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

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>							
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
Total Program Element	82.056	78.784	43.811	-	43.811	19.787	13.791	5.862	0.927	Continuing	Continuing
672832: <i>MEECN System Improvements</i>	1.790	1.299	0.786	-	0.786	0.822	0.851	0.887	0.927	Continuing	Continuing
674610: <i>Minuteman MEECN Program (MMP)</i>	21.127	32.029	10.465	-	10.465	-	-	-	-	Continuing	Continuing
675047: <i>Ground Element MEECN System (GEMS)</i>	59.139	45.456	14.491	-	14.491	6.063	-	-	-	Continuing	Continuing
675378: <i>Long Term Solution</i>	-	-	18.069	-	18.069	12.902	12.940	4.975	-	Continuing	Continuing

Note

In FY 2012, Project 675378 Long Term Solution (LTS) includes new start efforts.

The program funding for Project 672832 MEECN System Improvements (MSI) includes reductions for Reports/Studies/Board efficiencies that are not intended to impact program content. The efficiencies reductions total \$292K in FY12.

A. Mission Description and Budget Item Justification

Minimum Essential Emergency Communications Network (MEECN) systems provide assured communications connectivity between the President and the strategic deterrent forces in stressed environments. There are four on-going MEECN activities working to modernize strategic forces' communication networks.

MEECN System Improvements (MSI) is a long-range planning process with users (Air Force Global Strike Command (AFGSC), Air Combat Command (ACC), Air Force Space Command (AFSPC), Air Mobility Command (AMC), US Strategic Command (USSTRATCOM), and the Navy) to develop positions for current and future requirements/issues based on available technology.

Minuteman MEECN Program Upgrade (MMPU) updates existing systems composed of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) communications along with a Minuteman ICBM LCC Extremely High Frequency (EHF) communications capability. MMPU will provide a capability in the LCC for the Missile Combat Crew Members to have operator control of the terminal to switch among various EHF/Advanced EHF (AEHF) satellite constellations and be compatible with Advanced EHF (AEHF). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at High Data Rate (HDR) frequencies than the Low Data Rate (LDR) frequencies currently used on MILSTAR satellites.

Ground Element MEECN Systems (GEMS) provides secure, survivable inter-site, intra-site, and mobile VLF and EHF communication to bomber, tanker, reconnaissance units and other communications facilities with strategic responsibilities. GEMS will also be upgraded to be compatible with AEHF.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>
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Long Term Solution (LTS) will replace the current Nuclear Command, Control and Communications (NC3) Hybrid Solution and provide a worldwide, robust, non-survivable NC3 network for specialized messaging services to meet Nuclear Technical Performance Criteria (NTPC) requirements for Emergency Action Message (EAM) dissemination.

This program is in Budget Activity 07, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	72.360	78.784	10.855	-	10.855
Current President's Budget	82.056	78.784	43.811	-	43.811
Total Adjustments	9.696	-	32.956	-	32.956
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	9.999	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.303	-	32.956	-	32.956

Change Summary Explanation

FY10 funding increase includes \$6.715M for MPMU to complete remaining RDT&E effort, \$2.997M for GEMS due to programmatic/technical issues, and a funding decrease includes \$303K due to higher AF priorities.

FY12 funding changes include \$18.069M initial funding for new start LTS, additional \$10.465M to complete MPMU integration and test, additional \$4.952M for GEMS due to program delays, and decreases for MSI including a \$292K reduction for Reports/Studies/Boards efficiencies and \$238K for other higher AF priorities.

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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				PROJECT 672832: MEECN System Improvements			
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
672832: MEECN System Improvements	1.790	1.299	0.786	-	0.786	0.822	0.851	0.887	0.927	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
MEECN System Improvements (MSI) is a long-range planning process with users (Air Combat Command (ACC), Air Force Space Command (AFSPC), Air Force Global Strike Command (AFGSC), Air Mobility Command (AMC), US Strategic Command (USSTRATCOM), and the Navy) to develop positions for current and future requirements/issues based on available technology. Trade-off analysis is performed to identify benefits and drawbacks of maintaining current systems. Studies are conducted to monitor communications system technology and potential integration complexities into current and future capabilities. MSI provides pro-active support to the Nuclear and National C2 community: Develops an Air Force National Command and Control (NC2) Roadmap for FYDP budget inputs. Partner with Navy on Common VLF Receiver (CVR) requirements and architectural design. .											
This program is in Budget Activity 07, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and antipcate production funding in the current or subsequent fiscal year.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: MEECN System Improvements							1.790	1.299	0.786	-	0.786
Description: NC2 Studies & Analysis											
FY 2010 Accomplishments: Develop NC2 Architecture Roadmap; conduct Common VLF Receiver Trade-off Analysis											
FY 2011 Plans: Develop NC2 Architecture Roadmap; conduct Common VLF Receiver Trade-off Analysis											
FY 2012 Base Plans: Develop NC2 Architecture Roadmap; conduct Common VLF Receiver Trade-off Analysis											
FY 2012 OCO Plans:											
Accomplishments/Planned Programs Subtotals							1.790	1.299	0.786	-	0.786

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 672832: <i>MEECN System Improvements</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Johns Hopkins University (JHU) Applied Physics Lab (APL) is on contract to provide updates to the NC2 Roadmap and assist with a VLF/LF Modernization initiative.

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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				PROJECT 672832: MEECN System Improvements						
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	
Circular Error Probable (CEP) Analysis	MIPR	JHU APL:Laurel, MD	0.805	-		-		-		-	0.000	0.805	0.805	
NC2 Roadmap	MIPR	JHU APL:Laurel, MD	3.805	0.665	Dec 2010	0.305	Dec 2011	-		0.305	Continuing	Continuing	TBD	
Simulation/Modeling Equipment	MIPR	Lincoln Labs:Bedford, MA	2.224	-		-		-		-	0.000	2.224	2.224	
Vol VII EAM Format Updates	C/CPAF	GDCS:Needham, MA	0.500	-		-		-		-	0.000	0.500	0.500	
VLF/LF Modernization Studies	MIPR	SPAWAR:San Diego, CA	0.605	0.100	Nov 2010	0.100	Nov 2011	-		0.100	Continuing	Continuing	TBD	
Subtotal			7.939	0.765		0.405		-		0.405				
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	
Engineering and Acquisition Support	Various	Various:Various,	9.658	0.534	Jan 2011	0.381	Jan 2012	-		0.381	Continuing	Continuing	TBD	
MITRE	TBD	TBD:Bedford, MA	0.633	-		-		-		-	0.000	0.633	0.633	
Subtotal			10.291	0.534		0.381		-		0.381				
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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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				PROJECT 672832: MEECN System Improvements						
				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				18.230	1.299		0.786		-		0.786			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)	PROJECT 672832: MEECN System Improvements
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 672832: <i>MEECN System Improvements</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
NC2 Studies and Analysis	1	2010	4	2016
NC2 Roadmap Debriefs	2	2012	2	2012

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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				PROJECT 674610: Minuteman MEECN Program (MMP)			
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
674610: Minuteman MEECN Program (MMP)	21.127	32.029	10.465	-	10.465	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
The Minuteman MEECN Program Upgrade (MMPU) modernizes existing Minuteman ICBM Launch Control Center (LCC) Extremely High Frequency (EHF) communications to provide a capability for Missile Combat Crew Members to have operator control of the terminal in the LCC to switch rapidly among various EHF/Advanced EHF (AEHF) satellite constellations. This upgrade will be compatible with AEHF satellite and the supporting key management infrastructure (crypto interoperability). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at High Data Rate (HDR) frequencies than the Low Data Rate (LDR) frequencies currently used on MILSTAR satellites. The AEHF terminal will provide both receive and report-back capability. The terminal operator control modification will allow missile combat crews to transition between MILSTAR and AEHF satellite constellations without dispatch of a maintenance team. These modifications comply with USSTRATCOM requirement for MMP terminals to communicate at higher data rates. Due to late availability of AEHF satellite and supporting ground and over the air infrastructure, additional MMPU regression testing is planned for FY11 and FY12.											
This program is in Budget Activity 07, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and antipcate production funding in the current or subsequent fiscal year.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: MMP Upgrade Engineering and Manufacturing Development							21.127	32.029	10.465	-	10.465
Description: MMP Upgrade Engineering and Manufacturing Development											
FY 2010 Accomplishments: Continued Engineering and Manufacturing Development (combined MILSTAR LDR/AEHF XDR modem design, cryptographic upgrade, hardware and software development, antenna integration, development and prime item testing with on-orbit MILSTAR satellite and AEHF satellite simulator (SATSIM)).											
FY 2011 Plans: Continue EMD phase and conduct weapon system testing (WST) and operational testing (OT) with on-orbit MILSTAR LDR satellite. Also continue AEHF development testing and conduct AEHF on-orbit XDR testing to verify interoperability with AEHF satellite and supporting communications/cryptographic infrastructure in preparation for combined MILSTAR LDR/AEHF XDR on-orbit WST and OT.											
FY 2012 Base Plans:											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>		PROJECT 674610: <i>Minuteman MEECN Program (MMP)</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Complete integration and test with MILSTAR LDR/AEHF XDR satellites and supporting communications/cryptographic infrastructure.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	21.127	32.029	10.465	-	10.465

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
• PE0303131F: <i>MEECN, MPAF</i>	0.000	0.000	40.991	0.000	40.991	16.573	12.376	0.000	0.000	Continuing
										Continuing

D. Acquisition Strategy

The ICBM Prime Integrating Contract (IPIC), through OO-ALC, Hill AFB, UT, was used as a contracting vehicle for the legacy Minuteman MEECN Program (MMP) and the contractor will continue to serve in an advisory role for integration support for the MMPU program.

Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. The MMPU EMD effort was a full and open competition and was awarded to Raytheon Company, Marlborough, MA on 15 Jan 08.

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				R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				674610: Minuteman MEECN Program (MMP)					
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
MMP Development	C/CPAF	Northrop Grumman:Layton, UT	46.069	-		-		-		-	0.000	46.069	46.069
MMP Upgrade Technology Development	C/FFP	Rockwell Collins & Raytheon:Various,	16.566	-		-		-		-	0.000	16.566	16.566
MMP Upgrade Program Integrator (Advisor)	C/TBD	Northrop Grumman:Layton, UT	6.122	3.494	Feb 2011	1.050	Feb 2012	-		1.050	0.000	10.666	10.600
MMP Upgrade Engineering Manufacturing & Development	C/CPAF	Raytheon Company:Marlboro, MA	59.989	23.880	Dec 2010	6.465	Dec 2011	-		6.465	0.000	90.334	83.977
Subtotal			128.746	27.374		7.515		-		7.515	0.000	163.635	157.212
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
Engineering and Acquisition Support	Various	Various:Various,	9.135	2.164	Dec 2010	1.950	Dec 2011	-		1.950	0.000	13.249	13.288
MITRE	SS/CPFF	MITRE:Bedford, MA	7.437	1.983	Oct 2010	0.750	Oct 2012	-		0.750	0.000	10.170	10.067
PMA	Various	Various:Various,	0.591	0.378	Dec 2010	0.100	Dec 2011	-		0.100	0.000	1.069	0.940
Subtotal			17.163	4.525		2.800		-		2.800	0.000	24.488	24.295
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
Various	Various	Various:Various,	0.276	0.130	Mar 2011	0.150	Mar 2012	-		0.150	0.000	0.556	0.492
Subtotal			0.276	0.130		0.150		-		0.150	0.000	0.556	0.492

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>				PROJECT 674610: <i>Minuteman MEECN Program (MMP)</i>					

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

	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	146.185	32.029		10.465		-		10.465	0.000	188.679	181.999

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 674610: <i>Minuteman MEECN Program (MMP)</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 674610: <i>Minuteman MEECN Program (MMP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering Manufacturing & Development (started in 2008)	1	2010	4	2011
Integration and Test	1	2011	4	2012
Milestone C	1	2012	1	2012
Initial Operational Capability	3	2013	3	2013
Full Operational Capability	4	2014	4	2014

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				PROJECT 675047: Ground Element MEECN System (GEMS)			
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
675047: Ground Element MEECN System (GEMS)	59.139	45.456	14.491	-	14.491	6.063	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Ground Element MEECN Systems (GEMS) will be comprised of EHF/AEHF, VLF/LF, HF, UHF and Aircrew Alerting components and will provide secure, survivable inter-site, intra-site and mobile communications to bomber, tanker, reconnaissance and other communications facilities with strategic responsibilities. GEMS terminals will be developed and fielded to replace strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals. GEMS will also replace the Aircraft Alerting Communications Electromagnetic Pulse System/Electromagnetic Pulse Hardened Dispersal Communications (AACE/EHDC) systems. - GEMS' primary mission is to provide strategic Wing Command Posts and mobile support teams survivable communication paths to receive EAMs and Force Management messages from Nuclear Command and Control (NC2) nodes and disseminate them to bomber, tanker, and recce aircrews. - GEMS will provide solutions to existing capability shortfalls for NC2 and has significant potential to provide distributed and transportable command and control capabilities beyond the traditional NC2 mission - GEMS is the last line of operational comm when all other peacetime links fail.

This program is in Budget Activity 07, Operational System Development, because this budget activity includes developoment efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequen fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Engineering and Manufacturing Development	59.139	45.456	14.491	-	14.491
Description: Engineering and Manufacturing Development					
FY 2010 Accomplishments: Engineering and Manufacturing Development to include: EHF, VLF, HF and UHF integration of modem design, cryptographic upgrade, software development, antenna integration and pager/klaxon development.					
FY 2011 Plans: Engineering and Manufacturing Development to include: EHF, VLF, HF and UHF integration of modem design, cryptographic upgrade, software development, antenna integration and pager/klaxon development.					
FY 2012 Base Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions)											
						FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
Engineering and Manufacturing Development to include: EHF, VLF, HF and UHF integration of modem design, cryptographic upgrade, software development, antenna integration and pager/klaxon development. Integration and test of the developed hardware and software.											
<i>FY 2012 OCO Plans:</i>											
Accomplishments/Planned Programs Subtotals						59.139	45.456	14.491	-	14.491	
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
• PE0303131F: <i>MEECN, OPAF</i>	0.000	0.000	0.000	0.000	0.000	0.000	38.803	33.104	33.714	Continuing	Continuing
D. Acquisition Strategy											
Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. Rockwell Collins of Cedar Rapids, IA was awarded the Cost Plus Award Fee (CPAF) Engineering Manufacturing and Development (EMD) and production contract on 23 June 2005.											
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				R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0303131F: Minimum Essential Emergency Communications Network (MEECN)				675047: Ground Element MEECN System (GEMS)					
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
Engineering and Manufacturing Development	SS/CPAF	Rockwell Collins:Cedar Rapids, IA	238.355	39.143	Dec 2010	10.097	Dec 2011	-		10.097	Continuing	Continuing	TBD
Subtotal			238.355	39.143		10.097		-		10.097			
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
Engineering and Acquisition Support	Various	Various:Various,	15.329	2.991	Dec 2010	2.100	Dec 2011	-		2.100	Continuing	Continuing	TBD
MITRE	WR	MITRE:Bedford, MA	10.544	2.522	Oct 2010	1.600	Oct 2011	-		1.600	Continuing	Continuing	TBD
Subtotal			25.873	5.513		3.700		-		3.700			
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
Various	Various	Various:Various,	1.943	0.275	Feb 2011	0.544	Feb 2012	-		0.544	Continuing	Continuing	TBD
Subtotal			1.943	0.275		0.544		-		0.544			
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
PMA	Various	Various:Various,	2.066	0.525	Dec 2010	0.150	Dec 2011	-		0.150	Continuing	Continuing	TBD
Subtotal			2.066	0.525		0.150		-		0.150			
			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			268.237	45.456		14.491		-		14.491			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force						DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>			PROJECT 675047: <i>Ground Element MEECN System (GEMS)</i>		
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Remarks								

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 675047: <i>Ground Element MEECN System (GEMS)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering Manufacturing & Development (started FY05)	1	2010	4	2012
Integration and Test	4	2012	4	2014
Milestone C	4	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>				PROJECT 675378: <i>Long Term Solution</i>			
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
675378: <i>Long Term Solution</i>	-	-	18.069	-	18.069	12.902	12.940	4.975	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note Long Term Solution (LTS) is an FY12 New Start.											
A. Mission Description and Budget Item Justification LTS will replace the current Nuclear Command, Control and Communications (NC3) Hybrid Solution which consists of Navy's Nova system and Air Forces's Strategic Automated Command and Control System (SACCS), and will provide a worldwide, robust, non-survivable NC3 network for specialized messaging services to meet Nuclear Technical Performance Criteria (NTPC) requirements for Emergency Action Message (EAM) dissemination. The mission of the NC3 message service is to provide accurate and reliable delivery of time-critical messages from the Executing Command Authority to nuclear forces and other authorized subscribers. NC3 LTS provides NC3 messaging services to the JS-approved NC2 subscribers and critical interfaces (~350). This program is in Budget Activity 07, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Engineering and Manufacturing Development							-	-	18.069	-	18.069
Description: Design & develop IP based NC3 communications network											
FY 2010 Accomplishments:											
FY 2011 Plans:											
FY 2012 Base Plans:											
Design and develop IP based NC3 communications network. Support Milestone B decision process.											
FY 2012 OCO Plans:											
Accomplishments/Planned Programs Subtotals							-	-	18.069	-	18.069

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 675378: <i>Long Term Solution</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• MEECN: <i>PE0303131F, OPAF</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.987	21.977	Continuing	Continuing

D. Acquisition Strategy

LTS Program Engineering and Manufacturing Development effort will be a full and open competition.

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: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>				PROJECT 675378: <i>Long Term Solution</i>					
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
Design IP-based NC2	C/TBD	TBD:TBD,	-	-		16.440	Dec 2011	-		16.440	Continuing	Continuing	TBD
Subtotal			-	-		16.440		-		16.440			
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
Engineering & Acquisition Support	Various	TBD:,	-	-		1.629	Dec 2011	-		1.629	Continuing	Continuing	TBD
Subtotal			-	-		1.629		-		1.629			
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
			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			-	-		18.069		-		18.069			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 675378: <i>Long Term Solution</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0303131F: <i>Minimum Essential Emergency Communications Network (MEECN)</i>	PROJECT 675378: <i>Long Term Solution</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Long Term Solution (LTS) Milestone B	1	2012	1	2012
LTS Milestone C	2	2015	2	2015

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