

UNCLASSIFIED
FISCAL (FY) 2005 DESCRIPTIVE SUMMARIES

Exhibit R-2, RDT&E Budget Item Justification							Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				R-1 Item Nomenclature: Manufacturing Technology, 0708011S				
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	
Total PE Cost	20.741	45.871	11.005	10.391	10.418	10.649	10.898	
Project 1: Combat Rations (CR)	1.959	1.967	2.013	2.011	2.007	2.051	2.103	
Project 2: Apparel Research Network (ARN)	2.961	3.997	3.902	3.912	3.956	4.046	4.140	
Project 3: Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT)	2.281	3.249	2.340	2.428	2.421	2.473	2.529	
Project 4: Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST)	1.933	1.939	1.958	2.040	2.034	2.079	2.126	
Project 5: Customer Value Industrial Plant Equipment (CV:IPE)	1.380	1.170	0.792	-----	-----	-----	-----	
Project 6: Classified Programs (CP)	2.357	4.660	-----	-----	-----	-----	-----	
Project 7: Laser Additive Manufacturing (LAM)	5.902	2.375	-----	-----	-----	-----	-----	
Project 8: Twelve Screw Extruder for Fuel Cell Technology (FCT)	1.968	1.484	-----	-----	-----	-----	-----	
Project 9: Supply Chain Management (SCM)	-----	4.749	-----	-----	-----	-----	-----	
Project 10: Other Congressionally Added Programs (OCAs)	-----	3.462	-----	-----	-----	-----	-----	
Project 11: Defense Microelectronics (DMEA)	-----	16.819	-----	-----	-----	-----	-----	

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7	R-1 Item Nomenclature: Manufacturing Technology 0708011S		
<p>A. Mission Description and Budget Item Justification: Manufacturing Technology (ManTech) reduces costs and lead times, and increases quality, by developing and applying advanced manufacturing technology. DLA ManTech includes Combat Rations Network for Technology Implementation (CORANET), Apparel Research Network (ARN), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), and Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST) - in addition to congressionally added programs. Copper Based Casting Technology, Defense Supply Chain Technology, Laser Additive Manufacturing, Twelve Screw Extruder, Other Congressionally Added programs for Next Generation Manufacturing Technology and Small Business Technical Procurements. Congress also added funding for Spray Cooling Manufacturing for DMEA to continue its work with the services to increase service familiarity with this advanced technology.</p>			
B. Program Change Summary:			
	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Previous President's Budget	20.728	16.163	11.070
Current President's Budget	20.741	45.871	11.005
Total Adjustments	+0.013	+29.708	-0.065
Revised Inflation adjustment	-----	-----	-0.065
Congressional increase	-----	+30.200	-----
Program adjustments	+0.013	-0.492	-----
<p>Change Summary Explanation: FY 2003 reflects (+\$0.013 million) minor program adjustment. FY 2004 reflects a net increase (+\$29.708 million) due to: 1. (+\$30.2 million) in congressionally added programs (+\$1.5 million) for Copper Based Castings Technology; (+\$4.8 million) for Defense Supply Chain Technology; (+\$1.5 million) for Twelve Screw Extruder for Fuel Cell Technology; (+\$2.4 million) for Laser Additive Manufacturing; (+\$17.0 million) for Mfg. Engineering of Spray Cooling managed by the Defense Microelectronics Activity (DMEA); and Other Congressional Adds (OCAs) – (+\$2.250 million) for Next Generation Manufacturing Technology and (+\$1.250 million) for Small Business Technical Procurements; and 2. (-\$0.492 million) for pro-ration of DW FY 2004 Appropriations Act adjustments for DW savings from management improvements per Section 8094 (-\$0.098 million) and DW savings from outsourcing, management efficiencies, and economic assumptions per Section 8126 (-\$0.394 million). FY 2005 reflects inflation adjustments (-\$0.065 million).</p>			
C. Other Program Funding Summary: N/A			
D. Acquisition Strategy: N/A			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Combat Rations, Project 1				
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	
Project 1: Combat Rations	1.959	1.967	2.013	2.011	2.007	2.051	2.103	
RDT&E Articles Quantity- N/A								
<p>A. Mission Description and Budget Item Justification: DLA buys about \$200 million worth of Combat Rations annually. The product is military unique. The limited industrial base is barely capable of producing variety and quantities needed for surge, and has been dependent on orders from Government to remain viable. This initiative ensures that DLA will have an industrial base to continue to support warfighters with needed combat rations. The program partners 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 Joint Steering Group of users, designers, and buyers assures that selected projects contribute to DLA mission.</p>								
B. Accomplishments/Planned Program:								
	FY 2003		FY 2004		FY 2005			
Accomplishment/ Effort/Subtotal Cost	1.959		1.967		2.013			
RDT&E Articles Quantity – N/A								
<p>Develop and implement Improved Retort Rack Materials And Design; implement Ultra-Sonic Sealing for MRE; develop and implement Streamline Inspection Criteria For Operational Rations. Evaluate commercial items for introduction into ration program.</p>								
C. Other Program Funding Summary: N/A								
D. Acquisition Strategy: N/A								

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
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 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				1.959	1.967	2.013		
B. Budget Acquisition History and Planning Information								
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2003	FY 2004	FY 2005	Budget to Complete	Total Program
				1.959	1.967	2.013	Cont	Cont
Ameriquial	Cost, No Fee	12/01/2001	Partner					
Georgia, Univ of	Cost, No Fee	12/01/2001	Partner, STP*					
NCFST	Cost, No Fee	12/01/2001	Partner, STP					
Ohio State Univ	Cost, No Fee	12/01/2001	Partner, STP					
R&D Associates	Cost, No Fee	12/01/2001	Partner, STP					
Rutgers	Cost, No Fee	12/01/2001	Partner, STP					
SOPAKCO	Cost, No Fee	12/01/2001	Partner, STP					
Stegner	Cost, No Fee	12/01/2001	Partner, STP					
Sterling	Cost, No Fee	11/25/2001	Partner					
TEES (TAMU)	Cost, No Fee	12/01/2001	Partner, STP					
Tennessee, Univ of	Cost, No Fee	12/01/2001	Partner, STP					
Wornick	Cost, No Fee	12/01/2001	Partner,					
Washington State Univ	Cost, No Fee	12/01/2001	Partner, STP					
Rutgers Demo Site	Cost, No Fee	12/01/2001	Partner, STP					
Government Furnished Property: None.							*STP = "Short Term Project"	

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name 0708011S Manufacturing Technology			Project Name and Number - Combat Rations, Project 1		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
BAA Preparation and Issue					1-4Q	1-4Q
BAA Closing and Evaluations						1-4Q
Contracts Awarded						1-4Q
Kick Off Meeting, Joint Planning Sessions		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
-- Selection and Award of Demo Site						1-4Q
-- Arrangements for Facilitation		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Initial Review and Disposition of Candidate Projects, initial award of delivery orders		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Follow on assessment of candidate Projects, acceptance of qualified subjects by JSG.		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Continuing award of delivery orders		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct workshops to review projects, evaluate new candidate proposals, initiate qualified projects		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct IPRs to manage and control progress, assure that results are achieved and implemented when applicable	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Apparel Research Network (ARN), Project 2			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project 2: ARN	2.961	3.997	3.902	3.912	3.956	4.046	4.140
RDT&E Articles Quantity- N/A							
<p>A. Mission Description and Budget Item Justification: The Department of Defense, through the Defense Logistics Agency, purchases an average of \$1.2 billion of clothing and textile items per year. The lead-time is up to 15 months and the current inventory acquisition value over \$1 billion. ARN is a Manufacturing Technology program to improve the responsiveness of the industrial base that supplies the clothing items to the Military Services. It enables the small business oriented apparel producers to access state-of-the-art supply chain management technologies through its R&D and technology transfer mechanism. It allows the military clothing supply chain to have asset visibility and decision support at retail, wholesale and manufacturing levels. The goal of this program is to reduce the lead-time from 6 months to 6 weeks and to reduce the inventory and inventory carrying costs by 50%. A 50% reduction in carrying cost would further reduce the cost to the customer.</p>							
B. Accomplishments/Planned Program:							
	FY 2003	FY 2004	FY 2005				
AAVS	1.000	1.957	1.977				
<p>ARN Asset Visibility System (AAVS) – a data repository that integrates data from existing DoD, Services’ legacy systems and manufacturing data and 3D scan data collected from ARN developed systems with decision support with web-based interface.</p> <ul style="list-style-type: none"> • Successfully implemented recruit clothing transactions • Further expansion to include non-recruit clothing: Organizational Clothing & Initial Equipment (OCIE) items; Fiber and Textiles; • Leveraging with DoD Email and further expanding to include On-Demand-Manufacturing (ODM) hardware items. 							
	FY 2003	FY 2004	FY 2005				
VIM-ASAP	1.000	1.000	1.000				
<p>Virtual Item Manager – ARN Supply-chain Automated Processing (VIM-ASAP) - A web-based system that pulls from the data collected in the AAVS Datamart, for military clothing manufacturers. ASAP receives electronic orders, captures WIP and finished goods inventories, prepares shipping documents, transmits invoices and receive payments electronically.</p> <ul style="list-style-type: none"> • Successful implementations at selected group of defense clothing manufacturers • Leveraging and connecting with DCMA Wide Area Work Flow (WAWF) system. • Expanding to include regional distribution centers and Email ODM hardware manufacturers. • Future implementation of Balance Inventory Flow Replenishment to level manufacturing production capabilities 							

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Apparel Research Network (ARN), Project 2				
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	
Project 2: ARN	2.961	3.997	3.902	3.912	3.956	4.046	4.140	
RDT&E Articles Quantity -N/A								
	FY 2003	FY 2004	FY 2005					
VIM	0.961	1.040	0.925					
<p>VIM – Electronic Military Clothing Inventory Management System - Pulls and pushes data to AAVS Datamart to provide fully integrated system, from 3-D full body scanning, size selection issue database with powerful inventory management tools for Military Service employee to view and manage inventory and supplies throughout the supply chain.</p> <ul style="list-style-type: none"> ▪ Successful implementations at Marine Corp Recruit Depot (MCRD) San Diego and Parris Island through FY 2003. ▪ Expanding to include (5) Army, Navy and Air Force Recruit Training Centers, DLA non-recruit OCIE sites and Army Clothing Issue Facilities <p>C. Other Program Funding Summary: N/A</p> <p>D. Acquisition Strategy: N/A</p>								

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: February 2004		
Appropriation/Budget Activity RDT&E, Defense-wide BA 7					Project Name and Number - Apparel Research Network (ARN), Project 2				
A. Project Cost Breakdown Apparel Research Network									
Project Cost Categories					FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs					2.961	3.997	3.902		
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 2003	FY 2004	FY 2005	Budget to Complete	Total Program	
Note: All contracts are Fixed Cost or Cost Plus Fixed Fee				2.961	3.997	3.902	Cont	Cont	
PDIT	Cost Plus Fixed Fee/Contractor								
Clemson Univ	Cost Plus Fixed Fee/Contractor								
Cyberware	Cost Plus Fixed Fee/Contractor								
EDI Integration	Cost Plus Fixed Fee/Contractor								
Southern Tech	Cost Plus Fixed Fee/Contractor								
Government Furnished Property: None.									

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Exhibit R-4, Schedule Profile																							Date: February 2004					
Appropriation/Budget Activity RDT&E, Defense Wide BA 7								Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology								Project Name and Number - Apparel Research Network (ARN), Project 2												
Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ARN Asset Visibility System	[Bar spanning Q1 2003 to Q4 2007]																											
▪ Expand Supply Chain to OCIE, and Fiber and Fabric Items	[Bar spanning Q2 2003 to Q3 2005]																											
▪ EMall On Demand Manufacturing Items	[Bar spanning Q3 2004 to Q2 2006]																											
ARN Supply Chain Automated Processing (ASAP)	[Empty]																											
▪ Leveraging WAWF & Emall	[Empty]																											
▪ Balanced Inventory Flow Replenishment	[Bar spanning Q1 2003 to Q4 2007]																											
Electronic Military Clothing Inventory Management System	[Empty]																											
▪ Additional Army & Non-recruit Sites	[Empty]																											
	[Empty]																											
	[Empty]																											
	[Empty]																											

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-Wide BA 7	Program Element Number and Name 0708011S Manufacturing Technology			Project Name and Number - Apparel Research Network (ARN), Project 2		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
ARN Asset Visibility System	1-4Q	1-4Q	1-4Q	1-4Q		
▪ Expand supply chain to Organizational Clothing & Individual Equipment and Textiles & Fiber	3-4Q	1-4Q	1-4Q	1-4Q		
▪ EMall On Demand Manufacturing Items		2-4Q	1-4Q	1-4Q	1-3Q	
ARN Supply Chain Automated Processing	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
▪ Leveraging WAWF & Emall	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
▪ Balanced Inventory Flow Replenishment System	2-3Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Electronic Military Clothing Inventory Management	1-4Q	1-4Q	1-4Q	1-4Q	1-3Q	
▪ Additional Army and non-recruit sites	1-4Q	1-4Q	1-4Q	1-4Q	1-3Q	

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project 3: PRO-ACT	2.281	3.249	2.340	2.428	2.421	2.473	2.529
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: About 6% of all weapon system spare parts are made from castings, but they account for about 10% of all backorders, due to obsolete and incomplete technical data packages, and atrophied supply chains.</p>							
B. Accomplishments/Planned Program:							
	FY 2003	FY 2004	FY 2005				
Collaborative Problem Solving	1.528	1.506	1.563				
<p>Collaborative problem solving environments have been prototyped with several of the Military Service Engineering Support Activities. Each environment is custom designed to reflect the needs of the weapon system and the processes used by the Services. Collaborative teams include representatives of DLA, the Services, primes and subcontractors. Efforts have been focused on over 500 different weapon systems parts that have caused backorder problems. This model of providing solutions to vexing spare parts sourcing problems will be further developed and deployed throughout the DoD as resources and opportunities permit.</p>							
	FY 2003	FY 2004	FY 2005				
Casting Technology for Cost Reduction	0.753	1.743	0.777				
<p>Casting technology for cost reduction is under development at several sites, including simulation of size, position and type of cast steel porosity and its effect on service life; development of a foundry tooling database; enhancement of die casting visualization software to reduce trial and error; melting and molding process improvements for seal rings used in armored vehicles; investigation of cheaper tooling materials for short run production; improved prediction of patternmakers shrink which will reduce production time. FY 2004 includes congressional funding for Copper Based Casting Technology (\$0.990 million); and Agency base funding for casting technology (\$0.753 million).</p>							
C. Other Program Funding Summary: N/A							
D. Acquisition Strategy: N/A							

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
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 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				2.281	3.249	2.340		
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 2003	FY 2004	FY 2005	Budget to Complete	Total Program
ATI	Cost Share	06/23/2000	N/A	2.281	2.259	2.340	Cont	Cont
ARL	Cost Plus Fixed Fee/ Contractor	TBD			0.990			
Government Furnished Property: None.								

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Exhibit R-4, Schedule Profile																							Date: February 2004					
Appropriation/Budget Activity RDT&E, Defense Wide BA 7								Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology								Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3												
Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Collaborative Problem Solving	[Bar spanning from start of 2003 to end of 2009]																											
Casting Technology for Cost Reduction	[Bar spanning from start of 2003 to end of 2007]																											
Copper Based Casting Technology for Energy Efficient Electric Motors	[Bar spanning from start of 2004 to end of 2005]																											

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Procurement Readiness Optimization-Advanced Casting Technology (PRO-ACT), Project 3		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Collaborative Problem Solving	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Casting Technology for Cost Reduction	1-4Q	1-4Q	1-4Q	1-4Q	1-2Q	
Copper Based Casting Technology for Energy Efficient Electric Motors		2-4Q	1-4Q			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project 4: PRO-FAST	1.933	1.939	1.958	2.040	2.034	2.079	2.126
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: About 6% of all weapon system spares are made from forgings but forgings account for 10% of all backorders, due to obsolete and incomplete technical data packages and atrophied supply chains.</p>							
B. Accomplishments/Planned Program:							
	FY 2003	FY 2004	FY 2005				
Collaborative Problem Solving	1.295	1.292	1.308				
<p>This program develops and demonstrates innovate solutions to forged spare parts problems by building collaborative teams with DLA and the Military Services. It also develops fast, cheap tooling technology. Tooling is a major lead-time driver for small quantity forging production.</p> <p>Collaborative problem solving environments have been prototyped with several of the Military Service Engineering Support Activities. Each environment is custom designed to reflect the needs of the weapon system and the processes used by the Services. Collaborative teams include representatives of DLA, the Services, primes and subcontractors. Efforts have been focused on over 50 different weapon systems parts that have caused backorder problems. This model of providing solutions to vexing spare parts sourcing problems will be further developed and deployed throughout the DoD as resources and opportunities permit.</p>							
	FY 2003	FY 2004	FY 2005				
Forging Technology for Lead Time Reduction	0.638	0.647	0.650				
<p>Forging technology for lead-time development is under development at several sites. Rapid low cost tooling will be developed based on a spray metal technique; lean manufacturing demonstrations in a job shop forging environment will be used to prototype new practices for faster forging; a database of forging dies will be developed and fielded.</p>							
C. Other Program Funding Summary: N/A							
D. Acquisition Strategy: N/A							

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Procurement Readiness Optimization-Forging Advanced System Technology (PRO-FAST), Project 4				
A. Project Cost Breakdown								
Procurement Readiness Optimization—Forging Advanced System Technology (PRO-FAST)								
Project Cost Categories				FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				1.933	1.939	1.958		
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 2003	FY 2004	FY 2005	Budget to Complete	Total Program
ATI	Cost Share	02/09/2001	N/A	1.933	1.939	1.958	Cont	Cont
Government Furnished Property: None.								

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Exhibit R-4, Schedule Profile																							Date: February 2004					
Appropriation/Budget Activity RDT&E, Defense Wide BA 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology								Project Name and Number - Procurement Readiness Optimization- Forging Advanced System Technology (PRO-FAST), Project 4															
Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Collaborative Problem Solving	[Bar chart showing activity from Q1 2003 to Q4 2009]																											
Forging Technology for Lead Time Reduction	[Bar chart showing activity from Q1 2003 to Q3 2006]																											

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004								
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Customer Value Industrial Plant Equipment (CV:IPE), Project 5											
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009								
Project 5: CV:IPE	1.380	1.170	0.792	-----	-----	-----	-----								
RDT&E Articles Quantity - N/A															
<p>A. Mission Description and Budget Item Justification: Industrial Plant Equipment (IPE) is used by maintenance depots, air logistics centers and on bases and ships everywhere to maintain weapons. When this equipment becomes worn, it can either be rebuilt or replaced with new. Its not unusual for rebuilt equipment to be 40% cheaper than new equipment. Rebuilds also save money because they use the same foundations and utility connections. Rebuilds can be challenging because there is little standardization, spare parts can be hard to get, and old equipment can conceal hidden defects. Rebuild times can stretch out, which is a risk factor to maintenance activities, because large machines can have unique capabilities and cannot be kept offline for long periods.</p>															
<p>B. Accomplishments/Planned Program:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">FY 2004</th> <th style="text-align: center;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Lean Manufacturing Principles</td> <td style="text-align: center;">1.380</td> <td style="text-align: center;">1.170</td> <td style="text-align: center;">0.792</td> </tr> </tbody> </table>									FY 2003	FY 2004	FY 2005	Lean Manufacturing Principles	1.380	1.170	0.792
	FY 2003	FY 2004	FY 2005												
Lean Manufacturing Principles	1.380	1.170	0.792												
<p>This project applies lean manufacturing principles to the overhaul of IPE. Lean manufacturing is a methodology that looks at every process step from the end consumer's viewpoint. If it doesn't add value, it is a candidate for elimination. Lean manufacturing has a toolbox of methods that will be applied to rebuilding IPE, including standard work; visible processes; capable processes; and empowered workforce.</p>															
<p>C. Other Program Funding Summary: N/A</p>															
<p>D. Acquisition Strategy: N/A</p>															

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Customer Value Industrial Plant Equipment (CV:IPE), Project 5				
A. Project Cost Breakdown Customer Value Industrial Plant Equipment (CV:IPE)								
Project Cost Categories				FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				1.380	1.170	0.792		
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 2003	FY 2004	FY 2005	Budget to Complete	Total Program
Various	COST PLUS FIXED FEE	03/2002		1.380	1.170	0.792	1.962	3.342
Government Furnished Property: None.								

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Exhibit R-4a, Schedule Detail					Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Customer Value Industrial Plant Equipment (CV:IPE), Project 5		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Baselining Current Processes	1-4Q	1-4Q	1-4Q			
Develop Standard Templates		1-4Q	1-4Q			
New Methods for Project Initiation & Risk Management Plans		1-4Q	1-4Q	1-4Q		
Rapid Design of Control Systems		1-4Q				
Parametric Estimating Models for Rapid Cost Estimates		1-4Q	1-4Q	1-4Q		

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004		
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Classified Programs (CP), Project 6					
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
Project 6: CP	2.357	4.660	-----	-----	-----	-----	-----		
RDT&E Articles Quantity - N/A									
A. Mission Description and Budget Item Justification: N/A									
B. Accomplishments/Planned Program:									
	FY 2003	FY 2004	FY 2005						
Accomplishment/ Effort/Subtotal Cost	2.357	4.660	-----						
RDT&E Articles Quantity – N/A									
C. Other Program Funding Summary: N/A									
D. Acquisition Strategy: N/A									

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004												
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Laser Additive Manufacturing (LAM), Project 7															
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009												
Project 7: LAM	5.902	2.375	-----	-----	-----	-----	-----												
RDT&E Articles Quantity- N/A																			
<p>A. Mission Description and Budget Item Justification: This program will develop a rapid manufacturing capability that produces high performance military and commercial components via laser additive manufacturing. It will be executed to realize as many applications as possible across the services and also support the DLA mission. The Laser Additive Manufacturing (LAM) process has the ability to produce components with properties bridging between the high end of castings and the low end of forgings. The major advantages are a reduced cycle time of up to 75%, reduced cost, elimination of forging dies and casting molds, inserts and fixtures, and reduced machining requirements.</p> <p>B. Accomplishments/Planned Program:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th></th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">FY 2004</th> <th style="text-align: center;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Accomplishment/ Effort/Subtotal Cost</td> <td style="text-align: center;">5.902</td> <td style="text-align: center;">2.375</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>RDT&E Articles Quantity – N/A</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>A joint advisory board will be constituted to provide oversight. Initial applications are planned for components of aerospace systems including fighters, and helicopters, applications for missiles including rhenium motors and thrusters, and other components. A portion of the program will also focus on repairs. Weapon system contractors such as Boeing and Sikorsky will also be participating to assure the smooth transition of the technology. Aerospace components have been selected for transition. A qualification matrix has been developed. Prototype parts will be processed and qualified. A test matrix to qualify repair parts will be developed. Technology will be developed for non-aerospace applications. The technology will be transitioned to as many parts as possible.</p> <p>C. Other Program Funding Summary: N/A</p> <p>D. Acquisition Strategy: N/A</p>									FY 2003	FY 2004	FY 2005	Accomplishment/ Effort/Subtotal Cost	5.902	2.375	-----	RDT&E Articles Quantity – N/A			
	FY 2003	FY 2004	FY 2005																
Accomplishment/ Effort/Subtotal Cost	5.902	2.375	-----																
RDT&E Articles Quantity – N/A																			

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Laser Additive Manufacturing (LAM), Project 7				
A. Project Cost Breakdown Laser Additive Manufacturing (LAM)								
Project Cost Categories				FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				5.902	2.375	-----		
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2003	FY 2004	FY 2005	Budget to Complete	Total Program
				5.902	2.375		8.277	8.277
Aeromet Corp	Section 845 Prototype Agreement	27 Sep 02						
Government Furnished Property: None.								

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Exhibit R-4, Schedule Profile																				Date: February 2004								
Appropriation/Budget Activity RDT&E, Defense Wide BA 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology										Project Name and Number - Laser Additive Manufacturing (LAM), Project 7													
Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Establish Tri-service joint advisory board.	█																											
Select target aerospace components for transition	█																											
Develop a qualification matrix for the parts					█																							
Process prototype parts and qualify the process, material, and the part					█																							
Research DOD parts that can be repaired at a reduced cost versus procurement of new parts					█																							
Establish a test matrix for repair parts to qualify the repair					█																							
Produce and qualify prototype parts					█																							
Develop technology for non-aerospace applications					█																							
Transition LAM					█																							

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Exhibit R-4a, Schedule Detail					Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Laser Additive Manufacturing (LAM), Project 7		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Establish Tri-service joint advisory board.	1-4Q					
Select target aerospace components for transition	1-4Q					
Develop a qualification matrix for the parts		1-4Q				
Process prototype parts and qualify the process, material, and the part		1-4Q				
Research DOD parts that can be repaired at a reduced cost versus procurement of new parts		1-4Q				
Establish a test matrix for repair parts to qualify the repair		1-4Q	1-4Q			
Produce and qualify prototype parts		1-4Q	1-4Q			
Develop technology for non-aerospace applications		1-4Q	1-4Q			
Transition the LAM process for as many parts as possible		1-4Q	1-4Q			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004														
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8																	
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009														
Project 8: Twelve Screw Extruder for Fuel Cell Technology (FCT)	1.968	1.484	-----	-----	-----	-----	-----														
RDT&E Articles Quantity - N/A																					
<p>A. Mission Description and Budget Item Justification: A critical part of the organization mission focuses on the leveraging of commercial technology to develop advanced manufacturing technology to support military ground vehicle alternative propulsion technology development and advanced materials design and applications. Enhancements in materials alloying technology are critical to efficient and economical production of 'Fuel Cell' alternative propulsion technology, and to the development and application of light weight, fuel efficient and durable materials structures and components.</p> <p>B. Accomplishments/Planned Program:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">FY 2004</th> <th style="text-align: center;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Accomplishment/ Effort/Subtotal Cost</td> <td style="text-align: center;">1.968</td> <td style="text-align: center;">1.484</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>RDT&E Articles Quantity - N/A</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Under FY03 funding, the program demonstrated the capability of the 12 Screw Extrusion material alloying process to efficiently, effectively and economically alloy materials necessary to manufacture critical components of Fuel Cell alternative propulsion power generation equipment. Under FY04 program funding, the Twelve Screw Extrusion process will be used to fabricate Fuel Cell power generation 'stacks' to provide the electro-chemical reaction necessary to convert fuel into emission free electrical power for ground vehicle applications. In addition, the program will leverage other technology initiatives to demonstrate the capability to alloy/mix developmental materials for fabrication into lightweight, durable ground vehicle and material transport structures. We are executing the FY03 contract and scoping the FY04 phase with the additional funds.</p> <p>C. Other Program Funding Summary: N/A</p> <p>D. Acquisition Strategy: N/A</p>											FY 2003	FY 2004	FY 2005	Accomplishment/ Effort/Subtotal Cost	1.968	1.484	-----	RDT&E Articles Quantity - N/A			
	FY 2003	FY 2004	FY 2005																		
Accomplishment/ Effort/Subtotal Cost	1.968	1.484	-----																		
RDT&E Articles Quantity - N/A																					

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: February 2004																																	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7					Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8																																			
<p>A. Project Cost Breakdown Twelve Screw Extruder for Fuel Cell Technology (FCT)</p> <p>Project Cost Categories</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 10%;">FY 2003</th> <th style="width: 10%;">FY 2004</th> <th style="width: 10%;">FY 2005</th> <th colspan="3"></th> </tr> </thead> <tbody> <tr> <td>a. Manufacturing Process Support Costs</td> <td style="text-align: center;">1.968</td> <td style="text-align: center;">1.484</td> <td style="text-align: center;">-----</td> <td colspan="3"></td> </tr> </tbody> </table> <p>B. Budget Acquisition History and Planning Information</p> <p>Performing Organizations</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Contractor or Government Performing Activity</th> <th style="width: 15%;">Contractor Method/Type Or Funding Vehicle</th> <th style="width: 15%;">Award or Obligation Date</th> <th style="width: 15%;">Performing Project Activity BAC</th> <th style="width: 10%;">FY 2003</th> <th style="width: 10%;">FY 2004</th> <th style="width: 10%;">FY 2005</th> <th style="width: 10%;">Budget to Complete</th> <th style="width: 10%;">Total Program</th> </tr> </thead> <tbody> <tr> <td>U.S. Army TACOM</td> <td>MIPR</td> <td>July 03</td> <td></td> <td style="text-align: center;">1.968</td> <td style="text-align: center;">1.484</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">1.484</td> <td style="text-align: center;">3.452</td> </tr> </tbody> </table> <p>Government Furnished Property: None.</p>										FY 2003	FY 2004	FY 2005				a. Manufacturing Process Support Costs	1.968	1.484	-----				Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2003	FY 2004	FY 2005	Budget to Complete	Total Program	U.S. Army TACOM	MIPR	July 03		1.968	1.484	-----	1.484	3.452
	FY 2003	FY 2004	FY 2005																																					
a. Manufacturing Process Support Costs	1.968	1.484	-----																																					
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2003	FY 2004	FY 2005	Budget to Complete	Total Program																																
U.S. Army TACOM	MIPR	July 03		1.968	1.484	-----	1.484	3.452																																

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Exhibit R-4, Schedule Profile																	Date: February 2004											
Appropriation/Budget Activity RDT&E, Defense Wide BA 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology							Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8																
Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Establish contract milestones With revisions.			█	█	█	█																						
Create Engineering Models			█	█	█	█	█																					
Animate 12 Screw Ext Process			█	█																								
Create non-materiel model to represent process			█	█																								
Develop 12 Screw Ext Demonstrator					█	█																						
Correlate Analytical Model w/ Demonstrator performance					█	█	█																					
Fabricate Fuel Cell Stacks							█																					
Fabricate Low Rate Fuel Cell Stacks								█	█																			
Commercialize Fuel Cell Stack process									█	█																		

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Twelve Screw Extruder for Fuel Cell Technology (FCT), Project 8		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Establish contract milestones With revisions.	3-4Q	1-2Q				
Create Engineering Models	4Q	1-2Q				
Animate 12 Screw Ext Process		1-4Q				
Create non-materiel model to represent process		1-4Q				
Develop 12 Screw Ext Demonstrator		1-4Q				
Correlate Analytical Model with Demonstrator performance		3-4Q				
Fabricate Fuel Cell Stacks		4Q	1Q			
Fabricate Low Rate Fuel Cell Stacks			1-3Q			
Commercialize Fuel Cell Stack process			2-4Q			

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Supply Chain Management (SCM), Project 9			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project 9: Supply Chain Management (SCM)	-----	4.749	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: The DLA mission is to get the right item, at the right time, to the right place, at the right price, every time in support of America's warfighter. To accomplish its mission DLA must use an integrated combat logistics solution that is coordinated among the Services and across DoD to meet all combat support requirements in peace and war. There is a need for the Agency to stay abreast of the latest supply chain management principles and techniques that will improve the supply availability of DLA-managed items by optimizing supply chains to shorten lead times and reduce costs. The Agency must ensure that outsourcing strategies are coordinated, that performance metrics are in place to measure effectiveness, that the organizational structure promotes successful supply chain management and that the latest electronic commerce initiatives are incorporated into its supply chain.</p>							
B. Accomplishments/Planned Program:							
	FY 2003	FY 2004	FY 2005				
Accomplishment/ Effort/Subtotal Cost	-----	4.749	-----				
RDT&E Articles Quantity - N/A							
<p>Concurrent Technologies Corporation (CTC) has initiated some 33 Supply Chain Management projects for DLA and the Services since the inception of this program in FY 2002.</p>							
C. Other Program Funding Summary: N/A							
D. Acquisition Strategy: N/A							

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown				Date: February 2004				
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Supply Chain Management (SCM), Project 9				
A. Project Cost Breakdown								
Supply Chain Management (SCM)								
Project Cost Categories				FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				-----	4.749	-----		
B. Budget Acquisition History and Planning Information								
Performing Organizations								
Contractor or Government Performing Activity	Contractor Method/Type Or Funding Vehicle	Award or Obligation Date	Performing Project Activity BAC	FY 2003	FY 2004	FY 2005	Budget to Complete	Total Program
TBD	TBD	TBD		-----	4.749	-----	4.749	4.749
Government Furnished Property: None.								

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Exhibit R-4, Schedule Profile																							Date: February 2004									
Appropriation/Budget Activity RDT&E, Defense Wide BA 7								Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology								Project Name and Number - Supply Chain Management (SCM), Project 9																
Fiscal Year	2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
SCM Integration Planning Order																																
Virtual Data Mart																																
Equipment Readiness (MERIT & Multi-Service MERIT)																																
Supply Chain Visualization -- Source Readiness (MERIT applied to manufacturers) -- Map-enabled SPIDERS																																
DLIS Advanced Cataloging -- NCS an ISO Standard -- eOTD-based demos																																
RFID Technology Assessment																																
BSM Configuration and Technical Notification program Multi-Service CaTNP																																
TDX -- Rapid manufacturing -- Diminishing manufacturing sources -- Robust/ready small manufacturing base																																

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Supply Chain Management (SCM), Project 9		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
SCM Integration Planning Order		2-4Q	1-4Q	1-4Q	1-2Q	
Virtual Data Mart	1-4Q	1-4Q	1-4Q			
Equipment Readiness (MERIT & Multi-Service MERIT)	1-4Q	1-4Q	1-4Q			
Supply Chain Visualization	1-4Q	1-4Q	1-4Q	1-4Q		
DLIS Advanced Cataloging	2-4Q	1-4Q	1-4Q	1-4Q	1-2Q	
RFID Technology Assessment	3-4Q	1-4Q	1-4Q			
BSM Configuration and Technical Notification program Multi-Service CaTNP	1-4Q	1-4Q	1-4Q			
TDX	1-4Q	1-4Q	1-4Q	1-4Q		

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004												
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Other Congressionally Added Programs (OCAs), Project 10															
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009												
Project 10: Other Congressionally Added Programs (OCAs)	-----	3.462	-----	-----	-----	-----	-----												
RDT&E Articles Quantity - N/A																			
<p>A. Mission Description and Budget Item Justification: Congressional add. Meetings with the prospective contractor and potential DOD stakeholder still underway.</p> <p>B. Accomplishments/Planned Program:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th></th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">FY 2004</th> <th style="text-align: center;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Accomplishment/ Effort/Subtotal Cost</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">3.462</td> <td style="text-align: center;">-----</td> </tr> <tr> <td>RDT&E Articles Quantity – N/A</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><u>FY 2004:</u> These programs are in the Requirements Definition Phase and final details have not been developed:</p> <ul style="list-style-type: none"> • Next Generation Manufacturing Technology (\$2.226) • Small Business Technical Procurement (\$1.236) <p>C. Other Program Funding Summary: N/A</p> <p>D. Acquisition Strategy: N/A</p>									FY 2003	FY 2004	FY 2005	Accomplishment/ Effort/Subtotal Cost	-----	3.462	-----	RDT&E Articles Quantity – N/A			
	FY 2003	FY 2004	FY 2005																
Accomplishment/ Effort/Subtotal Cost	-----	3.462	-----																
RDT&E Articles Quantity – N/A																			

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: February 2004																																																																									
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Other Congressionally Added Programs (OCAs), Project 10																																																																												
<p>A. Project Cost Breakdown Other Congressionally Added Programs (OCAs)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Project Cost Categories</td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2003</td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2004</td> <td style="width: 10%; text-align: center; padding: 5px;">FY 2005</td> <td colspan="5"></td> </tr> <tr> <td style="padding: 5px;"> a. Manufacturing Process Support Costs</td> <td style="text-align: center; padding: 5px;">-----</td> <td style="text-align: center; padding: 5px;">3.462</td> <td style="text-align: center; padding: 5px;">-----</td> <td colspan="5"></td> </tr> </table> <p style="padding: 10px 0 0 0;">B. Budget Acquisition History and Planning Information</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4" style="padding: 5px;">Performing Organizations</td> <td style="padding: 5px;">FY 2003</td> <td style="padding: 5px;">FY 2004</td> <td style="padding: 5px;">FY 2005</td> <td style="padding: 5px;">Budget to</td> <td style="padding: 5px;">Total</td> </tr> <tr> <td style="padding: 5px;">Contractor or</td> <td style="padding: 5px;">Contractor</td> <td style="padding: 5px;">Award or</td> <td style="padding: 5px;">Performing</td> <td></td> <td></td> <td></td> <td style="padding: 5px;">Complete</td> <td style="padding: 5px;">Program</td> </tr> <tr> <td style="padding: 5px;">Government</td> <td style="padding: 5px;">Method/Type</td> <td style="padding: 5px;">Obligation</td> <td style="padding: 5px;">Project</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Performing</td> <td style="padding: 5px;">Or Funding</td> <td style="padding: 5px;">Date</td> <td style="padding: 5px;">Activity</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;"><u>Activity</u></td> <td style="padding: 5px;"><u>Vehicle</u></td> <td style="padding: 5px;">_____</td> <td style="padding: 5px;"><u>BAC</u></td> <td style="padding: 5px;">_____</td> </tr> <tr> <td style="padding: 5px;">TBD</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center; padding: 5px;">3.462</td> <td></td> <td style="text-align: center; padding: 5px;">3.462</td> <td style="text-align: center; padding: 5px;">3.462</td> </tr> </table> <p style="padding: 10px 0 0 0;">Government Furnished Property: None.</p>									Project Cost Categories	FY 2003	FY 2004	FY 2005						a. Manufacturing Process Support Costs	-----	3.462	-----						Performing Organizations				FY 2003	FY 2004	FY 2005	Budget to	Total	Contractor or	Contractor	Award or	Performing				Complete	Program	Government	Method/Type	Obligation	Project						Performing	Or Funding	Date	Activity						<u>Activity</u>	<u>Vehicle</u>	_____	<u>BAC</u>	_____	_____	_____	_____	_____	TBD					3.462		3.462	3.462
Project Cost Categories	FY 2003	FY 2004	FY 2005																																																																													
a. Manufacturing Process Support Costs	-----	3.462	-----																																																																													
Performing Organizations				FY 2003	FY 2004	FY 2005	Budget to	Total																																																																								
Contractor or	Contractor	Award or	Performing				Complete	Program																																																																								
Government	Method/Type	Obligation	Project																																																																													
Performing	Or Funding	Date	Activity																																																																													
<u>Activity</u>	<u>Vehicle</u>	_____	<u>BAC</u>	_____	_____	_____	_____	_____																																																																								
TBD					3.462		3.462	3.462																																																																								

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Exhibit R-2a, RDT&E Project Justification							Date: February 2004
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11			
Cost (\$ in millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project 11: Mfg Engineering of Spray Cooling	-----	16.819	-----	-----	-----	-----	-----
RDT&E Articles Quantity - N/A							
<p>A. Mission Description and Budget Item Justification: The Defense Microelectronics Activity (DMEA) mission is to leverage advanced technologies to extend the life of weapon systems, to solve operational problems (e.g., reliability and maintainability) and to address diminishing manufacturing sources. The DMEA provides technical and application engineering support for the implementation of advanced microelectronics research technologies from design through assembly and installation. The DMEA manages an organic capability to support these strategically important technologies within the DoD. These advanced technologies are translated into solutions for military needs. DMEA's RDT&E program is comprised of a mix of studies, investigations, planning efforts, developments, fabrications, and the insertions of solutions. This effort applies to all DoD systems using electronics e.g., F-22, B-2, AWACS, F-16, F-15, F-14, GPS, USQ-113, JAST, EA-6B, M-65, AN/TSC-93B, and AN/GSC-49 (V). Funds are required for technical and analytical support, equipment, supplies, travel, and publications.</p>							
B. Accomplishments/Planned Program:							
	FY 2003	FY 2004			FY 2005		
Accomplishment/ Effort/Subtotal Cost	-----	16.819			-----		
RDT&E Articles Quantity - N/A							
<p>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 standardize advanced spray cooling technology components and products to facilitate cross-platform migrations.</p>							
C. Other Program Funding Summary: N/A							
D. Acquisition Strategy: N/A							

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Exhibit R-3, RDT&E Program Element/Project Cost Breakdown							Date: February 2004	
Appropriation/Budget Activity RDT&E, Defense-wide BA 7				Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11				
A. Project Cost Breakdown								
Manufacturing Engineering of Spray Cooling								
Project Cost Categories				FY 2003	FY 2004	FY 2005		
a. Manufacturing Process Support Costs				-----	16.819	-----		
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 <u> </u>	Performing Project Activity <u>BAC</u>	FY 2003 <u> </u>	FY 2004 <u> </u>	FY 2005 <u> </u>	Budget to Complete <u> </u>	Total Program <u> </u>
Isothermal Systems Research	COST PLUS FIXED FEE	Mar 04		-----	16.819	-----	16.819	16.819
Government Furnished Property: None.								

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Exhibit R-4, Schedule Profile																							Date: February 2004									
Appropriation/Budget Activity RDT&E, Defense Wide BA 7					Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology									Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11																		
Fiscal Year	2003				2004				2005				2006				2007				2008				2009							
	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				
Develop key manufacturing processes and engineering design tools needed for low cost, high volume fabrication and assembly																																
Analyze vendor base and qualification activities necessary to establish a solid supplier base for all key system components																																
Implement the above into a pilot line and develop the processes needed to enable transition into a low-cost manufacturing base to ensure a reliable supply																																
Develop tools needed to support rapid in-field maintenance and logistics																																

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Exhibit R-4a, Schedule Detail						Date: February 2004
Appropriation/Budget Activity RDT&E, Defense Wide BA 7	Program Element Number and Name PE 0708011S Industrial Preparedness Manufacturing Technology			Project Name and Number - Defense Microelectronics Activity (DMEA), Mfg Engineering of Spray Cooling, Project 11		
Schedule Profile	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
Develop key manufacturing processes and engineering design tools needed for low cost, high volume fabrication and assembly		3-4Q	1-4Q			
Analyze vendor base and qualification activities necessary to establish a solid supplier base for all key system components		3-4Q	1-4Q			
Implement the above into a pilot line and develop the processes needed to enable transition into a low-cost manufacturing base to ensure a reliable supply			1-4Q			
Develop tools needed to support rapid in-field maintenance and logistics		3-4Q	1-4Q			