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
End-to-End Visibility Accomplishments/Plans	0.000	2.779	4.916	
<i>FY 2008 Accomplishments:</i> N/A				
<i>FY 2009 Plans:</i> - Test and evaluate military utility of COTS satellite tracking devices to enhance in transit visibility. - Commence next generation Portable Deployment Kit effort designed to provide end-to-end visibility in austere/mobile environments. - Commence development with Army/Logistics Info Agency of a mobile AIT capability in a military environment in all environments.				
<i>FY 2010 Plans:</i> - Complete next generation Portable Deployment Kit effort designed to provide end-to-end visibility in austere/mobile environments. - Continue development with Army/Logistics Innovation Agency of a mobile AIT capability in a military environment in all environments.				

UNCLASSIFIED

R-1 Line Item #42

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM		PROJECT NUMBER 4	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Provide end-to-end visibility of all aspects of the projection and sustainment of forces and equipment.				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 5	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
5: Distribution Planning and Forecasting	0.000	2.750	2.870						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Distribution Planning and Forecasting Accomplishments/Plans <i>FY 2008 Accomplishments:</i> N/A <i>FY 2009 Plans:</i> - Commence two year effort to build a highly configurable, agile Distribution Process Nodal Model (DPNM) capable of expressing and analyzing complex and detailed distribution processes to support operational planning and execution. - Commence effort with JFCOM and Services to develop a Single Load Planning Capability (SLPC) that enables load planners across the enterprise to collaborate to provide end-to-end load plans. <i>FY 2010 Plans:</i> - Complete effort to build a highly configurable, agile DPNM. - Complete SLPC effort.	0.000	2.750	2.870	

C. Other Program Funding Summary (\$ in Millions)

N/A

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM	PROJECT NUMBER 5
D. Acquisition Strategy N/A		
E. Performance Metrics Planning, based on an understanding of customer requirements, for optimizing the distribution process.		

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 6	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
6: Joint Transportation Interface	3.857	7.174	8.831						Continuing	Continuing

Note

FY 08 & FY 09 funding supporting PACOM sponsored CMS JCTD, (PEs 0603750D8Z/0603648D8Z).

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Joint Transportation Interface Accomplishments/Plans	3.857	7.174	8.831	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - Commenced multi-year development/integration of systems for Common Operational Picture for Deployment and Distribution (COP D2) that will mitigate effect of multiple, overlapping functional legacy systems and business processes, and provide timely, relevant, and actionable information to enhance the warfighters' level of confidence in joint distribution processes. - Commenced development of database/query tool to exchange air and sealift schedules to support Coalition Task Force operations enhancing logistics information exchange between coalition partners – effort supporting Coalition Mobility System (CMS) JCTD. 				

UNCLASSIFIED

R-1 Line Item #42

Page 13 of 16

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM		PROJECT NUMBER 6	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Continue COP(D2) efforts. - Continue support to CMS JCTD. - Develop the Community of Exchange (CoEx) for JDDE that will enable interoperability among heterogeneous systems and facilitate exchange of knowledge within the context of formalized JDDE processes. - Exploration of cognitive-based visualization, alerting and optimization engines that make optimal/near optimal resource allocation, transportation, and distribution recommendations. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Continue COP(D2) and CMS JCTD efforts. - Commence multi-year development of an automated data quality analysis capability linked to the Enterprise Data Warehouse (EDW) that will enable end-to-end analysis of data quality and system performance. - Continue development of cognitive-based visualization, alerting and optimization engine effort. 				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Synchronizing, through information exchange, strategic/theater delivery capabilities to meet warfighter needs.				

UNCLASSIFIED

R-1 Line Item #42

Page 14 of 16

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM					PROJECT NUMBER 7	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
7: Distribution Protection/ Safety/Security	0.303	1.925	1.125						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Distribution Protection/Safety/Security Accomplishments/Plans	0.303	1.925	1.125	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - In collaboration with C-130 J Program Office increased technology level readiness (TRL) level of Wireless Gate Release System (WGRS) prototype to provide required capability and facilitate transition activities. - Commenced two year effort to develop a En-Route Patient Care Module to enhance initial care for the injured <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Develop, integrate and test advanced sensors, guidance approaches, and control system technologies relevant to all weight classes of Joint Precision Airdrop Systems (JPADS). - Complete En-Route Patient Care Module development/commence transition activities into program of record. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Development of improved guidance/navigation/control systems to improve the delivery accuracy of airdropped supplies. 				

UNCLASSIFIED

R-1 Line Item #42

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603713S Deployment and Distribution Enterprise Technology- USTRANSCOM	PROJECT NUMBER 7
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics Providing the appropriate security in a timely manner during deployment and distribution operations.		

UNCLASSIFIED

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)					PE 0603720S Microelectronics Technology Development and Support - DMEA					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	47.138	32.392	26.310						Continuing	Continuing
1: Defense Microelectronics Activity (DMEA)	47.138	32.392	26.310						Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Microelectronics Activity (DMEA) was established in FY 1996 by the Office of the Secretary of Defense to act as the joint DOD Center for microelectronics acquisition, transformation, and support. Microelectronics technology is a critical and essential technology for all operations within the DOD and their use is rapidly increasing. Yet, as critical as this technology is to DOD operations, the defense microelectronics market is now <0.1% share of the total market because the use of microelectronics has exploded in the commercial world, driving the semiconductor industry to supersede successive generations of microelectronics technologies with new technologies every 18 months. As a result, the semiconductor industry does not respond to DOD's unique needs of ultra-low volumes, extended availability timeframes, or unique security concerns. The DMEA mission is to design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to provide a pathway to extend the life of weapon systems and to solve operational problems (e.g., reliability, maintainability, performance, and assured supply). DMEA's capabilities make it a key tool in the intelligent and rapid development and application of advanced technologies to identified military needs. This includes implementation of advanced microelectronics research technologies providing for the development and long-term support structure necessary to ensure rapid design, fabrication, test, insertion, and support of microelectronics technologies. DMEA has developed a unique-in-the-world flexible process foundry, the Advanced Reconfigurable Manufacturing for Semiconductors (ARMS) foundry, to develop specialized microelectronic devices critical for DOD on a wide variety of process technologies and geometry node-sizes. The DMEA provides an in-house capability to support these strategically important technologies within the DOD. The DMEA applies both available leading-edge technologies and innovative applied research and development (R&D) approaches to develop solutions to current problems. DMEA's RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions to identified military needs. DMEA has been singled out as a unique national resource by the warfighters, industry and foreign governments. Funds are required for investments and expenses for personnel, technical and analytical support, facilities, equipment, supplies, travel, and publications.

UNCLASSIFIED

R-1 Line Item #44

Page 1 of 15

UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	PE 0603720S Microelectronics Technology Development and Support - DMEA

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	47.138	0.000	0.000	
Current BES/President's Budget	47.138	32.392	26.310	
Total Adjustments	0.000	32.392	26.310	
Congressional Program Reductions	0.000	0.000		
Congressional Rescissions	0.000	0.000		
Total Congressional Increases	0.000	32.480		
Total Reprogrammings	0.000	0.000		
SBIR/STTR Transfer	0.000	0.000		
Economic Assumptions		-0.088		
Departmental Guidance			26.310	

UNCLASSIFIED

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Defense Microelectronics Activity (DMEA)	47.138	32.392	26.310						Continuing	Continuing

A. Mission Description and Budget Item Justification

The Microelectronics Technology Development and Support funds are to design, develop, and demonstrate microelectronics concepts, technologies, and applications to extend the life of weapon systems and solve operational problems (e.g., reliability, maintainability, performance, and assured supply). This includes providing for the development and long-term support structure necessary to ensure rapid prototyping, insertion, and support of microelectronics technologies into fielded systems, particularly as the technology advances.

These funds provide an in house technical staff of skilled and experienced microelectronics personnel working in state of the practice facilities providing technical and application engineering support for the implementation of advanced microelectronics research technologies from design through fabrication, assembly, and installation. The DMEA provides an in-house capability to support these strategically important technologies within the DOD with distinctive resources to meet DOD's requirements across the entire spectrum of technology development, acquisition, and long term support. DMEA's capabilities make it a key tool in the intelligent and rapid application of advanced technologies to add needed performance enhancements in response to the newest asymmetric threats and to modernize ageing weapon systems.

DMEA has developed a unique-in-the-world flexible process foundry for making semiconductors on a wide variety of process technologies and geometry node-sizes. The ARMS can be "flexed" on demand to fabricate integrated circuit (IC) devices on not just one, but on multiple manufacturing processes with different feature sizes and technologies. DMEA's foundry process business model is to acquire commercial process IP to host in the ARMS at much reduced cost. However, this requires keeping pace with the microelectronics industry and updating the necessary equipment and processes providing these capabilities as the technology advances. This flexibility satisfies the DMEA mission to provide microelectronics solutions, and results in "just enough, just in time" supportability. DMEA has also been requested to make the DMEA flexible semiconductor foundry a contingency foundry for trusted integrated circuits to provide a means of supplying critical trusted integrated circuits when the industrial base is not able to provide them.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
DMEA Accomplishments / Plans	47.138	32.392	26.310	

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> • 3-D Electronics efforts are to accomplish technology development in four areas: 3D integration of optical and digital technologies; materials development for thermal management; materials development for 3D wiring; and utilization of new interconnects and devices based on graphene. By stacking devices and interconnecting them in a 3D arrangement, a huge leap in functional density is possible. 3D integration is a cornerstone of the coming revolution in electronics. Critical enablers to fulfilling the vision of high density 3D technology are new materials for electrical interconnects electromagnetic shielding and heat removal. The FY08 efforts are development of a 3D magnetic logic system with no moving parts, fabrication/evaluation of proof-of-concept nonvolatile memories with metal/silicon, optimization/characterization of Single-Walled Carbon Nanotube (SWNT) thin film optocoupler, and demonstration of a hetero-nanocrystals concept as a floating gate for nonvolatile memory. (\$0.969) • Advanced Dynamic Technology Optics Program efforts are continuing development of a new class of smart materials that will provide nanosecond switching speed shutter devices and variable index of refraction devices. These devices will be operated with a microelectronics controller system to ensure that signal processing delays within the microelectronics will not impede the speed of the device operation. The FY 2008 efforts continued system integration, field demonstration, and prototype testing of electronically tunable optical filters. (\$1.162) • Advanced Surface Radar Technologies efforts are developing and adapting electronic components to new form factors thereby expanding surface ship radar electronics miniaturization and packaging methodologies to demonstrate low cost, scalable radar designs. Presently, the Navy's surface radar systems are monolithic in their design/implementation, requiring the Service to purchase new radar systems (or extensively upgrade existing systems) for any change in the threat they face. New innovations derived from DOD airborne radar systems development are promising lower cost, modular surface ship radar designs that can be quickly and inexpensively scaled to meet the Service's needs. In FY08, candidate electronics were evaluated for potential benefit to supporting the Navy's next generation surface ship radar systems. (\$5.325) 					

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UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Forbes Field Air National Guard (ANG) Regional Defense Command Integration Center efforts are developing an architecture, concept of operations (CONOPS) and communications systems to improve mission systems, enhance ANG capabilities and correct emergency response management deficiencies, redundancies and technology gaps. Specific accomplishments include updates to the proof-of-concept design to an Operational/Deployed phase with expanded collaboration and communications systems within the Eisenhower Center working with fixed, mobile and temporary emergency response centers. (\$0.968) • Foliage-penetrating Acoustically Cued Imagery Sensor (FACIS) will provide near real-time Intelligence, Surveillance and Reconnaissance (ISR) in the jungle environments. Current efforts are development of a miniature multimode sensor array subsystem, imaging subsystem, sensor controller, Line Of Sight (LOS) and non-LOS communications subsystem, and Global Positioning System (GPS) subsystems. FACIS may be cued or event driven to automatically take pictures, compress, encrypt, and transmit the image for further analysis at a remote location. Miniaturization through advanced packaging and design of the prototypes will achieve covertness for the system. Conduct further jungle environment experiments to refine the design and expand the operational characteristics of the system. (\$2.327) • Superlattice Nanotechnology efforts are developing and characterizing Silicon Carbide (SiC) wafers grown from SiC templates using low-temperature processes and molecular beam epitaxy with minimum defects that will form the basis for the next generation of radio frequency and radiation-hardened microelectronics. The Specific accomplishments include infusing superlattice nanotechnology into the growth of SiC substrates; minimizing growth defects; growing crystalline, defect-free SiC-on-Silicon, utilizing superlattice and superlattice-like atomic layer growth control; producing full wafer, full thickness SiC with device-appropriate dopants for high-voltage applications; fabricating and testing large-area power devices with performance targets of 5-10 kV and 50,000 Amps. (\$1.549) • Semiconductor Photomask Technology Development otherwise known as the Domestic Mask Inspection Tools and Technology (ADMITT) program are accelerating the development of state-of-the-art mask making tools and also the formation of a domestic mask blank source for future applications in the below 45 nanometer regime. Specific accomplishments include development of beta prototype 					

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>inspection hardware necessary to evaluate the optical quality of a mask and documented reticle inspection technology candidates that may meet 22nm and 16nm wafer node sizes. An additional (non-mask) inspection need has emerged – the qualification of the patterns written by e-beam pattern generators directly on semiconductor wafers – abbreviated as MLL (Mask Less Lithography). This technology is currently being investigated and was included in the ADMITT investigation tasks. (\$2.327)</p> <ul style="list-style-type: none"> • University Materials Characterization and Metrology Center efforts are identifying the chemical and structural elements of materials and devices, as well as chemical, optical, electrical, and physical principles in measurement science and enabling the nanotechnology industry by providing expertise, training, and sharing diagnostics equipment. Specific accomplishments include advanced materials for semiconductor nanowire synthesis, characterization and device development for electronics, thermoelectric cooling and chemical sensing, and development of nano-scale devices and materials for computing electronics, data storage and sensors. (\$1.162) • Spintronics Memory Storage Technology efforts are to achieve a breakthrough in magnetic random access memory (MRAM) technologies together with companion programs in electronics packaging and advanced materials in order to develop a technology that will be produced domestically and will transition from the lab to the battlefield in a timely and cost effective manner. The FY 2008 efforts will conduct university-based research in nanomaterials and nanodevices, investigating applications of carbon materials in spintronic devices, advanced MRAM chip and racetrack memory development, and demonstrating a nanomagnetic logic system. (\$2.324) • Network Micro-Sensors Technology Testbed efforts are to establish a national testbed asset. The testbed will be utilized by military and commercial customers to develop and test large-scale sensor network protocols and applications. The availability of the testbed will make possible cost and schedule savings for future networked sensor development efforts. Specific accomplishments include fabrication, test, and integration of the hardware elements and completion of the software development necessary to implement the complete system design. The system will be demonstrated using the MicroSensor System, a wireless networked unattended ground sensor system, to populate the testbed sites. A universal interface is being designed to accommodate many different micro-sensor types. Special 					

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>consideration is being given to storage of data generated by the test bed because this data will in all likelihood be ITAR controlled. The test bed will reside on the University of Texas at Dallas (UTD) campus. (\$1.549)</p> <ul style="list-style-type: none"> • End to End Semiconductor Fabrication Alpha Tool efforts are to develop a novel semiconductor processing capability to manufacture semiconductors in a single tool. This new, non liquid chemical, multi-activation processing technique allows high resolution patterns of process layered material to be fabricated directly on semiconductor wafers in a single step. This industry disruptive process eliminates the need for billion dollar facilities and million dollar masks for each chip design. The specific FY 2008 accomplishments include extensive modeling and design towards the development of the Optical Column needed for the Alpha tool. Elements for the column are presently under construction. (\$1.549) • Demonstrations, Test and Evaluation of Mini-Sensor efforts are to support demonstrations, operational tests and evaluations of state-of-the-art sensor technology. One technology uses microsensors to improve the military's awareness of potential threats and the defense of high-value targets. Specific accomplishments include enhancements which were requested by potential end users and implemented into the system; increase the stand-off distance between the sensor field and the human operator, integrate with other security systems use by the military, improve the detection range of the system, and improve the intruder tracking algorithm. A pilot system was installed and demonstrated for the US Customs and Border Patrol. That pilot system had enhanced miniature wireless components that collect and transmit information using very little power. It also has further enhancements e.g., beacon hopping to decrease the probability of detection and interception, base station authentication to ensure the security of the data, and integration with other data gathering systems. (\$4.647) • Electronics and Materials for Flexible Sensors and Transponders (EMFST) efforts are to perform advanced research on inks for fabrication of silicon based electronic components, evaluate roll to roll assembly technologies and laser assisted electronics assembly processes for application to flexible electronics such as sensor arrays, and develop a passive transducer as an event detector. Such components can be used covertly in the war on terrorism. (\$2.905) 				

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Feature Size Migration efforts at DMEA provided the fabrication technology, infrastructure modifications and facilitation to build microelectronics with increased functional density using digital, analog and mixed signal processes for military systems in DMEA's foundry. (\$3.877) • Rapid Prototyping / Low Rate Production of Mini-Sensor efforts are to develop and prototype advanced wireless components for U.S. government customers to facilitate their transition into operational use. Specific accomplishments include developing a covert camera system, a magnetic sensor system, RFID sensor tags, and an acoustic sensor array. The prototype hardware and software will be transitioned to a production ready status. Qualification testing, and supporting the execution of a military utility assessment is required to ensure the system is ready for transition to a military user. Military users will be consulted to ensure the system integrates into the existing C4ISR network. Training and operation material will be provided to the military user. (\$3.485) • High Specific Energy Rechargeable Battery efforts are to improve the delivered energy and cycle life of Next Generation Energy Storage Devices and optimize battery cell chemistry and design to generate higher power. The DOD relies heavily on microelectronics for the effectiveness of its combat systems (Ex: Unmanned Aerial Vehicles (UAVs), unattended ground sensors, etc). These systems, inturn have increased demands for power to operate. While there has been exponential growth in integrated circuit performance since 1970, battery technology has been lagging and has reduced growth potential of digital devices. This new work, creates a new battery technology, utilizing lithium sulfur (Li-S) and implementing improvements in cell chemistry and cell design. (\$1.551) • Carbon Nanotube Thin Film Near Infrared Detector efforts are to build on the revolutionary discovery of the broad spectrum bolometric response of single-walled carbon nanotube (SWNT) thin films to develop a new generation of near infrared detectors. Specific accomplishments include optimizing the temperature coefficient of resistivity which is an important parameter in the bolometric performance of these films. Techniques were developed to chemically process and functionalize the SWNT and cost-efficient procedures were developed for large scale synthesis of chemically functionalized SWNT materials. The thin film technology will be developed for the focal plane arrays. (\$0.969) 					

UNCLASSIFIED

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Self-Sensing Array Container Pre-Screening Sensor System efforts are developing a first generation trace chemical detection system suitable for applications in ISO shipping containers for homeland defense. This program will result in robust, compact, low-cost, low-power chemical sensor units for unattended sensing applications in International Standards Organization (ISO) shipping containers and other applications to enhance homeland security. Microcantilever-based Self-Sensing Array (SSA) technology is expected to provide the selectivity, sensitivity, durability, low cost, and low power needed for unattended sensors and sensor networks. Specific accomplishments include developing a combined system prototype of a chemical sensor system to be evaluated in laboratory and field tests and analyze the data. (\$1.394) • Agile JTRS Integrated Circuits program has developed proof of concept voltage controlled, frequency agile filters. The goal is to develop channelizers based upon high performance chip scale acoustic resonator filters. Promising advancements in filters capable of switching through the application of a DC voltage have been made. Systems such as the Joint Tactical Radio System (JTRS) require significant frequency tunability and could make immediate use of this technology to both improve performance and reduce cost of the systems. This capability will significantly increase the ability of the military to provide high-performance and cost-effective communications systems to the warfighter. (\$1.549) • Next Generation Supercomputer IA Prototype for the NRL efforts to functionally prototype the next generation of a large data, digital supercomputing information architecture at the Naval Research Laboratory Center for Computational Science. This Federated, Distributed Information Assured Architecture scales to provide an Enterprise-wide view of information as 'single image' based on net-centricity. It proposes to allow concurrent search, location and fusing of multifunctional data quickly in near real-time. Sustained 40-100G wide area data flows are proposed for ingestion, manipulation and visualization of data from multiple sites for processing, search, exchange, and COOP of data. (\$4.388) • Small Business Innovative Research (SBIR) efforts are to use the SBIR community to address the challenges of current and emerging microelectronics issues which adversely impact the reliability, performance, maintainability, or operational life of DOD weapon systems, and to investigate opportunities for application of advanced microelectronics technologies in DOD weapon systems. DMEA will generally 					

UNCLASSIFIED

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA		PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>participate in one or two SIBR solicitations per year depending on the quality and quantity of responses received. The mission of the DMEA is to research current and emerging microelectronics issues, with a focus on warfighters needs, and to leverage advanced technologies to extend the life of weapon systems by improving their reliability, maintainability and performance, while addressing the problem of diminishing manufacturing sources. This mission includes providing for the development and long-term support structure necessary to ensure rapid prototyping, insertion, and support of advanced microelectronics technologies into fielded systems.</p> <ul style="list-style-type: none"> The primary effort this FY is a SBIR phase 2 effort to design, develop, and demonstrate a flexible, reconfigurable radio transceiver implemented on a microelectronic device (ASIC) that is suitable for long term operation (one year or more) on battery power. A flexible reconfigurable radio transceiver consists of a digital radio (or software radio) core and required oscillators, mixers, and amplifiers needed for specific applications. The digital radio should be easily reprogrammed to use different modulation methods. This makes it a useful building block for many different types of systems used by both military and commercial users. An ultra-low power radio is meant to be powered by batteries over long periods of time (months or years) without replacement. This makes it useful in deployed sensor array systems with possible applications in ad-hoc networks. Additionally, FY 2008 SBIR funds will share the cost (with DARPA MTO) of a proposed enhancement to LumArray's existing NavAir Phase II SBIR to achieve nanometer-level-precision lithography with LumArray's maskless lithography system, the ZP-150, compatible with hybrid lithography, and to accelerate the development of the ZP-150B. The proposed SBIR enhancement will enable improvements to the software that controls the alignment subsystem, and innovations in the data-path software that will compensate for systematic errors in the stage motion, the spatial-light modulator, and the location of zone plates in the array of zone plates. (\$1.162) <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> 3-D Electronics and Power efforts are to take advantage of recent advances in nanomaterials and nanodevices to begin to address the issues necessary to take the electronics industry beyond the two-dimensional silicon based devices and wiring. Development of new high density electronic materials 				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>and 3D-electronics technologies together with associated packaging and heat dissipation solutions are planned. (\$2.334)</p> <ul style="list-style-type: none"> • Agile JTRS Integrated Circuits program continues the development of voltage controlled, frequency agile, acoustic resonator filters. The ultimate goal is to develop channelizer based upon high performance chip scale acoustic resonator filters. This phase continues the development of filters capable of switching frequencies through the application of a DC voltage (i.e. being totally passive devices). Systems such as the Joint Tactical Radio System (JTRS) require significant frequency tunability and could make immediate use of this technology to both improve performance and reduce cost of the systems. This technology has the potential to provide a cost effective solution to the high-performance tuning requirements of military communication systems. (\$1.556) • C-Scout Container Security System efforts are the second of three planned phases, continuing development of the Self-Sensing Array Container Pre-Screening Sensor System efforts (FY 2008) to further design, develop and test the prototype self-sensing array based system. This FY09 task will focus on further testing and development of the prototype's capabilities and enhancement of the system for biological and radiation threat detection. (\$2.334) • Carbon Nanotube Thin Film Devices for Portable Power efforts will build on the revolutionary improvement of fabricating some of the fuel cell components from thin films of Carbon Nanotubes (CNTs). This breakthrough improves the performance of the fuel cells and lowers the cost so that emergency response teams and even individual soldiers could be equipped with portable power sources. In order to realize the benefits of this breakthrough, it is necessary to develop large scale fabrication techniques for producing the membrane electrode assemblies that are suitable for use in portable fuel cells. The FY 2009 funds will be used to advance material science technology of carbon nanotube manufacturing and to develop techniques for processing the thin films into the rugged membrane electrode assemblies (MEAs) that are necessary for deployment in portable fuel cells. The FY 2009 funds will also be used to modify the carbon nanotubes with Platinum (Pt) nanoparticles for incorporation into the fuel cell electrodes and demonstrate the preparation of large area thin film catalyst support layers (CSL) and gas 					

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>diffusion electrodes (GDE) using carbon nanotube materials. The performance of the carbon nanotube based CSL and GDE will be evaluated as fuel cell components. (\$1.556)</p> <ul style="list-style-type: none"> • Defense Command Integration Center efforts in FY 2009 are the third phase of an initiative to enhance the emergency response system by developing the Eisenhower Center Regional Defense Command Integration Center. This phase will provide collaboration capability by designing and developing a mobile incident command vehicle with communications and GIS capabilities to aid command and control and situational awareness for emergency responders. (\$0.856) • Electronics and Materials for Flexible Sensors and Transponders (EMFST) efforts are to perform advanced research and development of materials and process for printed electronics on flexible substrates, evaluate flexible electronics assembly methods for high-speed assembly process, and develop a disposable radio-frequency sensors and transponders. Such components can be used covertly in the war on terrorism. (\$3.112) • Feature Size Migration efforts at DMEA are providing the fabrication technology, infrastructure modifications and facilitization to build microelectronics with increased functional density using digital, analog and mixed signal processes for military systems in DMEA's foundry. The funds for this project will be used to develop the ability to produce more complex microcircuits, to improve the efficiency of converting from one process to another in making required parts. (\$1.945) • High Performance Tunable Materials efforts are to radically improve the tuning range and lower the loss of multi-octave tunable circuits for software defined radio preselectors and create the truly wideband, multi-mode radios long sought for direct communications across a variety of applications. High-throughput combinatorial methodologies will be used to create new materials in a series of short loop experiments. These experimental material combinations will allow thousands of variations to be quickly investigated. The result will be new materials for tunable applications which are had been overlooked by less sophisticated experimental approaches. (\$2.334) 					

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Scalable Topside Array Radar (STAR) Demonstration addresses deficiencies in the Navy's existing surface ship radar systems which are primarily monolithic in function, requiring replacing or extensively upgrading radar systems, for newly defined threats. Recent innovations in DOD airborne radar development promise lower size, weight, and cost and are adaptable modular designs that can be quickly and inexpensively scaled to meet the Navy's shipboard needs. STAR is an effort to assess elements of applicable technology and support refinements necessary to reduce the cost/risk of next generation surface ship radar systems. STAR directly supports the Navy's plan for an aggressive radar competition to help reduce the cost of next generation platforms, such as the CG(X) cruiser. Specifically, the STAR efforts are to study and analyze high power amplifier monolithic microwave integrated circuits, transmit/receive modules, receiver multi chip modules, and beam steering control modules (BSCM) for improvements in next generation radar system performance. The contractor shall analyze advanced technology microelectronic and semiconductor processes to lower unit production costs. (\$0.778) • Semiconductor Photomask Technology efforts are further extending the capabilities of the 6XX generation inspection tools to meet the needs for advanced 193nm immersion masks and Extreme Ultraviolet Lithography (EUVL) pilot-production masks (13.5nm). Complete System Requirements Document (SRD) for all the hardware and software to inspect immersion masks. Set all system level parameters for masking techniques required using EUVL and Nano-Imprint Lithography (NIL) node geometries. This effort will begin to define all the requirements for producing equipment to manufacture masks that will produce die with geometries of less than 22nm. (\$2.333) • Smart Bomb Microwave Radar Guidance System efforts will develop an all-weather, miniature, targeting Planned Position Indication (PPI), synthetic aperture RADAR (SAR) solution to guide smart bombs to targets. This FY 2009 task will design, develop, integrate, test and demonstrate a Smart Bomb Microwave RADAR Targeting System. (\$1.945) • Spintronics Memory Storage Tech efforts are to take advantage of recent activities in nanomaterials, nanodevices and spintronics to bring about revolutionary advances in magnetic storage technologies. Current hard disk drives are now contending with the superparamagnetic limit which limits the magnetic grain size for recording information, and there is an opportunity to introduce new storage and logic 					

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>devices and new architectures that can combine these functions. Exploration of the use of multilevel recording techniques, nanomagnetic logic devices, spin momentum transfer devices, high performance tunnel barriers and new carbon materials in order to implement advanced spintronics memory technologies are planned. (\$2.334)</p> <ul style="list-style-type: none"> • Superlattice Nanotechnology efforts will facilitate the development of a large SiC epitaxial substrate with processes comparable in cost to standard silicon wafers. This cost reduction will impact the use of SiC devices in military applications such as high power switches for power distribution (free electron lasers, high power radars, electromagnetic gun, electromagnetic launchers, solid state lasers, and commercial), high power radio frequency transistors, light emitting diodes, and radiation hard electronics. During earlier phases of this program, processes for the fabrication of SiC films on silicon substrates were demonstrated and samples were successfully fabricated and characterized. This phase builds upon the results of previous phases to perfect the growth of AlN on Si and Sapphire, subsequent growth of SiC on AlN on Si and Sapphire, further evaluate the possibility of ALD and low energy deposition growth of SiC on 111 Si, select the preferred growth and material system, and fabricate, test, and evaluate SiC power devices in the 2KV/20K AMP range. (\$1.945) • Tunable MicroRadio for Military Systems are to develop RF technology and packaging capabilities for innovative broadband, tunable RF front end subsystem to provide a more fully integrated, miniaturized RF MicroRadio System. This system will ultimately be capable of multi-band and multi-mode operation in a single RF module for Department of Defense and commercial applications. FY09 will focus on packaging design and demonstration, functional RF circuit block design and demonstration, modeling tools and RF characterization capabilities. (\$4.667) • X-Band/W-Band Solid State Power Amp efforts will develop solid state power amplifiers as the facilitating replacement technology for traveling wave tubes (TWTs) in X-Band and W-Band RADAR systems. Solid state power amplifiers are a potential enabling technology to replace TWTs, and will facilitate better RADAR performance via more rugged, compact, efficient and reliable X-Band and W-Band RADAR transmitters. This FY 2009 effort will design, develop, integrate, bench test and demonstrate first generation prototype X-Band / W-Band RADAR solid state power amplifiers. (\$1.556) 					

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603720S Microelectronics Technology Development and Support - DMEA			PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<ul style="list-style-type: none"> • Unmanned Aerial Vehicle (UAV) Situational Awareness efforts are to design, develop, and test an integrated system that will fuse data from sensor systems such as radar, infrared (IR), and optical sensors, with GPS maps and global information, in near real-time. In addition to the fusion of the sensors, a three dimensional location of targets and obstacles will be created, and updated frequently, to result in a data base that is available to provide inputs to the flight control director, which is part of the flight control system onboard the UAV, as well as transmit situational awareness information to a ground-based Command Center. The system shall provide significant near-real time situational awareness/data fusion and will be applicable across a broad spectrum of Department of Defense operational users. (\$1.000) 					
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy N/A					
E. Performance Metrics N/A					

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)					PE 0603805S Dual Use Technology (DUAP) /Commercial Technology for Maintenance Activities (CTMA)					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	1.600	0.000	0.000						Continuing	Continuing
1: CTMA	1.600	0.000	0.000						Continuing	Continuing

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 (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	1.600	0.000	0.000	
Current BES/President's Budget	1.600	0.000	0.000	
Total Adjustments		0.000		
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases				
Total Reprogrammings		0.000		
SBIR/STTR Transfer				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603805S Dual Use Technology (DUAP) /Commercial Technology for Maintenance Activities (CTMA)					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: CTMA	1.600	0.000	0.000						Continuing	Continuing

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.

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

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

UNCLASSIFIED

R-1 Line Item #58

Page 2 of 2

UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 6 - RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605502S Small Business Innovative Research
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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.547	0.000	0.000						Continuing	Continuing
1: DLA	2.547	0.000	0.000						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

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

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	0.000	0.000	0.000	
Current BES/President's Budget	2.547	0.000	0.000	
Total Adjustments	2.547	0.000		
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases				
Total Reprogrammings				
SBIR/STTR Transfer	2.547	0.000		

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 6 - RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605502S Small Business Innovative Research					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: DLA	2.547	0.000	0.000						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
SBIR Accomplishments/Plans	2.547	0.000	0.000	
<p><i>FY 2008 Accomplishments:</i> In FY 2008, eleven Phase I awards and one Phase II award were made from DLA Topic 07-01 Advanced Technologies for Discrete Parts Manufacturing which seeks drastically lower unit costs of support through manufacturing revolutions that also have applicability to low and high volume production from commercial sales. This will result in an improvement in the affordability of these innovations to DLA and its customers and the development of cost effective methods to sustain existing defense systems while potentially impacting the next generation of defense systems.</p> <p><i>FY 2009 Plans:</i> DLA Topic 08-01 Advanced Technologies for Discrete Parts Manufacturing seeks drastically lower unit costs of support through manufacturing revolutions that also have applicability to low and high volume production from commercial sales. This will result in an improvement in the affordability of these innovations to DLA and its customers and the development of cost effective methods to sustain existing defense systems while potentially impacting the next generation of defense systems. Phase II awards</p>				

UNCLASSIFIED

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 6 - RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605502S Small Business Innovative Research		PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>resulting from some of the completed Phase I contracts from DLA Topic 07-01 Technologies for Discrete Parts Manufacturing are planned.</p> <p><i>FY 2010 Plans:</i> For FY 2010 we plan to execute using DoD SBIR solicitation 9.3 with the same topic that we used in FY 2007- FY 2008. Phase II awards will be generated upon completion of the 8.3 Phase I contracts from DLA topic 08-01 . New topics in the out-years are may be planned depending on availability of funds and responses to 9.3.</p>				
C. Other Program Funding Summary (\$ in Millions)				
N/A				
D. Acquisition Strategy				
DLA was part of DoD SBIR solicitation 8.3. Seventy proposals were evaluated in FY 2009 and nine were selected for Phase I award. Seven have been awarded as of 23 March 2009. Four Phase II proposals were selected from DoD SBIR solicitation 7.2 and 2 have been awarded as of 23 March 2009. DLA obtains contracting support from the Army Space and Missile Defense Agency on a fee-for-service basis paid from another RDT&E budget line.				
E. Performance Metrics				
SBIR awards from DOD SBIR solicitations 7.2 and 8.3 will be made to 19 different small businesses that perform R&D. There are no major or dominant performers.				

UNCLASSIFIED

R-1 Line Item #146

Page 3 of 3

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UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 6 - RDT&E Management Support					PE 0605798S Defense Technology Analysis (DTAO)					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	1.800	0.000	0.000						Continuing	Continuing
1: Defense Technology Analysis	1.800	0.000	0.000						Continuing	Continuing

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.

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	1.800			
Current BES/President's Budget	1.800			
Total Adjustments				
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases				
Total Reprogrammings				
SBIR/STTR Transfer				

UNCLASSIFIED

R-1 Line Item #149

Page 1 of 2

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 6 - RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605798S Defense Technology Analysis (DTAO)					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Defense Technology Analysis	1.800	0.000	0.000						Continuing	Continuing

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) Capturing NSN application data from the IETM and supplying that data to other authoritative sources.

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

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness
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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	56.057	55.130	20.514						Continuing	Continuing
1: Combat Rations (CR)	1.908	1.952	1.826						Continuing	Continuing
2: Customer Driven Uniform Manufacturing (CDUM) (Preciously called Apparel Reseach Network)	3.796	4.030	3.967						Continuing	Continuing
3: Procurement Readiness Optimization-Advanced System Technology (PRO-ACT)	2.527	2.608	2.466						Continuing	Continuing
4: Procurement Readiness Optimizatino-Forging Advanced System Technology (PRO-FAST)	1.175	1.213	1.151						Continuing	Continuing
5: Material Acquisition: Electronics (MAE)	10.131	10.622	10.118						Continuing	Continuing
6: BattNet	0.000	0.000	0.986						Continuing	Continuing
7: Congressional Adds	36.520	34.705	0.000						Continuing	Continuing

Note
BATNET is an FY 2010 new start program. Resourced within the FY 2010 budget.

A. Mission Description and Budget Item Justification
The Defense Logistics Agency (DLA) Manufacturing Technology (ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. ManTech:
 - Provides the crucial link between invention and product application to speed technology transitions.
 - Matures and validates emerging manufacturing technologies to support low-risk implementation in industry and DoD facilities, e.g. depots and shipyards.

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Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness
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- Addresses production issues early by providing timely solutions.
 - Reduces risk and positively impacts system affordability by providing solutions to manufacturing problems before they occur.
 DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Customer Driven Uniform Manufacturing (CDUM), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST), and Material Acquisition: Electronics (MAE). DLA is not involved with execution of this program. Other Congressional Adds (OCA) programs are Congressionally Directed efforts.

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	57.347	20.480	20.514	
Current BES/President's Budget	56.057	55.130	20.514	
Total Adjustments	-1.290	34.650	0.000	
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases	0.000	34.705		
Total Reprogrammings				
SBIR/STTR Transfer	-1.290			

Congressional Increase Details (\$ in Millions)

Project: 7, Congressional Additions

Congressional Additions-
 FY 2009 SBIR amount for Congressional Adds is included in the \$34.800M

<u>FY 2008</u>	<u>FY 2009</u>
36.520	34.705

Change Summary Explanation

FY 2008: Reduction of \$1.290 million for Small Business Innovative Research (SBIR), PE 0605502S.

BATNET is an FY 2010 new start program. Resourced within the FY 2010 budget.

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Combat Rations (CR)	1.908	1.952	1.826						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Combat Rations Accomplishments/Plans <i>FY 2008 Accomplishments:</i> <ul style="list-style-type: none"> - Partner support, identify, define, review and transition research activities. - Demonstration site. - Bakery Shelf Life Extension-Improved formulations, processes and packaging for increased shelf life and improved acceptance. - Wet Pack Fruit Quality Improvement-Process and formulation improvement for increased shelf life. - Addition of Antioxidants to Combat Rations-Improved nutritional quality, reduced production costs and processing time. - Improving Insulated Beverage Dispenser-Improved process and materials for increased production, decreased cost and reduced lead-time. <i>FY 2009 Plans:</i> <ul style="list-style-type: none"> - Transition to CORANET 3. - Improved thermo processing for Polymeric trays. - First Strike Ration (FSR) improved menu variety. - Infusion of Antioxidants to improve vitamin delivery. 	1.908	1.952	1.826	

UNCLASSIFIED

R-1 Line Item #238

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness		PROJECT NUMBER 1	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<ul style="list-style-type: none"> - Vitamin Encapsulation to expand vitamin variety. - Transition project funding and other program support. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Identify, define, review and implement research activities. - New Short Term Projects and Partner support 				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics <p>CORANET is a community-of- practice, which includes all military and federal organizations involved in the development, procurement and oversight of combat rations, multiple university research partners, and the combat ration manufacturers themselves. The major objective of this program is to perform short term projects that ensure surge production capability, maintain food safety, improve the quality and producibility of combat rations, and/or help make combat rations affordable. As a result the anticipated Percent of completed demonstration programs transitioning per year would be 50%.</p> <p>-Strategic Plan Long-term Performance Targets – The average technical readiness level of a CORANET project is 6.5. The likelihood of maintaining the 50% is good.</p> <p>- Annual Performance Targets – FY 2010: 50% of programs transitioning.</p>				

UNCLASSIFIED

R-1 Line Item #238

Page 4 of 16

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7				Project Name and Number - Combat Rations (CR), Project 1				
A. Project Cost Breakdown								
Combat Rations								
Project Cost Categories				FY 2008	FY 2009	FY 2010		
a. Manufacturing Process Support Costs				1.908	1.957	1.852		
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government	Contractor Method/Type	Award or Obligation	Performing Project	FY 2008	FY 2009	FY 2010	Budget to Complete	Total Program
				<u>Performing Activity</u>	<u>Or Funding Vehicle</u>	<u>Date</u>	<u>Activity BAC</u>	
Ameriquel	Cost, No Fee	12/2001	Partner					
Georgia, Univ of	Cost, No Fee	12/2001	Partner, STP *					
NCFST	Cost, No Fee	12/2001	Partner, STP					
Ohio State Univ	Cost, No Fee	12/2001	Partner, STP	Cont	Cont	Cont.	Cont.	
R&D Associates	Cost, No Fee	12/2001	Partner, STP					
Rutgers	Cost, No Fee	12/2001	Partner, STP, Demo					
SOPAKCO	Cost, No Fee	12/2001	Partner, STP					
Sterling	Cost, No Fee	11/2001	Partner,					
TEES (TAMU)	Cost, No Fee	12/2001	Partner, STP					
Tennessee, Univ of	Cost, No Fee	12/2001	Partner, STP					
Wornick	Cost, No Fee	12/2001	Partner					
Washi. State U	Cost, No Fee	12/2001	Partner, STP					
Michigan State U	Cost, No Fee	7/2006	Partner					
Virginia Tech	Cost, No Fee	7/2006	Partner					
Diversapak	Cost, No Fee	7/2006	Partner					
Truitt	Cost, No Fee	7/2006	Partner					
Oregon Freeze Dry	Cost, No Fee	7/2006	Partner					
				1.908	1.957	1.852		
Government Furnished Property: None.							*STP = "Short Term Project"	

**UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES**

Exhibit R-4a, Schedule Detail							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Combat Rations (CR), Project 1			
Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Quality Improvement Cheese Spread								
Ultra High Pressure Processing Eggs								
Acceptance Test for Retort Pouch Material								
Technology Transition Retort Racks	1-2Q							
Microbial Studies MRE Shelf Stable Pocket Sandwich	1-2Q							
Knurled Seal Heat Bar Technology	1-2Q							
Oxygen Absorbing Packaging Materials	1-2Q							
New Short Term Projects	1-4Q	1-4Q	1-4Q					
Demonstration Site	1-4Q	1-4Q	1-4Q					
Identify, define, review and implement research activities	1-4Q	1-4Q	1-4Q					

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 2	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2: Customer Driven Uniform Manufacturing (CDUM) (Preciously called Apparel Reseach Network)	3.796	4.030	3.967						Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department of Defense, through the Defense Logistics Agency, purchased \$2.04 billion of clothing and textile items in FY 2007. The lead-time is up to 15 months and the current inventory acquisition value is over \$1 billion. The current focus of DLA military clothing research is Customer Driven Uniform Manufacturing (CDUM). CDUM explores the application of advanced manufacturing and information technologies to the end-to-end management of non-recruit clothing and individual equipment (NRCIE). Each NRCIE supply chain has unique requirements not typically found in apparel industrial operations. CDUM will experiment with ways to help manufacturers meet the requirements specific to NRCIE (i.e. raw material tracking). It will also explore ways to account for NRCIE after it has left the wholesale system. The benefits will include improved asset visibility, accountability, and shelf-life management throughout an items' life cycle, reduced item cost, reduced operational costs, and improved readiness. Experimentation will identify promising technical solutions, prototype alternative solutions, and validate user requirements.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Customer Driven Uniform Manufacturing Accomplishments/Plans	3.796	4.030	3.967	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - RFID/AIT pilots for the NRC supply chain including Joint Service Lightweight Integrated Suite Technology (JSLIST), Individual Body Armor, and the Advanced Combat Uniform (ACU) at Lackland AFB and Travis VPVSC. - NRCIE Prototype Demonstrations for items at Army Ft. Carson. - Expanded 3D Body scanning demonstration for NRCIE. - Explore RFID alternatives for Individual Protective Equipment (IPE) including near field technologies, active RFID, sensory networks, motes. <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Expanded RFID/AIT Prototype Demonstrations. - Expanded NRCIE Prototype Demonstrations. - Extend from end-item manufacturers to fabric suppliers. 				

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness		PROJECT NUMBER 2	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Transition to CDUM II. - Roadmap New Initiatives. - Prototype Implementations for NRCIE. - Prototype Implementations for RFID/AIT. 				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics The CDUM program focus is on Non-recruit clothing and individual equipment (NRCIE). Based on the CDUM business case analysis the estimated reduction in Army-owned Organizational Clothing and Individual Equipment (OCIE) inventory due to the CDUM program will be \$65.7M by FY 2012. This represents a net present value for the program, at current funding levels, of \$31.5M with a Return on Investment of \$2.47M. The CDUM business case is updated on a regular basis to monitor program performance.				

UNCLASSIFIED

R-1 Line Item #238

Page 6 of 16

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: May 2009		
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7					Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2				
A. Project Cost Breakdown:									
Customer Driven Uniform Manufacturing									
Project Cost Categories:					FY 2008	FY 2009	FY 2010		
a. Manufacturing Process Support Costs					3.796	4.041	4.023		
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 2008	FY 2009	FY 2010	Budget to Complete	Total Program	
				3.796	4.041	4.023	_____	_____	
PDIT	Cost Plus Fixed Fee/Contractor		03/2002						
AdvanTech	Cost Plus Fixed Fee/Contractor		03/2002						
Human Solutions	Cost Plus Fixed Fee/Contractor		03/2002						
Government Furnished Property: None.									

**UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES**

Exhibit R-4, Schedule Profile																							Date: May 2009													
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology										Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2																					
Fiscal Year					2008				2009				2010				2011				2012				2013				2014				2015			
					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
RFID/AIT pilots for the NRCIE supply chain including JSLIST, Individual Body Armor and the ACU					x	x	x	x	x	x	x	x																								
NRCIE Prototype Demonstrations for items at Army Ft. Carson					x	x	x	x	x	x	x	x																								
Expanded 3D Body Scanning Demonstration for NRCIE					x	x	x	x	x	x	x	x																								
Explore RFID alternatives for Individual Protective Equipment (IPE)					x	x	x	x	x	x	x	x	x	x	x	x																				
Expanded RFID Prototype Demonstrations									x	x	x	x	x	x	x	x																				
Expanded NRCIE Prototype Demonstrations									x	x	x	x	x	x	x	x																				
Extend from end-item manufacturers to fabric suppliers													x	x	x	x	x	x	x																	
Transition to CDUM II Prototype Implementations																	x	x	x	x																
CDUM II New Initiatives																					x	x														

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FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-4a, Schedule Detail							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Customer Driven Uniform Manufacturing (CDUM), Project 2			
Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
RFID/AIT pilots for the NRCIE supply chain including JSLIST, Individual Body Armor and the ACU	1-4Q	1-4Q						
NRCIE Prototype Demonstrations for items at Army Ft. Carson	1-4Q	1-4Q						
Expanded 3D Body Scanning Demonstration for NRCIE	1-4Q	1-4Q						
Explore RFID alternatives for Individual Protective Equipment (IPE)	1-4Q	1-4Q	1-4Q					
Expanded RFID Prototype Demonstrations		1-4Q	1-4Q					
Expanded NRCIE Prototype Demonstrations		1-4Q	1-4Q					
Extend from end-item manufacturers to fabric suppliers		3-4Q	1-4Q					
Transition to CDUM II Prototype Implementations		3-4Q	1-4Q					
CDUM II New Initiatives			1-4Q					

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 3	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3: Procurement Readiness Optimization-Advanced System Technology (PRO-ACT)	2.527	2.608	2.466						Continuing	Continuing

A. Mission Description and Budget Item Justification

Weapon system spare parts which use castings are responsible for a disproportionate share of backorders. Cast parts are 2% of National Stock Numbered parts but represent 4% of all backorders, and when only the oldest backorders are considered, up to 19% of them are castings. This program develops innovative technology and processes to improve the procurement, manufacture, and design of weapon system spare parts which use castings. The Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT) program takes a systems view and considers not only the Defense Logistics Agency (DLA) perspective but also the Military Service Engineering Support Activities (ESA) which DLA works with to solve technical issues, as well as the industrial supply base. The program has three components: Rapid Acquisition, Quality, and Cost Effectiveness

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Procurement Readiness Optimization-Advanced Casting Technology Accomplishments/Plans	2.527	2.608	2.466	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - 16,000 tools in Defense Tooling Database Pushing \$1 million per month of solicitations to foundries with tooling Completed re-engineering of - 120 castings that had producibility issues Completed digital radiography standard for aluminum castings. <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Develop working document for new radiography standard for investment steel castings - Push \$1.2 million per month of solicitations to foundries with tooling Develop technology to increase productivity of short run die castings. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Develop technology to predict service life performance of steel castings. - Develop statistical properties for E357 sand cast aluminum for aerospace castings 				

UNCLASSIFIED

R-1 Line Item #238

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness	PROJECT NUMBER 3
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy Competitive Broad Agency Announcement (BAA) evaluations complete.		
E. Performance Metrics This program has a business case which justifies the investment in terms of economic and readiness benefits.		

UNCLASSIFIED

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: May 2009				
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 2008	FY 2009	FY 2010		
a. Manufacturing Process Support Costs				2.527	2.615	2.501		
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 2008	FY 2009	FY 2010	Budget to Complete	Total Program
				2.527	2.615	2.501		
AdvanTech, Inc	Cost Share Contract	06/2000	12.585					
AdvanTech, Inc	Cost share	10/2005	14.442					
Government Furnished Property: None.								

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 4	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
4: Procurement Readiness Optimizatio-Forging Advanced System Technology (PRO-FAST)	1.175	1.213	1.151						Continuing	Continuing

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Procurement Readiness Optimization-Forging Advanced System Technology Accomplishments/Plans	1.175	1.213	1.151	
<p><i>FY 2008 Accomplishments:</i></p> <ul style="list-style-type: none"> - 50,000 tools in National Forging Tooling Database Completed lean manufacturing demonstration projects at 8 small forges and one prime (Sikorsky) - Developed spray metal tooling machine to reduce die production lead time from 12 weeks to 1 week - Kick off new forging program jointly with Army <p><i>FY 2009 Plans:</i></p> <ul style="list-style-type: none"> - Investigation, development, and deployment of new and innovative tools, technologies and techniques to address forging design and acquisition for weapon systems. Projects include forming simulation; system performance prediction, new forging materials, and rapid tooling. - Develop dynamic partnering (sourcing tool) for forgings; lean six sigma process improvements at forges; develop multi-material, multi-method evaluation tool. 				

UNCLASSIFIED

R-1 Line Item #238

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness			PROJECT NUMBER 4	
B. Accomplishments/Planned Program (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Investigation, development, and deployment of new and innovative tools, technologies and techniques to address forging design and acquisition for weapon systems. Projects include forming simulation; system performance prediction, new forging materials, and rapid tooling. - Develop dynamic partnering (sourcing tool) for forgings; lean six sigma process improvements at forges; develop multi-material, multi-method evaluation tool. 						
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
A Broad Agency Announcement (BAA) evaluations complete.						
E. Performance Metrics						
This program has a business case which justifies the investment in terms of economic and readiness benefits.						

UNCLASSIFIED

R-1 Line Item #238

Page 10 of 16

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (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 2008	FY 2009	FY 2010	
a. Manufacturing Process Support Costs					1.175	1.216	1.167	
 B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing <u>Activity</u>	Contractor Method/Type Or Funding <u>Vehicle</u>	Award or Obligation Date	Performing Project Activity <u>BAC</u>	FY 2008	FY 2009	FY 2010	Budget to Complete	Total Program
AdvanTech, Inc	Contract	10/2005	13.006	1.175	1.216	1.167		
AdvanTech, Inc	Contract	07/2008						
Government Furnished Property: None.								

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 5	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
5: Material Acquisition: Electronics (MAE)	10.131	10.622	10.118						Continuing	Continuing

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 \$2.9 billion is spent every five years redesigning circuit card assemblies. Many of these circuit card redesigns are performed to mitigate IC obsolescence. Commercial ICs have short Product Life Cycles (often only 18 months). IC Manufacturers subsequently move on to later generations of ICs, leaving little to no sources for their previous IC products.

DoD maintains weapons systems much longer than IC lifecycles, resulting in an obsolescence problem. In order to avoid costs and potential readiness issues associated with buying / carrying excess inventories acquired before commercial availability ceases, or redesigning the next higher assembly to mitigate the obsolete IC, DLA (as the manager of 88% of the IC Federal Stock Class) must have a capability to manufacture needed IC devices. This project develops that capability and expands it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation Program. In addition, there has been increased DoD concern over trusted sourcing issues, as most IC design and production has migrated to overseas suppliers. The Agency is taking measures to address IC Trust issues in accordance with OSD direction.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Material Acquisition: Electronics Accomplishments/Plans	10.131	10.622	10.118	
<p>The Material Acquisition Electronics Program continues to perform development and expansion of IC design & fabrication technology to emulate succeeding generations of discontinued or otherwise non-available commercial technology. Effort includes transitioning technologies to Low Rate Initial Production capability. MAE is expanding our design system capability, enhancing design models, and advancing fabrication technologies to accommodate both in-house and third-party (principally Original Equipment Manufacturer) IC device requirements. MAE has developed an IC characterization tool/capability to mitigate missing technical data frequently encountered while emulating obsolete devices. In FY 2008 MAE completed development of Deep Trench Isolation processing capability to support high fan-out and transceiver applications. The Program also developed several other devices applicable to a wide range of DoD weapons systems. To support critical DoD trusted IC requirements, MAE achieved final</p>				

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness		PROJECT NUMBER 5	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
Trusted Foundry Certification from the National Security Agency. The previous certification was an interim approval. To date in FY 2009, MAE has shipped new IC types supporting multiple Services. Additionally, the Program has made yield and fabrication process improvements expanding our IC device capabilities. For the balance of FY 2009 & FY 2010, MAE will continue focus advancing our 0.5 micron design, test, and fabrication technologies, expanding our capabilities for high circuit density and radiation hardened ICs. The IC characterization tool will continue development to accommodate more complex DoD IC requirements, providing critical missing design specifications. MAE will continue an IC requirements assessment and evaluate the feasibility of an analog Emulation capability. The Program will continue proving new technologic capabilities via MAE produced military quality and trusted ICs employed on multiple weapons systems. These efforts will include progressively more complex Application Specific Integrated Circuits (ASICs). Future MAE devices will have an increased Radiation Tolerance.				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy N/A				
E. Performance Metrics Transition of technologies implementation (base arrays) to low-rate initial production or full-scale production.				

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FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7					Project Name and Number - Material Acquisition: Electronics (MAE), Project 5			
A. Project Cost Breakdown Material Acquisition: Electronics (MAE)								
Project Cost Categories					FY 2008	FY 2009	FY 2010	
a. Manufacturing Process Support Costs					10.131	10.651	10.260	
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing <u>Activity</u>	Contractor Method/Type Or Funding <u>Vehicle</u>	Award or Obligation Date	Performing Project Activity <u>BAC</u>	FY 2008	FY 2009	FY 2010	Budget to Complete	Total Program
Sarnoff Corp.		TBD		10.131	10.651	10.260		
SPAWARSYSCEN		TBD						
Government Furnished Property: None.								

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-4, Schedule Profile																				Date: May 2009																
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology								Project Name and Number - Material Acquisition: Electronics (MAE), Project 5																							
Fiscal Year					2008				2009				2010				2011				2012				2013				2014				2015			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Perform Gap Analysis (GA) of Commercial Technology.					x	x	x	x	x	x	x	x	x	x	x	x																				
Perform Base array designs required to fill GA.					x	x	x	x	x	x	x	x	x	x	x	x																				
Update design Library					x	x	x	x	x	x	x	x	x	x	x	x																				
Develop prototypes for test and insertion.					x	x	x	x	x	x	x	x	x	x	x	x																				
Develop Low Rate Initial Production (LRIP) capability.					x	x	x	x	x	x	x	x	x	x	x	x																				
Transition new microcircuit designs to LRIP.					x	x	x	x	x	x	x	x	x	x	x	x																				
Perform process review					x	x	x	x	x	x	x	x	x	x	x	x																				
Plan required process improvements.					x	x	x	x	x	x	x	x	x	x	x	x																				
Implement process improvements.					x	x	x	x	x	x	x	x	x	x	x	x																				
Monitor and adjust process improvements.					x	x	x	x	x	x	x	x	x	x	x	x																				

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FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-4a, Schedule Detail							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology				Project Name and Number - Material Acquisition: Electronics (MAE), Project 5			
Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Perform Gap Analysis (GA)of Commercial Technology.	1-4Q	1-4Q	1-4Q					
Perform base array designs required to fill GA.	1-4Q	1-4Q	1-4Q					
Update design library.	1-4Q	1-4Q	1-4Q					
Develop prototypes for test and insertion.	1-4Q	1-4Q	1-4Q					
Develop Low Rate Initial Production (LRIP) capability	1-4Q	1-4Q	1-4Q					
Transition new microcircuit designs to LRIP	1-4Q	1-4Q	1-4Q					
Perform process review	1-4Q	1-4Q	1-4Q					
Plan required process improvements.	1-4Q	1-4Q	1-4Q					
Implement process improvements.	1-4Q	1-4Q	1-4Q					
Monitor and adjust process improvements	1-4Q	1-4Q	1-4Q					

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 6	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
6: BattNet	0.000	0.000	0.986						Continuing	Continuing
A. Mission Description and Budget Item Justification										
Mission Description and Budget Item Justification BattNet is focused on improving the supply and reducing the cost of batteries used in fielded weapon systems, such as communication radios and armored vehicles. Battnet is a community of practice of battery supply chain members, including materials and components suppliers, assemblers, engineering support activities, battery maintenance activities, researchers, and users.										
B. Accomplishments/Planned Program (\$ in Millions)							FY 2008	FY 2009	FY 2010	FY 2011
BattNet Accomplishments/Plans							0.000	0.000	0.986	
<i>FY 2008 Accomplishments:</i> Preliminary Planning Activities. DLA has held meetings with Military Service Engineering Support Activities (ESAs) to determine requirements for the BattNet program. DLA also issued a Broad Area Announcement for the BattNet.										
<i>FY 2009 Plans:</i> Preliminary Planning Activities. DLA has held meetings with Military Service Engineering Support Activities (ESAs) to determine requirements for the BattNet program. DLA also issued a Broad Area Announcement for the BattNet.										
<i>FY 2010 Plans:</i> DLA contemplates awarding up to 10 Partner Contracts as the result of the BAA. BATTNET research is done through the award of Short Term Projects (STPs) that develop and adapt modern processes to be implemented within the battery supply chain to assure the prompt and sustained availability, quality, and affordability of batteries. STPs have an expected duration of 18-24 months and an average funding level of \$100K-\$250K per year. All STP proposals are required to include a business case, developed in advance, with specific metrics for success as well as a predicted return on investment (ROI).										
C. Other Program Funding Summary (\$ in Millions)										
N/A										

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness	PROJECT NUMBER 6
<p>D. Acquisition Strategy A competitive Broad Area Announcement (BAA) will allow for maximum competition. To continue the competition throughout the life of the program, up to 10 contracts will be awarded to research partners. These research partners will continue to compete among themselves for particular research tasks. Additional partners will be sought as the need arises.</p> <p>E. Performance Metrics Each Short Term Project (STP) will have performance metrics appropriate to its scope. Also all STPs will include a business case to demonstrate return on investment, or a readiness case to calculate warfighter impact vs costs.</p>		

UNCLASSIFIED

R-1 Line Item #238

Page 14 of 16

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: May 2009	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7				Project Name and Number - BattNet Project 6				
A. Project Cost Breakdown								
BattNet								
Project Cost Categories				FY 2008	FY 2009	FY 2010		
a. Manufacturing Process Support Costs				0.000	0.000	0.986		
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing <u>Activity</u>	Contractor Method/Type Or Funding <u>Vehicle</u>	Award or Obligation Date _____	Performing Project Activity <u>BAC</u>	FY 2008 _____	FY 2009 _____	FY 2010 _____	Budget to Complete _____	Total Program _____
TBD				0.000	0.000	0.986		
Government Furnished Property: None.								

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness					PROJECT NUMBER 7	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
7: Congressional Adds	36.520	34.705	0.000						Continuing	Continuing

A. Mission Description and Budget Item Justification

This R2 is for all the Congressionally added programs to the DLA Manufacturing Technology Program.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2008	FY 2009	FY 2010	FY 2011
Other Congressional Addition Accomplishments/Plans	36.520	34.705	0.000	
<ul style="list-style-type: none"> - Castings for Improved Defense Readiness (CID) – - Corrosion Resistant Ultrahigh-Strength Steel for Landing Gear (ULG) - Execute Corrosion Resistant Ultrahigh-Strength Steel for Landing Gear program. Prototype material development. - Military High Pressure Packaging Project (MHP) - The Defense Logistics Agency (DLA) intends to utilize funding from the FY 2008 Department of Defense Appropriations Act to have AmeriQual conduct research and development to improve the quality, texture, taste, food safety and shelf life of various high-acid products, including certain fruits and vegetables, so that they may become more readily available through the Combat Rations Program, as well as other channels in the military. The objective of this project is to determine the feasibility of using HHP technology to produce high quality products. It is expected that, as a result of this project, one or more high quality HHP processed products will be developed and that all costs associated with this product or products will be clearly identified. A major component of the effort will be obtaining Food and Drug Administration (FDA) or U.S. Department of Agriculture (USDA) approval for the newly formulated or processed products. - Northwest Manufacturing Initiative (NMI) - Funds are provided for the FY08 Northwest Manufacturing Initiative in support of the Defense Industrial Base Development. -Technology Roadmapping and Strategic Investment Planning (TIP) - Develop Customer driven Technology Roadmaps and Strategic Investment Plans for Critical DoD Programs. Provide and Apply 				

UNCLASSIFIED

R-1 Line Item #238

UNCLASSIFIED

Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification			DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0708011S Industrial Preparedness		PROJECT NUMBER 7	
B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Tools and Methods for Technology Management. Funds will be applied to a new contract via a Missile Defense Agency Broad Area Announcement to fund the DLA plus-up in the Industrial Preparedness Program Element entitled "Technology Road mapping and Strategic Investment Planning"</p> <p>- Advanced Microcircuit Emulation (AME) - The full amount of this congressionally directed funding will be utilized for improving the AME emulation and fabrication process capability at the Sarnoff Corporation, Princeton NJ.</p> <p>- Industrial Base Innovation Fund (IBI) -</p> <p>- Collapsible Urethane Fuel Storage Tanks (UFS) - The objective of this effort is to improve polyurethane storage tank performance by developing improved tank construction materials, fabrication techniques and quality control procedures.</p>				
C. Other Program Funding Summary (\$ in Millions) N/A				
D. Acquisition Strategy Funds are provided to executing agencies and placed on existing contracts with the intended recipient of the Congressional Addition.				
E. Performance Metrics NA				

UNCLASSIFIED

R-1 Line Item #238

Page 16 of 16

UNCLASSIFIED
FISCAL YEAR (FY) 2010 BUDGET ESTIMATES

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: May 2009				
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7				Project Name and Number - Other Congressionally Added Programs (OCAs), Project 7				
A. Project Cost Breakdown								
Other Congressionally Added Programs (OCAs)								
Project Cost Categories				FY 2008	FY 2009	FY 2010		
a. Manufacturing Process Support Costs				36.520	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 2008	FY 2009	FY 2010	Budget to Complete	Total Program
TBD				36.520	0.000	0.000		
Government Furnished Property: None.								

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UNCLASSIFIED

Exhibit R-2, PB 2010 Defense Logistics Agency RDT&E Budget Item Justification **DATE:** May 2009

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development					PE 0708012S Logistics Support Activities					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.828	2.838	2.798						Continuing	Continuing
1: Logistics Support Activities	2.828	2.838	2.798						Continuing	Continuing

A. Mission Description and Budget Item Justification

This is a classified program.

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	2.828	2.846	2.798	
Current BES/President's Budget	2.828	2.838	2.798	
Total Adjustments		-0.008		
Congressional Program Reductions				
Congressional Rescissions				
Total Congressional Increases				
Total Reprogrammings				
SBIR/STTR Transfer				
Economic Assumption		-0.008		

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Exhibit R-2a, PB 2010 Defense Logistics Agency RDT&E Project Justification									DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 7 - Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0708012S Logistics Support Activities					PROJECT NUMBER 1	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: Logistics Support Activities	2.828	2.838	2.798						Continuing	Continuing

A. Mission Description and Budget Item Justification

N/A

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

UNCLASSIFIED

R-1 Line Item #239

Page 2 of 2