

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0606323F: Multi-Service Systems Engineering							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	18.901	0.000	18.901	0.000	0.000	0.000	0.000	Continuing	Continuing
668101: MSSE and JIAMD Capability Initiative	0.000	0.000	18.901	0.000	18.901	0.000	0.000	0.000	0.000	0.000	0.000

Note

In FY 2011, this is a new PE. In FY 2010, PE 0605452F Joint Single Integrated Air Picture (SIAP) Program Executive Office efforts come to a close. This new PE (0606323F) includes follow-on efforts under the Joint Integrated Air and Missile Defense (JIAMD) initiative. FY 2011 efforts in this PE include Multi-Service Systems Engineering (MSSE), Joint Track Manager Capability (JTMC) demonstrations, and Joint Operational requirements definition.

A. Mission Description and Budget Item Justification

The near term objectives of the PE are two fold. The first is to use cross-service System Engineering (SE) expertise to develop, test and field Joint Integrated Air and Missile Defense (JIAMD) capabilities. This effort will define the incremental capability improvements toward the objective architecture and provide technical recommendations to Department of Defense (DoD) leadership on specific changes to developmental and fielded air and missile defense weapon and sensor systems necessary to achieve the war fighter desired JIAMD capability. A concerted attempt will be made to ensure minimal disruption to on-going Programs of Record (PoRs) while developing these recommendations and capability enhancements. The second objective is the development of Joint Track Management Capability.

Joint Track Management Capability

The Services, under JPEO oversight, developed a consolidated plan for Joint Track Management Capability (JTMC) for FYs 2010 and 2011. This plan will lay the foundation for the incremental fielding of JTMC to the war fighter. The intent is to define the SE process necessary to achieve JTMC and incorporate those efforts into the top-level JTMC schedule with associated deliverables. By working collaboratively with the Service PoRs, the effort will serve as a risk reduction activity on the path to fielding an initial capability in FY 2014. The SIAP/JTM Capability Development Document (CDD) which is being revised and updated in FY2010, will provide the key performance parameters (KPPs) by which success will be measured.

The initial engineering efforts will focus on the bridging of Army IAMD Integrated Fire Control Network and the Cooperative Engagement Capability (CEC) Net onboard Navy platforms. The Missile Defense Agency, Air Force and Marine Corps are exploring how they will actively participate in the requirement maturation process and system engineering efforts associated with the JTMC development.

JTMC Demonstration

UNCLASSIFIED

R-1 Line Item #107

Page 1 of 8

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force		DATE: February 2010
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<p>To evaluate and assess progress toward achieving the JTMC, a demonstration will be conducted in FY 2011. The objectives of the demonstration are to demonstrate the ability to exchange and process Associated Measurement Reports (AMRs) across dissimilar bridged networks, specifically Army IFCN and Navy CEC. Additional data that is expected to be examined include:</p> <ul style="list-style-type: none">- Characterize the ability to create composite tracks from AMRs derived from multiple-service sensors- Characterize data registration capability- Characterize track state commonality and consistency <p>The purpose of the bridging demonstration is not to assess performance, but to characterize bridge interface and functionality required as part of a JTMC proof of concept.</p> <p>There are a number of key milestones on the path to success. Some of these include the Milestone B for Army IAMD (16 December 2010) and subsequent contract award, the updated SIAP/JTM CDD in July 2010, prototype bridge development late in FY 2010, and architecture product delivery in June of 2011. During this period the Services will be going through their individual program review cycle of Critical Design Reviews (CDRs), System Readiness Reviews (SRRs) and System Design Reviews (SDRs) as well as developing test plans and conducting work-ups in preparation for the demonstration.</p> <p>The tasks associated with this effort have been divided into five categories. These categories are:</p> <ul style="list-style-type: none">- Requirements- Architecture- System Design- Demo Planning and Execution- Integration and Coordination <p>Specific tasks are defined under each of the categories and the associated deliverables are tied to that tasking. Examples of the deliverables include publishing JTMC requirements, development of CONOPs, delivery of architectural views, a system engineering plan, and a demonstration report and presentation.</p> <p>This program is categorized as Budget Activity 6 because it involves system engineering and demonstrations.</p>		

UNCLASSIFIED

R-1 Line Item #107

Page 2 of 8

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force				DATE: February 2010	
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B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	18.901	0.000	18.901
Total Adjustments	0.000	0.000	18.901	0.000	18.901
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	18.901	0.000	18.901
Change Summary Explanation					
In FY 2011, this is a new PE. In FY 2010, PE 0605452F Joint Single Integrated Air Picture (SIAP) Program Executive Office come to a close. This new PE (0606323F) includes follow-on efforts under the Joint Integrated Air and Missile Defense (JIAMD) initiative. FY 2011 efforts in this PE include Multi-Service Systems Engineering (MSSE), Joint Track Manager Capability (JTMC) demonstrations, and Joint Operational requirements definition.					

UNCLASSIFIED

R-1 Line Item #107

Page 3 of 8

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0606323F: <i>Multi-Service Systems Engineering</i>				PROJECT 668101: <i>MSSE and JIAMD Capability Initiative</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
668101: <i>MSSE and JIAMD Capability Initiative</i>	0.000	0.000	18.901	0.000	18.901	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<p>Note</p> <p>In FY 2011, this is a new PE. In FY 2010, PE 0605452F Joint Single Integrated Air Picture (SIAP) Program Executive Office efforts come to a close. This new PE (0606323F) includes follow-on efforts under the Joint Integrated Air and Missile Defense (JIAMD) initiative. FY 2011 efforts in this PE include Multi-Service Systems Engineering (MSSE), Joint Track Manager Capability (JTMC) demonstrations, and Joint Operational requirements definition.</p> <p>A. Mission Description and Budget Item Justification</p> <p>The near term objectives of the PE are two fold. The first is to use cross-service System Engineering (SE) expertise to develop, test and field Joint Integrated Air and Missile Defense (JIAMD) capabilities. This effort will define the incremental capability improvements toward the objective architecture and provide technical recommendations to Department of Defense (DoD) leadership on specific changes to developmental and fielded air and missile defense weapon and sensor systems necessary to achieve the war fighter desired JIAMD capability. A concerted attempt will be made to ensure minimal disruption to on-going Programs of Record (PoRs) while developing these recommendations and capability enhancements. The second objective is the development of Joint Track Management Capability.</p> <p>Joint Track Management Capability</p> <p>The Services, under JPEO oversight, developed a consolidated plan for Joint Track Management Capability (JTMC) for FYs 2010 and 2011. This plan will lay the foundation for the incremental fielding of JTMC to the war fighter. The intent is to define the SE process necessary to achieve JTMC and incorporate those efforts into the top-level JTMC schedule with associated deliverables. By working collaboratively with the Service PoRs, the effort will serve as a risk reduction activity on the path to fielding an initial capability in FY 2014. The SIAP/JTM Capability Development Document (CDD) which is being revised and updated in FY2010, will provide the key performance parameters (KPPs) by which success will be measured.</p> <p>The initial engineering efforts will focus on the bridging of Army IAMD Integrated Fire Control Network and the Cooperative Engagement Capability (CEC) Net onboard Navy platforms. The Missile Defense Agency, Air Force and Marine Corps are exploring how they will actively participate in the requirement maturation process and system engineering efforts associated with the JTMC development.</p> <p>JTMC Demonstration</p>											

UNCLASSIFIED

R-1 Line Item #107

Page 4 of 8

UNCLASSIFIED

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<p>To evaluate and assess progress toward achieving the JTMC, a demonstration will be conducted in FY 2011. The objectives of the demonstration are to demonstrate the ability to exchange and process Associated Measurement Reports (AMRs) across dissimilar bridged networks, specifically Army IFCN and Navy CEC. Additional data that is expected to be examined include:</p> <ul style="list-style-type: none">- Characterize the ability to create composite tracks from AMRs derived from multiple-service sensors- Characterize data registration capability- Characterize track state commonality and consistency <p>The purpose of the bridging demonstration is not to assess performance, but to characterize bridge interface and functionality required as part of a JTMC proof of concept.</p> <p>There are a number of key milestones on the path to success. Some of these include the Milestone B for Army IAMD (16 December 2010) and subsequent contract award, the updated SIAP/JTM CDD in July 2010, prototype bridge development late in FY 2010, and architecture product delivery in June of 2011. During this period the Services will be going through their individual program review cycle of Critical Design Reviews (CDRs), System Readiness Reviews (SRRs) and System Design Reviews (SDRs) as well as developing test plans and conducting work-ups in preparation for the demonstration.</p> <p>The tasks associated with this effort have been divided into five categories. These categories are:</p> <ul style="list-style-type: none">- Requirements- Architecture- System Design- Demo Planning and Execution- Integration and Coordination <p>Specific tasks are defined under each of the categories and the associated deliverables are tied to that tasking. Examples of the deliverables include publishing JTMC requirements, development of CONOPs, delivery of architectural views, a system engineering plan, and a demonstration report and presentation.</p> <p>This program is categorized as Budget Activity 6 because it involves system engineering and demonstrations.</p>						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Engineering Activity (Multi-Service Systems Engineering)		0.000	0.000	11.100	0.000	11.100

UNCLASSIFIED

R-1 Line Item #107

Page 5 of 8

UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: Will finalize system architecture for JTMC demo, process engineering change documents with programs of record, acquire final Tactical Component Network licensing. FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.					
MAJOR THRUST: Joint Track Manager Capability Demonstration FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: Will conduct bridge demonstration between Navy's Cooperative Engagement Capability (CEC) and Army Integrated Air Missile Defense Integrated Fire Control Network (AIAMD IFCN) PoRs. Develop test plans in support of demo. FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.	0.000	0.000	6.000	0.000	6.000
MAJOR THRUST: Joint Operational Requirements	0.000	0.000	1.801	0.000	1.801

UNCLASSIFIED

R-1 Line Item #107

Page 6 of 8

UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> In FY 2009: N/A <i>FY 2010 Plans:</i> In FY 2010: N/A <i>FY 2011 Base Plans:</i> In FY 2011: Will socialize revised JROC-approved SIAP/JTM Capability Development Document (CDD) changes to JIAMD community. <i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.											
Accomplishments/Planned Programs Subtotals						0.000	0.000	18.901	0.000	18.901	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE Not Provided (2681): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
Joint Track Management (JTM) will continue development in FY 2010 to establish networking capability with Service combat systems and the ability to provide a Joint Integrated Air Picture. The Milestone Decision Authority directed Joint Systems Engineering efforts to continue in FY 2011 and out in support of an enterprise realization of an Integrated Air Picture (IAP) Capability for the Services. This continuing effort will be performed by a new Program Element, MSSE and JIAMD Initiative (PE 0606323F) starting in FY 2011. The PE will continue to assist the pathfinder Services to develop, field and demonstrate incremental improvements for the Services' Programs of Record (PoRs).											

UNCLASSIFIED

UNCLASSIFIED

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E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

UNCLASSIFIED

R-1 Line Item #107

Page 8 of 8