Exhibit R-2, RDT&E Budget Item Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			R-1 Item Nomenclature: Manufacturing Technology Program Element: 0708011S				
Cost ($ in millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	39.424	34.667	18.748	19.358	19.763	20.265	20.626
Project 1: Combat Rations (CR)	1.970	1.970	2.007	2.010	2.020	2.030	2.040
Project 2: Apparel Research Network (ARN)	3.819	3.689	3.727	4.000	4.140	4.366	4.427
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	2.340	1.188	1.308	1.434	1.469	1.498	1.528
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.916	0.999	1.116	1.238	1.267	1.292	1.318
Project 5: Customer Value Industrial Plant Equipment (CV:IPE)	0.776	0.000	0.000	0.000	0.000	0.000	0.000
Project 6: Other Congressionally Added Programs (OCAs)	16.124	12.518	0.000	0.000	0.000	0.000	0.000
Project 7: Defense Microelectronics (DMEA)	12.479	4.190	0.000	0.000	0.000	0.000	0.000
Project 8: Material Acquisition Electronics (MAE) *formerly under Log R&D BA3*	0.000	10.113	10.590	10.676	10.867	11.079	11.313

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7	R-1 Item Nomenclature: Manufacturing Technology Program Element: 0708011S

A. Mission Description and Budget Item Justification: The DLA Manufacturing Technology (ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. ManTech:

- Provides the crucial link between invention and product application to speed technology transitions
- Matures and validates emerging manufacturing technologies to support low-risk implementation in industry and DoD facilities, e.g. depots and shipyards
- Addresses production issues early by providing timely solutions
- Reduces risk and positively impacts system affordability by providing solutions to manufacturing problems before they occur
- DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Apparel Research Network (ARN), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), and Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST) - in addition to congressionally added programs. Copper Based Casting Technology, Defense Supply Chain Technology, Laser Additive Manufacturing, Twelve Screw Extruder, Other Congressionally Added programs for Next Generation Manufacturing Technology and Small Business Technical Procurements.

B. Program Change Summary:

	FY 05	FY 06	FY 07
Previous PB 06	39.455	18.219	18.484
Current PB 07	39.424	34.667	18.748
Total Adjustment	- 0.031	16.448	0.264
Congressional Increase		16.950	
Program Adjustments	-0.031	- 0.502	0.264

Change Summary Explanation:
FY 05: Congressional Reduction – Transfer to the Department of Energy.
FY 06: Program Adjustments: Section 8301 - 1% Congressional Withhold (-$0.152) and Section 8125 - Economic Assumptions (-$0.350).
Congressional Increase: Congressional additions
FY 07: Program Adjustments: Non-pay purchase Inflation.

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7	R-1 Item Nomenclature: Manufacturing Technology Program Element: 0708011S

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Performance Metrics:
1. Inventory Reduction
2. Cost Reduction.
3. Lead time reduction.
4. Backorder reduction.
5. First time fill rate improvement.
6. Quality and customer satisfaction improvement
7. Cost avoidance.
8. Ability to surge.
9. Number of new sources
10. Business case analysis (BCAs) developed for Tasks to support subsequent transition

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Combat Rations, Project 1 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 1: Combat Rations (CR)	1.970	1.970	2.007	2.010	2.020	2.030	2.040
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification:

- The CORANET program funds both industry and academic partners that identify problems and develop new technology for implementation in their plants, after demonstrations conducted at a University demonstration site, unifying the civilian and military manufacturing processes to expand the base.
- The limited industrial base is required to meet the maximum production goals cited in their contracts. Current CORANET funded Short Term Projects (STP) helping industry reach that goal are: STP 2017 aids in qualifying now packaging material for the ration program, STP2002 single cavity leak detector help expedite inspections. STP 2007 and 2015 help in introducing new products and processing methods. The CORANET program ensures that the industrial base has the knowledge to insure that DLA will have the most modern industry to support warfighters with needed combat rations.
- The Joint Steering Group (JSG) is a Combat Ration Network (CORANET) funded body of users, designers, and buyers who assure that selected STP contribute to DLA mission.
- New Partners (University and Industrial) will enhance the program in FY 2006

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	1.970	1.970	2.007	2.010
RDT&E Articles Quantity – N/A				

The use of new polymers for improved Retort Rack Materials and Design allows for maximum use of processing equipment; The development of the Ultra-Sonic Sealing method for the Meals Ready to Eat (MRE) program aids in increased production speeds; The development of non-destructive inspection methods streamline inspection criteria and improve availability for Operational Rations. The development of new processing methods like ultra high pressure help new product introduction and faster commercial items become introduced into the ration program, research in new raw materials aid in extending the shelf life of combat rations.

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Combat Rations, Project 1 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 1: Combat Rations (CR)	1.970	1.970	2.007	2.010	2.020	2.030	2.040
RDT&E Articles Quantity - N/A							

FY 2005 Accomplishments: ($1.970)
- STP's $0.370
- Partners $0.200
- Demo site $0.500
- JSG $0.900

FY 2006 Plans: ($1.970)
- STP's $0.370
- Partners $0.200
- Demo site $0.500
- JSG $0.900

FY 2007 Plans: ($2.007)
- STP's $1.207
- Partners $0.300
- Demo site $0.400
- JSG $0.100

C. Other Program Funding Summary: N/A
D. Acquisition Strategy: N/A
E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown									Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7			Project Name and Number Combat Rations, Project 1						
A. Project Cost Breakdown **Combat Rations**									
Project Cost Categories				FY 2005	FY 2006	FY 2007	FY 2008		
Partner Support; JSG, Industry, Academic Demo site, STP's				1.970	1.970	2.007	2.010		
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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
Ameriqual	Cost, No Fee	12/01/2001	Industry Partner						
Georgia, Univ of	Cost, No Fee	12/01/2001	Partner, STP*						
NCFST	Cost, No Fee	12/01/2001	Partner, STP						
Ohio State Univ	Cost, No Fee	12/01/2001	Partner, STP						
R&D Associates	Cost, No Fee	12/01/2001	Industry Partner, STP						
Rutgers	Cost, No Fee	12/01/2001	Partner, STP						
SOPAKCO	Cost, No Fee	12/01/2001	Industry Partner, STP						
Sterling	Cost, No Fee	11/25/2001	Industry Partner						
TEES (TAMU)	Cost, No Fee	12/01/2001	Partner, STP						
Tennessee, Univ of	Cost, No Fee	12/01/2001	Partner, STP						
Wornick	Cost, No Fee	12/01/2001	Industry Partner,						
Washington State	Cost, No Fee	12/01/2001	Partner, STP						
Rutgers Demo Site	Cost, No Fee	12/01/2001	Partner, STP						
				1.970	1.970	2.007	2.010		
*STP = "Short Term Project"									

Exhibit R-4, Schedule Profile																												Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number Combat Rations, Project 1											
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Initial Review, Disposition of Candidate Projects, initial award of delivery orders	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Follow on assessment of candidate Projects, acceptance of qualified subjects by JSG.	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Continuing award of delivery orders, start performance	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Conduct workshops to review projects, evaluate new candidate proposals, initiate qualified projects	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Conduct IPRs to manage and control progress, assure that results are achieved and implemented when applicable	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**

Exhibit R-4a, Schedule Detail						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number Combat Rations, Project 1			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
BAA Preparation and Issue	4Q New Partners	1-4Q		1-4Q New Program			
BAA Closing and Evaluations	4Q New Partners				1-4Q New program		
Contracts Awarded		2-4Q					
Kick Off Meeting, Joint Planning Sessions		1-4Q	1-4Q	1-4Q	1-4Q		
-- Selection and Award of Demo Site					1-4Q		
-- Arrangements for Facilitation		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Initial Review and Disposition of Candidate Projects, initial award of delivery orders		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Follow on assessment of candidate Projects, acceptance of qualified subjects by JSG.		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Continuing award of delivery orders		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct workshops to review projects, evaluate new candidate proposals, initiate qualified projects		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct IPRs to manage and control progress, assure that results are achieved and implemented when applicable		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Apparel Research Network, Project 2 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 2: Apparel Research Network (ARN)	3.819	3.689	3.727	4.000	4.140	4.366	4.427
RDT&E Articles Quantity - N/A							

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

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	3.819	3.689	3.727	4.000
RDT&E Articles Quantity – N/A				

FY 2005 Accomplishments: ($3.819)

- Baseline and streamline Army Fort (Ft.) Carson & Ft. Bliss Central Issue Facility (CIF) Operation ($0.759)
- Army Asset Visibility for Organizational Clothing and Individual Equipment (OCIE) at Ft. Carson and Ft. Bliss ($0.964)
- 3D Body Scanner capturing accurate point-of-sale data and inventory replenishment at Lackland Air Force Base ($0.791)
- ARN Supply chain Automated Processing for defense apparel manufacturers ($1.305)

FY 2006 Plans: ($3.689)

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

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Apparel Research Network, Project 2 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 2: Apparel Research Network (ARN)	3.819	3.689	3.727	4.000	4.140	4.366	4.427
RDT&E Articles Quantity - N/A							

FY 2007 Plans: ($3.727)

- Expansion, enhancement and refinement of RFID/AIT initiatives ($1.000)
- Expansion, enhancement and refinement of non-recruit clothing (NRC) initiatives ($2.727)

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: AdvanTech, Inc., Annapolis, MD. Award Date 3/2003, CPFF, 3 Year base, 2 two year options. Contractor performs research and development in the area of supply chain management and integration.
P.D.I.T., Inc., Long Beach, CA, Award Date 3/2002, CPFF, 3 year base, 2 two year options. Contractor performs research and development in the area of data base development for real time asset visibility and automated processing of electronic transactions.
Human Solutions NA, Inc., Dearborn, MI, Award Date 3/2002, CPFF, 3 year base, 2 two year options. Contractor performs research and development in the area of 3D body scanning integration into supply chain management systems.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Apparel Research Network, Project 2

A. Project Cost Breakdown

Apparel Research Network

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
Manufacturing Process Support Costs	3.819	3.689	3.727	4.000

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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
				3.819	3.689	3.727	4.000		
PDIT	Cost Plus Fixed Fee/Contractor		03/2002						
AdvanTech	Cost Plus Fixed Fee/Contractor		03/2002						
Human Solutions	Cost Plus Fixed Fee/Contractor		03/2002						

Government Furnished Property: None

Exhibit R-4, Schedule Profile																												Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology												Project Name and Number Apparel Research Network, Project 2															
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	**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**
Baseline and streamline Army Ft. Carson & Ft. Bliss CIF Operation	x	x	x	x																								
Army Asset Visibility for OCIE at Ft. Carson and Ft. Bliss	x	x	x	x	x	x																						
3D Body Scanner capturing accurate POS data and inventory replenishment at Lackland AFB	x	x	x	x	x	x	x	x																				
ARN Supply chain Automated Processing for defense apparel manufacturers	x	x	x	x	x	x	x	x																				
Non-recruit clothing (NRC) business process baseline analyses.					x	x	x	x	x	x	x	x																
RFID/AIT pilots for the NRC supply chain including JSLIST, Individual Body Armor and the ACU					x	x	x	x	x	x	x	x																
Life cycle management for NRC					x	x	x	x	x	x	x	x																
Extend from end-item manufacturers to fabric suppliers					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x								
Expansion, enhancement and refinement of RFID/AIT initiatives									x	x	x	x	x	x	x	x	x	x	x	x								
Expansion, enhancement and refinement of non-recruit clothing (NRC) initiatives									x	x	x	x	x	x	x	x	x	x	x	x								
RFID/AIT prototype demonstration													x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
NRC prototype demonstrations													x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Exhibit R-4a, Schedule Detail						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number Apparel Research Network, Project 2			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Baseline and streamline Army Ft. Carson & Ft. Bliss CIF Operation	1-4Q						
Army Asset Visibility for OCIE at Ft. Carson and Ft. Bliss	1-4Q	1-2Q					
3D Body Scanner capturing accurate POS data and inventory replenishment at Lackland Air Force Base	1-4Q	1-4Q					
ARN Supply chain Automated Processing for defense apparel manufacturers	1-4Q	1-4Q					
Non-recruit clothing (NRC) business process baseline analyses.		1-4Q	1-4Q				
RFID/AIT pilots for the NRC supply chain including JSLIST, Individual Body Armor and the ACU		1-4Q	1-4Q				
Life cycle management for NRC		1-4Q	1-4Q				
Extend from end-item manufacturers to fabric suppliers.		1-4Q	1-4Q	1-4Q	1-4Q		
Expansion, enhancement and refinement of RFID/AIT initiatives			1-4Q	1-4Q	1-4Q		
Expansion, enhancement and refinement of non-recruit clothing (NRC) initiatives			1-4Q	1-4Q	1-4Q		
RFID/AIT prototype demonstrations				1-4Q	1-4Q	1-4Q	1-4Q
NRC prototype demonstrations				1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Procurement Readiness Optimization-Advanced Casting Technology, Project 3, Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	2.340	1.188	1.308	1.434	1.469	1.498	1.528
RDT&E Articles Quantity - N/A							

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

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	2.340	1.188	1.308	1.434
RDT&E Articles Quantity – N/A				

FY 2005 Accomplishments: (2.340)

- ($1.200) CAST-IT solutions for resolving 453 backordered parts from land, sea and maritime supply chains. These solutions ranged from developing new sources, to developing new technical data packages, solid models and simulation. Relationships with ESA partners were built. A strategy of identifying casting content up front and developing solutions before a backorder condition is observed, was developed.
- ($0.400) – Enterprise Integration – a foundry tooling database is further developed with 4,000 more tools, which will enhance the ability to supply very small quantities of castings.
- ($0.740) – foundry R&D – fabrication of new rapid tooling materials for die casting resulted in tooling lead time cut from 26 weeks to 4 weeks and a 5-fold improvement in tool durability; integrated dimensional engineering for short run castings pattern advisor 2.0 was released, and industry testing indicated a 90% conformance of first article castings verse 50% historically, which will yield a reduction in new pattern lead time from 12 weeks to 5 weeks; short run tooling advisor software tool verified "should cost" module for cost estimating of cast parts and tooling; lead time and cost reduction for safety critical aluminum castings worked with Boeing in the development of a digital radiographic standard for castings; this standard has been completed and has been designated American Society of Testing and Materials (ASTM) E 2422; Integrated Design of Steel Castings for Service Performance – completed multi-axial fatigue analyses from simulations on test specimens and cast components using the porosity software developed under this program, and completed comparison

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Procurement Readiness Optimization-Advanced Casting Technology, Project 3, Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	2.340	1.188	1.308	1.434	1.469	1.498	1.528
RDT&E Articles Quantity - N/A							

testing of specimens cast centrifugally and statically.

FY 2006 Plans: (1.188)

- ($1.188) – DLA plans to internally reprogram an additional $1.2 million into this program. A competitive Broad Area Announcement (BAA) will be awarded for a new program which will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing and buying weapon system spares through advanced casting technology. The program will develop the following technologies: software tools for casting technical data package review and modernization; software tools for evaluating foundry products and processes for best value source selection; foundry processes which improve the speed and predictability of casting manufacture; innovative methods and techniques to capture, retain, and recall casting process models, so that older weapon systems spare parts, which have not been manufactured in many years are back in production in an economical way that minimizes risk; best practices for qualification of new casting materials and processes when legacy materials and processes are no longer commercially viable; interactive web based software tools for design engineers to walk through potential casting applications and make decisions (process and materials selection) whether the applications are appropriate for castings; improved acceptance standards which are based on mathematical models and objective standards to replace human interpretations which can cause delay and disputes; casting applications development for small lots and short lead times; and demonstrations of casting applications which communicate the cost savings potential from this technology.

FY 2007 Plans: ($1.308) – depending on the proposals received in response to the BAA, individual projects will be developed and initiated that cover the BAA topics described above.

C. Other Program Funding Summary: N/A
D. Acquisition Strategy: Competitive BAA evaluations complete; award(s) 1 Oct 05.
E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Procurement Readiness Optimization-Advanced Casting Technology, Project 3

A. Project Cost Breakdown

Procurement Readiness Optimization-Advanced Casting Technology

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
Manufacturing Process development and demonstration	2.340	1.188	1.308	1.434

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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
				2.340	1.188	1.308	1.434		
ATI	Cost Share Contract	6/23/00	12.585						
Competitive Award	Cost share	10/1/05	14.442						

*STP = "Short Term Project"

Exhibit R-4, Schedule Profile																												Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number Procurement Readiness Optimization- Advanced Casting Technology, Project 3											
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	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
CAST-IT solutions	x	x	x	x																								
Enterprise Integration	x	x	x	x																								
Foundry R&D	x	x	x	x																								
New Program - will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing and buying weapon systems spares through advanced casting technology.					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Exhibit R-4a, Schedule Detail							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number Procurement Readiness Optimization- Advanced Casting Technology, Project 3			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
CAST-IT solutions							
Enterprise Integration							
Foundry R&D							
New Program - will demonstrate readiness improvements by developing and applying innovative methods of designing, manufacturing and buying weapon systems spares through advanced casting technology.							

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Procurement Readiness Optimization-Forging Advanced System Technology, Project 4, Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.916	0.999	1.116	1.238	1.267	1.292	1.318
RDT&E Articles Quantity - N/A							

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

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	1.916	0.999	1.116	1.238
RDT&E Articles Quantity – N/A				

FY 2005 Accomplishments: ($1.916)

- ($0.558) - Business Enterprise Integration Projects: rolled out National Forge Tooling Database (NFTD) with 100,000 tools. The lack of a forge tool will stop the procurement process because it's not economically feasible to recreate costly forge tools for a few replacement spares. The NFTD solves this problem…launched a Dynamic Partnering project to automatically match forge customer technical and business requirements to forge supplier capabilities; completed job shop lean projects at forging suppliers, resulting in greater throughput of parts for Operation Iraqi Freedom (OIF).
- ($0.700) - FORGE-IT projects: solved broken supply chain problems at DLA supply centers and United States Air Force (USAF) engineering support activities for 250 weapon system NSNs… completed forging acquisition process improvement at Sikorsky.
- ($0.658) – Forging Research Projects: made significant improvements in consistency of deposition rate and thus internal porosity and surface finish of rapid solidification processing forge tooling…developed simulations of inserted die applications to allow for very quick turnaround of forging dies.

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Procurement Readiness Optimization-Forging Advanced System Technology, Project 4, Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.916	0.999	1.116	1.238	1.267	1.292	1.318
RDT&E Articles Quantity - N/A							

FY 2006 Plans: ($0.999)

- ($0.099) – Work will continue on National Forge Tooling database (NFTD).
- ($0.700) – FORGE –IT projects to solve broken supply chain problems will continue, with some work being done at maritime and land supply chains.
- ($0.200) – Forging research projects to develop faster tools will be conducted.

FY 2007 Plans: ($1.116)

- ($0.116) - NFTD will be developed and the dynamic partnering projects.
- ($0.800) – We will continue FORGE-IT projects to solve supply chain problems for land, sea and air supply chains.
- ($0.200) – Forging research projects to develop faster tools will be conducted.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: N/A

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Procurement Readiness Optimization-Forging Advanced System Technology, Project 4

A. Project Cost Breakdown

Procurement Readiness Optimization-Forging Advanced System Technology

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
Manufacturing Process Development	1.916	0.999	1.116	1.238

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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
ATI	Contract	10/13/05	13.006	1.916	0.999	1.116	1.238		

*STP = "Short Term Project"

Exhibit R-4, Schedule Profile																				Date: February 2006							
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number Procurement Readiness Optimization-Forging Advanced System Technology, Project 4											
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Business Enterprise Integration	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**								
"FORGE-IT" projects	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**								
Forging R&D	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**								
New Forging Program																					**x**	**x**	**x**	**x**	**x**	**x**	**x**	**x**

Exhibit R-4a, Schedule Detail						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number Procurement Readiness Optimization-Forging Advanced System Technology, Project 4			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Business Enterprise Integration							
FORGE-IT Projects							
Forging R&D							
New Forging Program							

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Customer Value: Industrial Plant Equipment (CV:IPE), Project 5 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 5: Customer Value: Industrial Plant Equipment (CV:IPE)	0.776	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification: IPE is used by DoD maintenance depots and on bases and ships to keep weapons systems in a high state of operational readiness. IPE can frequently be rebuilt much more economically than buying new. This program (CV:IPE) has developed and demonstrated new methods for rebuilding IPE that improved weapon system readiness by reducing the cost and lead time associated with IPE rebuilds. The program developed tools and business processes that allowed the DLA IPE organization to reduce floor space required to accomplish the mission by one-third. In addition, the program added to the ability of the IPE organization to improve the accuracy of the IPE returned to the Service maintenance depots. This program completed in FY 05

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	0.776	0.000	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2005 Accomplishments: ($0.776)
- ($0.476) – Developed standard rebuild models for cost estimating and rebuild management.
- ($0.300) – Developed improved methods for IPE accuracy enhancement.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: 1. MDI Inc. 2. IQL Inc.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Customer Value: Industrial Plant Equipment, Project 5

A. Project Cost Breakdown

Customer Value: Industrial Plant Equipment

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
Manufacturing technology process development	0.776	0.000	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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
MDI	contract	Jan 05	0.376	0.476					
IQL	contract	Jan 05	0.300	0.300					

*STP = "Short Term Project"

Exhibit R-4, Schedule Profile																												Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology																Project Name and Number Customer Value: Industrial Plant Equipment, Project 5											
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	**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**
IPE accuracy enhancement	**x**	**x**	**x**	**x**																								
Standard models	**x**	**x**	**x**	**x**																								

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Other Congressionally Added Programs, Project 6 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 10: Other Congressionally Added Programs (OCAs)	16.124	12.518	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

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

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	16.124	12.518	0.000	0.000
RDT&E Articles Quantity – N/A				

FY 2005 Accomplishments: ($16.124)

- Defense Procurement Tech Asst Initiative for Small Business ($1.249) Improved capabilities of small manufacturers in the PA, OH and WV area based on enhancing their CAD / CAM and STEP capabilities. Concurrent Technologies Corporation (CTC)

- Laser Additive Mfg ($1.957) Aeromet has been developing LAM technology in partnership with defense supplier for a number of years. LAM is a technology to produce titanium parts directly from CAD files without the use or casting or forging molds and dies. Aeromet,

- Next Generation Manufacturing Technologies Initiative ($3.670) Rapidly escalating technological complexity and cost of products and systems, Decline in capital R&D investment and sharp increase in cost of doing business in US, and Erosion of defense manufacturing capacity (surge and mobilization, diminishing sources) ATI, NACFAM, IMIT

- Copper-base Casting Technology Program ($1.125) Fund development and application of copper-base alloys to make lighter, more efficient components of DoD systems. Copper Development Association

Exhibit R-2a, RDT&E Project Justification						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Other Congressionally Added Programs, Project 6 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 10: Other Congressionally Added Programs (OCAs)	16.124	12.518	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

- Defense Supply Chain Technology ($6.655) Improve the DOD supply chain through enhanced business processes and tools. Concurrent Technologies Corp

- Advanced Manufacturing Technology ($1.468) Fund Purdue to develop the next generation of manufacturing technologies to reduce the cycle time and cost of providing replacement parts to DLA. Purdue University FY 2006 Plans: N/A

FY 2006 Plans: N/A
FY 2007 Plans: N/A

C. Other Program Funding Summary: N/A

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

E. Major Performers: See information associated with each project provided under 2005 Accomplishments.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number Other Congressionally Added Programs, Project 6

A. Project Cost Breakdown

Other Congressionally Added Programs

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
N/A	16.124	12.518		

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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
N/A				16.124	12.518				

*STP = "Short Term Project"

Exhibit R-4, Schedule Profile																												
Date: February 2006																												
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology												Project Name and Number Other Congressionally Added Programs, Project 6															
	2005				2006				2007				2008				2009				2010				2011			
Fiscal Year	**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**
N/A																												

Exhibit R-4a, Schedule Detail						Date: February 2006	
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7	Program Element Number and Name 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number Other Congressionally Added Programs, Project 6			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
N/A							

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 07				Project Name and Number Project Name: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 7 Program Element: 0708011S			
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 7: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling	12.479	4.190	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification:

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

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	12.479	4.190	0.000	0.000
RDT&E Articles Quantity – N/A				

Exhibit R-2a, RDT&E Project Justification							Date February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 07				Project Name and Number Project Name: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 7 Program Element: 0708011S			
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 7: Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling	12.479	4.190	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Quantity - N/A							

FY 2005 Accomplishments: ($12.479)

- Developed a rapid prototyping capability for key manufacturing processes.
- Developed failure analysis closed-loop feedback architecture.
- Implemented strategic manufacturing partnerships necessary to establish a solid supplier base for all key system components
- Developed the tools needed to support advanced logistics capabilities.
- Advanced a lean manufacturing initiative.

FY 2006 Plans: ($4.190)

- Improve manufacturability and reliability of the spray cool systems and standard components.
- Continuing to implement a quick-turn pilot line and process for seamless transition into low-cost volume manufacturing.
- Continuing development of key manufacturing processes and engineering design tools needed for low cost, high volume fabrication and assembly.
- Developing an intelligent test capability for spray cooled electronics that provide qualified, war-ready, line replaceable units in sufficient quantities to meet field requirements for spray cool-equipped weapon systems.
- Developing tools, systems, and the service support capability needed to provide rapid, effective in-field and depot maintenance and the associated total asset visibility that ensures seamless life-cycle support to DOD.

C. Other Program Funding Summary: N/A
D. Acquisition Strategy: N/A
E. Major Performers: See R-3

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 7

A. Project Cost Breakdown

Manufacturing Engineering of Spray Cooling

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
a. Manufacturing Process Support Costs	12.479	4.190	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 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Program
Isothermal	CPFF	Jun 06		12.479	4.190				

*STP = "Short Term Project"

Exhibit R-4, Schedule Profile																															
Date: February 2006																															
Appropriation/Budget Activity RDT&E, Defense-Wide Budget Activity (BA): 7					Program Element Number and Name 0708011S, Industrial Preparedness Manufacturing Technology												Project Name and Number Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 7													
Fiscal Year	**2005**				**2006**				**2007**				**2008**				**2009**				**2010**				**2011**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Rapid prototype capability																												
Failure analysis closed-loop feedback																												
Implement strategic manufacturing partnerships																												
Develop advanced logistics capabilities																												
Advance lean manufacturing initiative																												
Improve manufacturability and reliability																												
Implement quick-turn pilot line and process																												
Key mfg. processes and tools																												
Intelligent Test Capability																												
Tools for field and depot maintenance and support																												

Exhibit R-4a, Schedule Detail							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name: 0708011S, Industrial Preparedness Manufacturing Technology			Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 7			
Schedule Profile	**FY2005**	**FY2006**	**FY2007**	**FY2008**	**FY2009**	**FY2010**	**FY2011**
Rapid prototype capability	4Q	1-4Q					
Failure analysis closed-loop feedback	3-4Q	1-4Q					
Implement strategic manufacturing partnerships	3-4Q	1-4Q					
Develop advanced logistics capabilities	3-4Q	1-4Q	1Q				
Advance lean manufacturing initiative	4Q	1-4Q	1Q				
Improve manufacturability and reliability		3-4Q	1-4Q				
Implement quick-turn pilot line and process		3-4Q	1-4Q				
Key mfg. processes and tools		3-4Q	1-4Q				
Intelligent Test Capability		3-4Q	1-4Q				
Tools for field and depot maintenance and support		3-4Q	1-4Q				

Exhibit R-2a, RDT&E Project Justification							Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide Budget Activity (BA): 7			Project Name and Number Material Acquisition Electronics , Project 8 Program Element: 0708011S				
Cost ($ in millions)	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Project 8: Material Acquisition Electronics (MAE)	0.000	10.113	10.590	10.676	10.867	11.079	11.313
RDT&E Articles Quantity - N/A							

A. Mission Description and Budget Item Justification: Develop a capability to emulate most obsolete digital integrated circuits (ICs) in the federal catalog using a single, flexible manufacturing line. DoD has estimated that $2.9B is spent every five years in redesigning circuit card assemblies. Much of these redesigns are driven by IC obsolescence. The commercial suppliers of ICs typically terminate production lines every 18 months, moving on to the next generation of ICs. Because DoD maintains weapons systems much longer than 3 years, this creates an obsolescence problem that can only be overcome through buying excessive inventories of parts before the production lines close or redesigning the next higher assembly to eliminate the obsolete part. DLA, as the manager of 88% of the IC supply class, must have a capability to manufacture these devices. This project develops this capability and will expand it to succeeding generations of obsolete ICs through the Advanced Microcircuit Emulation program.

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	FY 08
Accomplishment/ Effort/Subtotal Cost	0.000	10.113	10.590	10.676
RDT&E Articles Quantity – N/A				

The MAE project covers development of IC fabrication technology to continue to expand the capability to emulate succeeding generations of discontinued technology. This will include Low Rate Initial Production of earlier development efforts (e.g., 200K emulation Array) and integration of Advanced Tooling and development of future capabilities (e.g., High Speed/ High Density Emulation Arrays). Technology development will continue to deeper sub-micron (<1.0 um) feature sizes and faster operating speeds. Development of IC design capability and design model library to realize emulation performance and functional requirements outcomes using developed IC fabrication technology. This design capability will address both standard catalog ICs and Application Specific Integrated Circuits (ASICs) and will accommodate both in-house and third-party (principally OEM) design requirements. Prior to FY2006 Material Acquisition Electronics was aligned under Logistics R&D Technology Demonstration, PE 0603712S. In FY 2006 it became aligned with Industrial preparedness PE0708011S.

C. Other Program Funding Summary:

D. Acquisition Strategy: N/A

E. Major Performers: The Sarnoff Corporation, 201 Washington Road, Princeton, NJ 08543 is the prime contractor for the DLA Material Acquisition Electronics program. Electronic emulation technology development and production are performed by the Sarnoff Corporation.

Exhibit R-3, RDT&E Program Element/Project Cost Breakdown	Date: February 2006
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	Project Name and Number - Material Acquisition: Electronics (MAE), Project 12

A. Project Cost Breakdown

Material Acquisition: Electronics (MAE)

Project Cost Categories	FY 2005	FY 2006	FY 2007	FY 2008
a. Manufacturing Process Support Costs	-----	10.113	10.590	10.676

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Method/Type Performing Activity	Contractor Obligation Or Funding Vehicle	Award or Project Date	Performing Activity BAC	FY 2005	FY 2006	FY 2007	FY 2008	Budget to Complete	Total Government Program
				-----	10.113	10.590	10.676		
Sarnoff Corp.									
LMI									
ARINC									
SPAWARSYSCEN									

Government Furnished Property: None.

Exhibit R-4, Schedule Profile																												
Date: February 2006																												
Appropriation/Budget Activity RDT&E, Defense Wide BA 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology												Project Name and Number - Material Acquisition: Electronics (MAE), Project 12												
Fiscal Year	**2005**				**2006**				**2007**				**2008**				**2009**				**2010**				**2011**			
	1	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Perform Gap Analysis (GA) of Commercial Technology.																												
Perform Base array designs required to fill GA.																												
Update design Library.																												
Develop prototypes for test and insertion.																												
Develop Low Rate Initial Production (LRIP) capability.																												
Transition new microcircuit designs to LRIP.																												
Perform process review																												
Plan required process improvements.																												
Implement process improvements.																												
Monitor and adjust process improvements.																												