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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2012 Air Force **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				PE 0604436F: <i>Next-Generation MILSATCOM Technology</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	49.791	-	-	-	-	-	-	-	-	Continuing	Continuing
646001: <i>Evolved MILSATCOM</i>	49.791	-	-	-	-	-	-	-	-	Continuing	Continuing

**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 funded 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. No funds are requested in FY12.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	50.000	-	-	-	-
Current President's Budget	49.791	-	-	-	-
Total Adjustments	-0.209	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.209	-	-	-	-

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 646001: *Evolved MILSATCOM*

Congressional Add: *Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements*

Congressional Add Subtotals for Project: 646001

Congressional Add Totals for all Projects

<b>FY 2010</b>	<b>FY 2011</b>
49.791	-
49.791	-
49.791	-

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<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><u><b>Change Summary Explanation</b></u> None.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
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			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
646001: Evolved MILSATCOM	49.791	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
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 funded 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. No funds are requested in FY12.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011		
Congressional Add: Funds studies and technology demonstration and development efforts for future SATCOM capability enhancements								49.791	-		
FY 2010 Accomplishments: In FY2010: Funded support for the Joint Space Communications Layer ICD, architecture definition exercises in support of future Materiel Solutions Analysis (MSA) efforts, AEHF Capability Insertion Program (CIP) program planning for SV 7/8, crypto obsolescence and information assurance efforts, commercial Request For Proposal (RFP)/source selection supporting Broad Agency Announcements (BAA), future architecture definition including studies and analysis, Lincoln Labs technology defintion/capability harvests, support for alternative commercial industry product source development, AEHF CIP technology demonstration, and provided program office support and other related activities.											
FY 2011 Plans: Not applicable											
Congressional Adds Subtotals								49.791	-		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDT&E AF: PE 0603430F, AEHF, BPAC 644050	456.238	351.817	280.096	0.000	280.096	160.671	64.596	38.065	0.000	Continuing	Continuing
• RDT&E AF (1): PE 0603430F, AEHF, BPAC 64A030	0.000	0.000	142.914	0.000	142.914	233.654	297.061	306.355	216.792	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0604436F: Next-Generation MILSATCOM Technology	646001: Evolved MILSATCOM

## C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• MPAF: PE 0303604F, AEHF	1,836.687	246.598	551.894	0.000	551.894	556.362	543.230	487.151	687.508	Continuing	Continuing
• RDT&E AF (3): PE 0603854F, WGS	42.543	17.949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF (4): PE 0303600F, WGS	212.418	575.711	468.914	0.000	468.914	50.669	62.356	97.177	98.425	Continuing	Continuing
• RDT&E AF (5): PE 0303601F, MILSATCOM Terminals	253.818	186.582	270.326	0.000	270.326	198.117	16.043	13.094	13.346	Continuing	Continuing
• OPAF: PE 0303601F, MILSATCOM Terminals	106.536	219.634	106.843	0.000	106.843	360.505	193.169	56.979	58.005	Continuing	Continuing
• APAF: PE 0303601F, MILSATCOM Terminals	72.639	152.594	57.150	0.000	57.150	89.400	185.588	126.969	129.276	Continuing	Continuing

## D. Acquisition Strategy

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.

## 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
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					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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,	24.171	-		-		-		-	0.000	24.171	0.000
Technology Development & Demonstration	Various	Lincoln Laboratory:Lexington, MA	7.800	-		-		-		-	0.000	7.800	0.000
Subtotal			31.971	-		-		-		-	0.000	31.971	0.000
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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,	4.500	-		-		-		-	0.000	4.500	0.000
Analysis of Alternatives (AoA) support	Various	The Aerospace Corporation:El Segundo, CA	9.640	-		-		-		-	0.000	9.640	0.000
Program Office Support	Various	Various:Various,	3.680	-		-		-		-	0.000	3.680	0.000
Subtotal			17.820	-		-		-		-	0.000	17.820	0.000
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Subtotal			-	-		-		-		-	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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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					
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			49.791	-		-		-		-	0.000	49.791	0.000

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force	PE 0604436F: Next-Generation MILSATCOM	646001: Evolved MILSATCOM
BA 4: Advanced Component Development & Prototypes (ACD&P)	Technology	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<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>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JROC approved ICD	4	2010	4	2010

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