

UNCLASSIFIED

PE NUMBER: 0708011F
PE TITLE: Industrial Preparedness

Exhibit R-2, RDT&E Budget Item Justification									DATE May 2009																																					
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0708011F Industrial Preparedness																																									
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total																																				
Total Program Element (PE) Cost	48.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD																																				
2865 Manufacturing Technology	48.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD																																				
Note: In FY 2009 the AF Manufacturing Technology Program will transfer to PE 0603680F, Manufacturing Technologies from PE 0708011F, Industrial Preparedness, to focus on long-term manufacturing and processes and to better align with the Office of the Secretary of Defense ManTech PE. (U) A. Mission Description and Budget Item Justification This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance. (U) B. Program Change Summary (\$ in Millions) <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2008</u></th> <th style="text-align: right;"><u>FY 2009</u></th> <th style="text-align: right;"><u>FY 2010</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: right;">38.387</td> <td style="text-align: right;">0.000</td> <td></td> </tr> <tr> <td>(U) Current PBR/President's Budget</td> <td style="text-align: right;">48.987</td> <td style="text-align: right;">0.000</td> <td></td> </tr> <tr> <td>(U) Total Adjustments</td> <td style="text-align: right;">10.600</td> <td style="text-align: right;">0.000</td> <td></td> </tr> <tr> <td>(U) Congressional Program Reductions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Congressional Rescissions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Congressional Increases</td> <td style="text-align: right;">10.600</td> <td></td> <td></td> </tr> <tr> <td> Reprogrammings</td> <td></td> <td></td> <td></td> </tr> <tr> <td> SBIR/STTR Transfer</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (U) Significant Program Changes: Note: In FY 2008, Congress added \$10.6 million for: Technical Insertion Demonstration and Evaluation (TIDE) Program (\$1.2 million), High Temperature Laser Sintered												<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	(U) Previous President's Budget	38.387	0.000		(U) Current PBR/President's Budget	48.987	0.000		(U) Total Adjustments	10.600	0.000		(U) Congressional Program Reductions				Congressional Rescissions				Congressional Increases	10.600			Reprogrammings				SBIR/STTR Transfer			
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Exhibit R-2 (PE 0708011F)

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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	
Polymeric Material Digital Product Definition (\$2.0 million), Laser Peening for Friction Stir Welded (FSW) Aerospace Structures (\$1.0 million), Prepreg Thickness Variability Reduction Program (\$1.6 million), Production of Nanocomposites for Aerospace Applications (\$1.6 million), Rapid Manufacturing and Repair of Composite Components (\$1.6 million), Reconfigurable Tooling Systems (\$1.6 million).		
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Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0708011F Industrial Preparedness			PROJECT NUMBER AND TITLE 2865 Manufacturing Technology		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
2865 Manufacturing Technology	48.987	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Note: In FY 2009 the program will transfer from PE 0708011F, Industrial Preparedness, to Budget Activity 3 in PE 0603680F, Manufacturing Technologies, to better align with the Office of the Secretary of Defense's ManTech PE.

(U) **A. Mission Description and Budget Item Justification**

This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) MAJOR THRUST: Pursues affordable and efficient manufacturing investigations for critical, high quality, reliable structural, propulsion, stealth, and electronic components and assemblies required for existing and next generation aircraft.	4.241	0.000	0.000
(U) In FY 2008: Continued high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continued development of manufacturing capabilities for more affordable low-observable structures. Developed manufacturing capabilities for advanced propulsion technologies. Continued rapid response productivity improvement efforts with selected high value programs. Conducted manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.			
(U) MAJOR THRUST: Pursues cost-effective repair and manufacturing technologies for affordable sustainment components.	7.155	0.000	0.000
(U) In FY 2008: Continued cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continued ERLE technical effort to extend the life of critical, high value rotating			

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Exhibit R-2a, RDT&E Project Justification		DATE May 2009		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
07 Operational System Development	0708011F Industrial Preparedness	2865 Manufacturing Technology		
(U) B. Accomplishments/Planned Program (\$ in Millions)		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
engine components, which have been in service and scheduled for retirement. Started assessments and manufacturing technology development to reduce costs and lead times for hi-value supply chain commodities. Continued rapid response productivity improvement efforts with selected high value programs.				
(U) MAJOR THRUST: Develops efficient and cost-effective manufacturing methods for high performance, high reliability components and materials for advanced tactical missiles, aircraft missile sensors, and directed energy systems.		3.149	0.000	0.000
(U) In FY 2008: Continued to pursue cost-effective manufacturing methods for high performance, reliable components for next generation munitions. Conducted manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U) MAJOR THRUST: Addresses critical manufacturing issues for various Command, Control, Intelligence, Surveillance and Reconnaissance (C2ISR) and space platforms.		23.912	0.000	0.000
(U) In FY 2008: Continued efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continued effort on AESA to enable improved manufacturing processes, for reduced costs and cycle times and greater production capacity. Continued efforts on Affordable Datalink components to enable improved manufacturing processes for reduced costs and cycle times and increased production throughput. Conducted manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U) CONGRESSIONAL ADD: High Temperature, Laser Sintered Polymeric Material Digital Product		1.989	0.000	0.000
(U) In FY 2008: Conducted Congressionally-directed effort for High Temperature, Laser Sintered Polymeric Material Digital Product.				
(U) CONGRESSIONAL ADD: Prepreg Thickness Variability Reduction Program		1.589	0.000	0.000
(U) In FY 2008: Conducted Congressionally-directed effort for Prepreg Thickness Variability Reduction Program				
(U) CONGRESSIONAL ADD: Laser Peening for Friction Stir Welded (FSW) Aerospace Structures		0.993	0.000	0.000
(U) In FY 2008: Conducted Congressionally-directed effort for Laser Peening for Friction Stir Welded (FSW) Aerospace Structures				
(U) CONGRESSIONAL ADD: Production of Nanocomposites for Aerospace Applications		1.589	0.000	0.000
(U) In FY 2008: Conducted Congressionally-directed effort for Production of nanocomposites for Aerospace Applications				
(U) CONGRESSIONAL ADD: Reconfigurable Tooling Systems		1.589	0.000	0.000
(U) FY 2008: Conducted Congressionally-directed effort for Reconfigurable Tooling Systems				
(U) CONGRESSIONAL ADD: Technical Insertion Demonstration and Evaluation (TIDE) Program.		1.192	0.000	0.000
(U) In FY 2008: Conducted Congressionally-directed effort for Technical Insertion Demonstration and Evaluation				

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Exhibit R-2a (PE 0708011F)

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Exhibit R-2a, RDT&E Project Justification							DATE May 2009	
BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0708011F Industrial Preparedness		PROJECT NUMBER AND TITLE 2865 Manufacturing Technology		
(U)	<u>B. Accomplishments/Planned Program (\$ in Millions)</u>					<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
	(TIDE) Program.							
(U)	CONGRESSIONAL ADD: Rapid Manufacturing and Repair of Composites for High Temp Applications.					1.589	0.000	0.000
(U)	In FY 2008: Conduct Congressionally-directed effort for Rapid Manufacturing and Repair of Composites for High Temp Applications.							
(U)	Total Cost					48.987	0.000	0.000
(U)	<u>C. Other Program Funding Summary (\$ in Millions)</u>							
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
(U)	Not applicable.							
(U)	<u>D. Acquisition Strategy</u>							
	Not applicable.							

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Exhibit R-3, RDT&E Project Cost Analysis										DATE May 2009		
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0708011F Industrial Preparedness					PROJECT NUMBER AND TITLE 2865 Manufacturing Technology		
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Award</u> <u>Date</u>	<u>FY 2009</u> <u>Cost</u>	<u>FY 2009</u> <u>Award</u> <u>Date</u>	<u>FY 2010</u> <u>Cost</u>	<u>FY 2010</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
(U) <u>Product Development</u>												
Anteon	Various									0.000	0.000	
Argonne	Various										0.000	
Bell											0.000	
Boeing	Various									0.000	0.000	
Booz-Allen											0.000	
Doyle Center for MTech, PA	Various										0.000	
GE	Coop Agmt									0.000	0.000	
H.N. Burns											0.000	
Harris											0.000	
Honeywell	Various									0.000	0.000	
Infoscribe	Various										0.000	
Killdeer Mountain Manufacturing Inc.											0.000	
L3 Communications											0.000	
Lockheed Martin	Various									0.000	0.000	
Luna Technologies											0.000	
NASA Glenn											0.000	
Northrop Grumman	Various									0.000	0.000	
Pratt & Whitney	Tech Int									0.000	0.000	
	Agr									0.000	0.000	
Raytheon	Coop Agmt									0.000	0.000	
Renaissance Service Inc.											0.000	
Rockwell											0.000	
Rolls Royce											0.000	
Surmet	Various										0.000	
Tiburon											0.000	
Univ Dayton Res Inst	Cost Plus									0.000	0.000	
US Technology	Various										0.000	
UTC	Various									0.000	0.000	
Wright Brothers Institute											0.000	
Wyle											0.000	
Various	Various			48.987						Continuing	TBD	
Subtotal Product Development			0.000	48.987		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u>												
In house support											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
											0.000	

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY		PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE		
07 Operational System Development		0708011F Industrial Preparedness				2865 Manufacturing Technology		
Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) <u>Management</u>							0.000	
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U)							0.000	
Subtotal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U)							0.000	
Subtotal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost	0.000	48.987	0.000	0.000	0.000	Continuing	TBD	0.000

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Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

07 Operational System Development

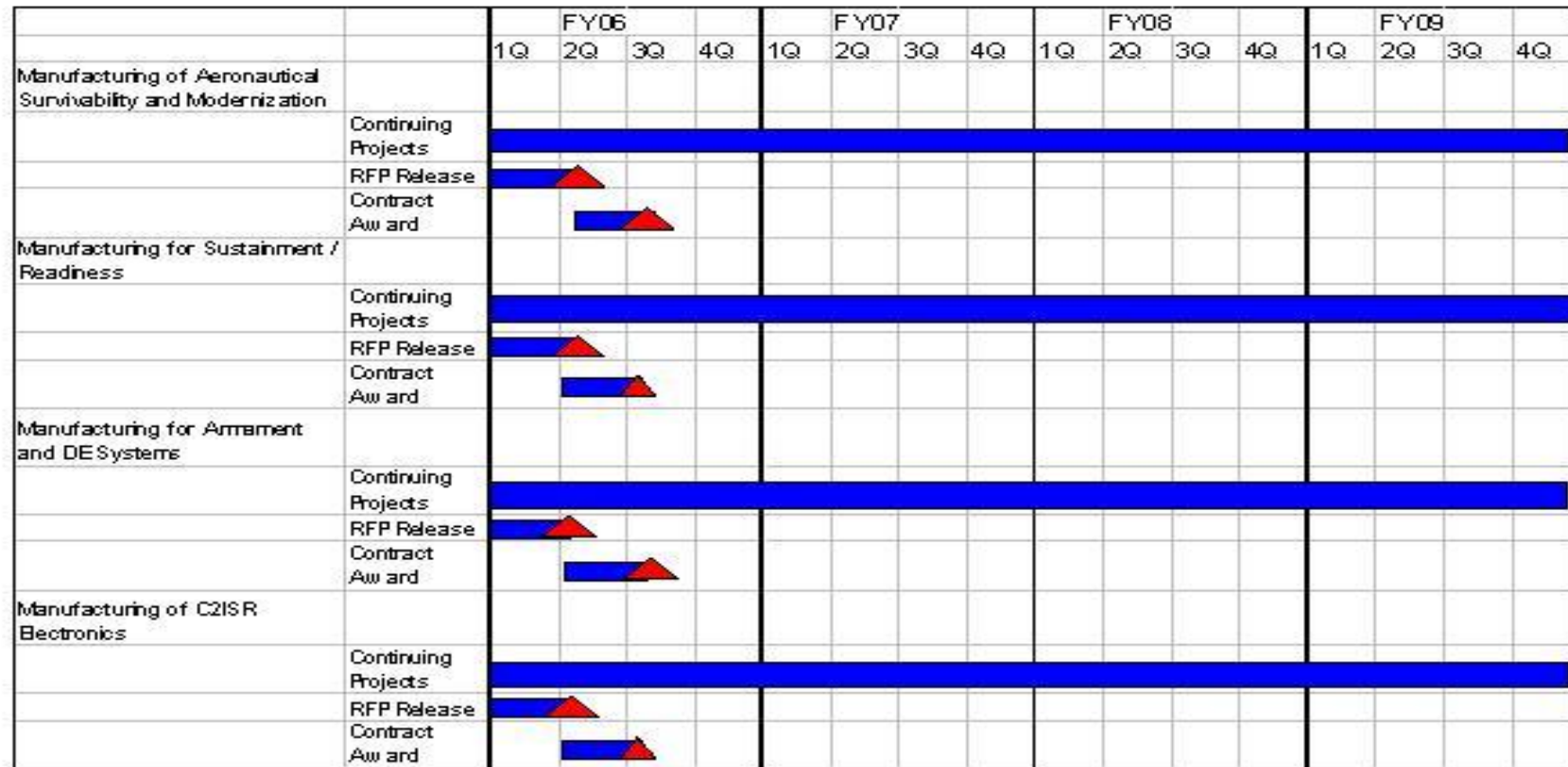
PE NUMBER AND TITLE

0708011F Industrial Preparedness

PROJECT NUMBER AND TITLE

2865 Manufacturing Technology

ManTech Schedule Summary



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Exhibit R-4a, RDT&E Schedule Detail

DATE

May 2009

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0708011F Industrial Preparedness

PROJECT NUMBER AND TITLE

2865 Manufacturing Technology

(U) **Schedule Profile**FY 2008FY 2009FY 2010

(U) Manufacturing Technology for Aeronautical Survivability and Modernization.

1-4Q

(U) Request for Proposal Release

2Q

(U) Contract Awards

3Q

(U) Manufacturing Technology for Sustainment / Readiness

1-4Q

(U) Request for Proposal Release

1Q

(U) Contract Awards

2Q

(U) Manufacturing for Armament and Directed Energy Systems.

1-4Q

(U) Request for Proposal Release

1Q

(U) Contract Awards

2Q

(U) Manufacturing for command, control, intelligence, surveillance, and reconnaissance (C2ISR) electronics

1-4Q

(U) Request for Proposal Release

1Q

(U) Contract Awards

2Q

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Exhibit R-4a (PE 0708011F)

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