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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 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0604436F: Next-Generation MILSATCOM Technology							
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	50.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
646001: Evolved MILSATCOM	0.000	50.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**A. Mission Description and Budget Item Justification**

This program element funds technology demonstration, development and study efforts for future Satellite Communications (SATCOM) capability enhancements. These capabilities could be utilized on future blocks of current SATCOM systems, hosted SATCOM payloads, or next-generation SATCOM systems. The goal of the effort is to sufficiently mature new technologies, system architectures, and business concepts to reduce overall risk of future SATCOM efforts and improve space/ground/terminal synchronization.

FY10 funds efforts such as: preparation and approval of the Joint Space Communications Layer Initial Capabilities Document (ICD), conducting the Materiel Solutions Analysis (MSA), development of the technologies, architectures, and business concepts for SATCOM including modification of current protected and wideband MILSATCOM systems and potential for incorporating new military-unique and/or commercial capabilities.

<b>B. Program Change Summary (\$ in Millions)</b>					
	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	50.000	0.000	0.000	0.000
Total Adjustments	0.000	50.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		50.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #52

Page 1 of 8

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Air Force		<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604436F: <i>Next-Generation MILSATCOM Technology</i>	

<p><b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b></p> <p><b>Project:</b> 646001: <i>Evolved MILSATCOM</i></p> <p style="margin-left: 40px;">Congressional Add: <i>Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements</i></p> <p style="text-align: right; margin-right: 100px;">Congressional Add Subtotals for Project: 646001</p> <p style="text-align: right;">Congressional Add Totals for all Projects</p> <p><b><u>Change Summary Explanation</u></b></p> <p>Congress added funds for studies and technology development efforts for future SATCOM capability enhancements.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="padding: 5px;">FY 2009</th> <th style="padding: 5px;">FY 2010</th> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="height: 20px;">0.000</td> <td style="height: 20px;">50.000</td> </tr> <tr> <td style="height: 20px;">0.000</td> <td style="height: 20px;">50.000</td> </tr> <tr> <td style="height: 20px;">0.000</td> <td style="height: 20px;">50.000</td> </tr> </table>	FY 2009	FY 2010			0.000	50.000	0.000	50.000	0.000	50.000
FY 2009	FY 2010										
0.000	50.000										
0.000	50.000										
0.000	50.000										

**UNCLASSIFIED**

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010									
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604436F: <i>Next-Generation MILSATCOM Technology</i>				<b>PROJECT</b> 646001: <i>Evolved MILSATCOM</i>									
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>						
646001: <i>Evolved MILSATCOM</i>	0.000	50.000	0.000	0.000	0.000	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><b>A. Mission Description and Budget Item Justification</b></p> <p>This program element funds technology demonstration, development and study efforts for future Satellite Communications (SATCOM) capability enhancements. These capabilities could be utilized on future blocks of current SATCOM systems, hosted SATCOM payloads, or next-generation SATCOM systems. The goal of the effort is to sufficiently mature new technologies, system architectures, and business concepts to reduce overall risk of future SATCOM efforts and improve space/ground/terminal synchronization.</p> <p>FY10 funds efforts such as: preparation and approval of the Joint Space Communications Layer Initial Capabilities Document (ICD), conducting the Materiel Solutions Analysis (MSA), development of the technologies, architectures, and business concepts for SATCOM including modification of current protected and wideband MILSATCOM systems and potential for incorporating new military-unique and/or commercial capabilities.</p> <p><b>B. Accomplishments/Planned Program (\$ in Millions)</b></p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width:60%;"></td> <td style="width:20%; text-align: center;"><b>FY 2009</b></td> <td style="width:20%; text-align: center;"><b>FY 2010</b></td> </tr> <tr> <td>                     Congressional Add: Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements   <i>FY 2009 Accomplishments:</i>                          In FY2009: N/A   <i>FY 2010 Plans:</i>                          In FY2010: The program will fund completion of a Joint Space Communications Layer ICD; conduct Materiel Solutions Analysis (MSA) efforts; develop capability insertion program (CIP) and commercial capability plans; provide technical support, including studies and analysis; provide program office support and other related activities.                 </td> <td align="center" style="vertical-align: top;">0.000</td> <td align="center" style="vertical-align: top;">50.000</td> </tr> </table>													<b>FY 2009</b>	<b>FY 2010</b>	Congressional Add: Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements  <i>FY 2009 Accomplishments:</i> In FY2009: N/A  <i>FY 2010 Plans:</i> In FY2010: The program will fund completion of a Joint Space Communications Layer ICD; conduct Materiel Solutions Analysis (MSA) efforts; develop capability insertion program (CIP) and commercial capability plans; provide technical support, including studies and analysis; provide program office support and other related activities.	0.000	50.000
	<b>FY 2009</b>	<b>FY 2010</b>															
Congressional Add: Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements  <i>FY 2009 Accomplishments:</i> In FY2009: N/A  <i>FY 2010 Plans:</i> In FY2010: The program will fund completion of a Joint Space Communications Layer ICD; conduct Materiel Solutions Analysis (MSA) efforts; develop capability insertion program (CIP) and commercial capability plans; provide technical support, including studies and analysis; provide program office support and other related activities.	0.000	50.000															

**UNCLASSIFIED**

R-1 Line Item #52

Page 3 of 8

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force										DATE: February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604436F: <i>Next-Generation MILSATCOM Technology</i>				<b>PROJECT</b> 646001: <i>Evolved MILSATCOM</i>			
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
										<b>FY 2009</b>	<b>FY 2010</b>
Congressional Adds Subtotals										0.000	50.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PE 0603430F: <i>AEHF, RDT&amp;E</i>	441.401	461.667	351.817	0.000	351.817	740.127	997.888	1,022.755	1,327.126	0.000	0.000
• PE 0303604F: <i>AEHF, MPAF</i>	182.622	1,837.302	246.598	0.000	246.598	875.862	287.001	953.411	322.273	0.000	0.000
• PE 0603854F: <i>WGS, RDT&amp;E</i>	9.891	52.329	17.949	0.000	17.949	0.000	0.000	0.000	0.000	0.000	382.445
• PE 0303600F: <i>WGS, MPAF</i>	51.628	213.440	575.711	0.000	575.711	473.356	23.103	34.937	100.334	0.000	0.000
• PE 0303601F: <i>MILSATCOM Terminals, RDT&amp;E</i>	277.501	253.318	186.582	0.000	186.582	105.274	79.768	15.301	13.723	0.000	0.000
• PE 0303601F (1): <i>MILSATCOM Terminals, OPAF</i>	105.919	138.736	219.634	0.000	219.634	368.487	340.066	250.769	100.679	0.000	0.000
• PE 0303601F (2): <i>MILSATCOM Terminals, APAF</i>	0.000	72.639	152.594	0.000	152.594	282.867	247.119	129.233	83.291	0.000	0.000
<b>D. Acquisition Strategy</b>											
Upon completion of the ICD the program will proceed through a Materiel Design Decision (MDD) and MSA which will determine the mix of enhancements to existing systems and potential for incorporating new military-unique and/or commercial capabilities.											
<b>E. Performance Metrics</b>											
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 #52

Page 4 of 8

# UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				<b>R-1 ITEM NOMENCLATURE</b> PE 0604436F: Next-Generation MILSATCOM Technology				<b>PROJECT</b> 646001: Evolved MILSATCOM					
<b>Product Development (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Capability Insertion Program Studies	Various/ Various	Various Various	0.000	23.637	Feb 2010	0.000		0.000		0.000	0.000	23.637	0.000
Technology Development & Demonstration	Various/ Various	Various Various	0.000	9.907	Apr 2010	0.000		0.000		0.000	0.000	9.907	0.000
<b>Subtotal</b>			0.000	33.544		0.000		0.000		0.000	0.000	33.544	0.000
<b>Remarks</b>													
<b>Support (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical analysis & support	Various/ Various	Various Various	0.000	6.504	Feb 2010	0.000		0.000		0.000	0.000	6.504	0.000
Analysis of Alternatives (AoA) support	Various/ Various	Various Various	0.000	6.200	Apr 2010	0.000		0.000		0.000	0.000	6.200	0.000
Program Office Support	TBD/TBD	TBD TBD	0.000	3.752	Feb 2010	0.000		0.000		0.000	0.000	3.752	0.000
<b>Subtotal</b>			0.000	16.456		0.000		0.000		0.000	0.000	16.456	0.000
<b>Remarks</b>													

# UNCLASSIFIED

R-1 Line Item #52

Page 5 of 8

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Air Force							<b>DATE:</b> February 2010				
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	<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	0.000	50.000		0.000		0.000		0.000	0.000	50.000	0.000
<b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.											

**UNCLASSIFIED**

R-1 Line Item #52

Page 6 of 8

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force**

**DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: *Research, Development, Test & Evaluation, Air Force*  
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

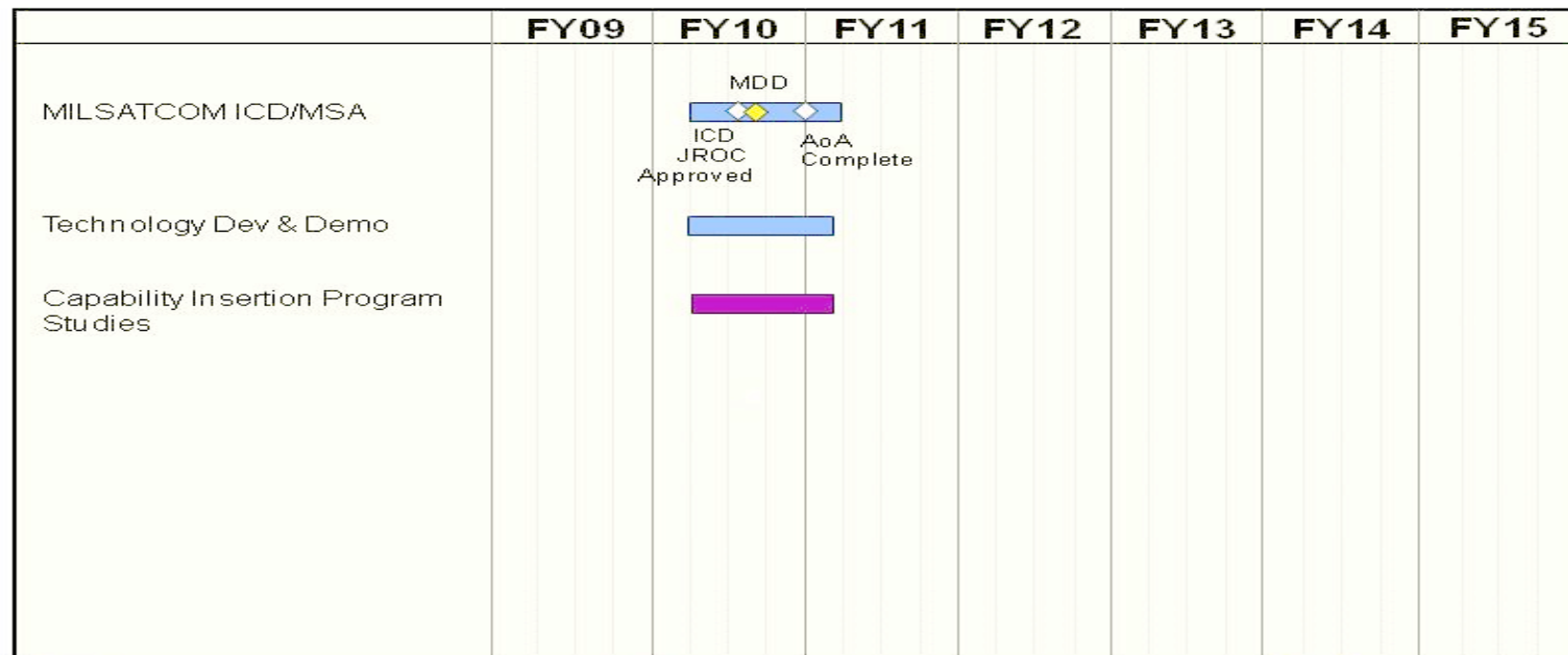
**R-1 ITEM NOMENCLATURE**

PE 0604436F: *Next-Generation MILSATCOM Technology*

**PROJECT**

646001: *Evolved MILSATCOM*

**PE 0604436F – Next Generation MILSATCOM Technology Development**



■ Concept activities  
■ Production / fielding

■ Design / development  
■ Operations / sustainment

■ Integration / test  
△◇ Key events

R-4 Program Schedule Detail

**UNCLASSIFIED**

R-1 Line Item #52

Page 7 of 8

**UNCLASSIFIED**

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0604436F: Next-Generation MILSATCOM Technology		PROJECT 646001: Evolved MILSATCOM
Schedule Details				
Event	Start		End	
	Quarter	Year	Quarter	Year
	2	2010	2	2010
	3	2010	3	2010
	4	2010	4	2010

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