

UNCLASSIFIED

PE NUMBER: 0303131F

PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential Emergency Communications Network (MEECN)

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	17.973	48.327	64.109	44.232	13.227	2.978	2.508	Continuing	TBD
2832 MEECN System Improvements	2.093	3.394	3.114	3.297	3.252	2.978	2.508	Continuing	TBD
4521 DIRECT	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
4610 Minuteman MEECN Program (MMP)	1.198	2.581	22.633	36.175	5.139	0.000	0.000	0.000	TBD
5047 Ground Element MEECN System (GEMS)	14.454	42.352	38.362	4.760	4.836	0.000	0.000	0.000	TBD

(U) **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. Modernization efforts upgrade network ground, airborne, and missile communications elements.

Currently these systems include:

- MEECN System Improvements (MSI) is a long range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC) and Navy) to develop positions for current and future requirements/issues based on available technology
- Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT). Upgrades hardware and software to ensure the capability for the President to transmit nuclear and non-nuclear EAMs and other time-critical messages to strategic and non-strategic forces
- Minuteman MEECN Program (MMP) - is the combination of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) upgrade efforts along with a new Minuteman ICBM Extremely High Frequency (EHF) communications capability
- Ground Element MEECN System (GEMS) - provides a secure, survivable inter-site, intra-site and mobile VLF and EHF communications to bomber, tanker and other communication facilities with strategic responsibilities. Replaces existing mission-deficient, unsustainable systems

Future capability will include Advanced EHF (AEHF) on MMP and GEMS.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

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(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	32.539	57.344	47.622
(U) Current PBR/President's Budget	17.973	48.327	64.109
(U) Total Adjustments	-14.566	-9.017	
(U) Congressional Program Reductions		-8.317	
Congressional Rescissions	-0.050	-0.700	
Congressional Increases			
Reprogrammings	-13.685		
SBIR/STTR Transfer	-0.831		
(U) <u>Significant Program Changes:</u>			
FY07: GEMS program restructured and production start slipped from FY06 to FY08.			

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Exhibit R-2a, RDT&E Project Justification

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PE NUMBER AND TITLE

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(MEECN)

PROJECT NUMBER AND TITLE

2832 MEECN System Improvements

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2832 MEECN System Improvements	2.093	3.394	3.114	3.297	3.252	2.978	2.508	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) **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) and Navy) to develop positions for current and future requirements/issues based on available technology.

- This project funds the Continuing Evaluation Program (CEP) for technical analysis of the currently fielded Nuclear Command, Control, and Communication (NC3) systems. CEP is a key factor in determining Assured MEECN Interoperability (AMI). The program implements a detailed test program for Emergency Action Message (EAM) injection and reception. It conducts multiple evaluations on a continuing year-round basis. Following test data collection, analysis is performed to ensure the strategic communication systems meet JCS-directed platform connectivity requirements. The purpose of the program is to test the strategic C3 system to establish a quantitative system-wide performance baseline, conduct trend analysis, integrate new systems into the strategic C3 system, identify system deficiencies, recommend solutions and verify the effectiveness of corrective actions, and recommend and develop procedures in order to improve overall system performance and network interoperability.

- Trade-off analysis is also 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. The MEECN architecture is currently evaluating/planning modernization of the VLF/LF cryptographic capability, application of using Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) in mobile configurations (E-4, E-6 and Mobile Consolidated Command Center (MCCC)) and application of High Data Rate (HIDAR/HIDAR+) VLF/LF in other strategic communications platforms.

- This project also funded a study to assess various approaches of replacing the Airborne Launch Control System (ALCS) (an alternate capability of launching Minuteman ICBMs) on the Navy E-6.

- Johns Hopkins University/Applied Physics Lab (JHU/APL) will conduct a study of Air Force survivable nuclear command and control MEECN Network. Allows to test futuristic communications equipment; e.g. MMP Upgrade AEHF testing prior to fielding of AEHF satellites.

- This program is in Budget Activity 07, Operational System Development, because it supports work on currently fielded weapon systems.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continuing Evaluation Program (CEP) Studies	0.275	0.265	0.250
(U) Study of alternative ICBM launch capability should the E-6 be removed from the Navy inventory	0.560		
(U) Nuclear command and control performance study and equipment for simulation/ modeling and testing for future communication systems/architectures	0.190	1.772	1.877
(U) Analytical Support	1.068	1.357	0.987
(U) Total Cost	2.093	3.394	3.114

Project 2832

R-1 Shopping List - Item No. 170-4 of 170-21

Exhibit R-2a (PE 0303131F)

Exhibit R-2a, RDT&E Project Justification

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Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

2832 MEECN System Improvements

(U) C. Other Program Funding Summary (\$ in Millions)FY 2005FY 2006FY 2007FY 2008FY 2009FY 2010FY 2011Cost toTotal CostActualEstimateEstimateEstimateEstimateEstimateEstimateComplete

(U) None

(U) D. Acquisition Strategy

Johns Hopkins University is on contract to provide CEP Analysis and a nuclear C2 performance study.

Test equipment will be acquired through Lincoln Laboratories

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Exhibit R-3, RDT&E Project Cost Analysis

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2832 MEECN System Improvements

(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>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</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>												
MMRT System Design & Development	SS/CPAF	Rockwell Collins, Dallas, TX	62.838								62.838	
MMRT System Design & Development	SS/CPAF	TRW, Layton, UT	16.788								16.788	
CEP Analysis	MIPR	Johns Hopkins Univ, MD	5.476	0.275	Oct-04	0.265	Dec-05	0.250	Oct-06	Continuing	TBD	
Simulation/Modeling Equipment	MIPR	Lincoln Labs, Bedford, MA				1.287		1.477			2.764	
Various (Trade studies and analysis)	Open Competitio n	Various		0.765	Dec-04	0.925	Mar-06	0.582	Mar-07		2.272	
Subtotal Product Development			85.102	1.040		2.477		2.309		Continuing	TBD	0.000
Remarks:	Effort prior to FY05 performed on MMRT Program under this project number											
(U) <u>Support</u>												
SE/TA Integrated Technical Support Program (ITSP)	Various	Various	4.748	0.843	Oct-04	0.771	Jan-06	0.670	Oct-06	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.277	0.210	Oct-04	0.146	Jan-06	0.135	Oct-06	Continuing	TBD	
Subtotal Support			5.025	1.053		0.917		0.805		Continuing	TBD	0.000
Remarks:	Effort prior to FY05 performed on MMRT Program under this project number											
(U) <u>Test & Evaluation</u>												
E-6 Integration Testing	MIPR	NavAir Warfare Cntr, San Diego, CA	5.554	0.000		0.000		0.000			5.554	
IOT&E	MIPR	AFOTEC, Kirtland AFB, NM	0.204	0.000		0.000		0.000			0.204	
Subtotal Test & Evaluation			5.758	0.000		0.000		0.000		0.000	5.758	0.000
Remarks:	Effort prior to FY05 performed on MMRT Program under this project number											
(U) <u>Management</u>								0.000			0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			95.885	2.093		3.394		3.114		Continuing	TBD	0.000

Project 2832

R-1 Shopping List - Item No. 170-6 of 170-21

Exhibit R-3 (PE 0303131F)

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

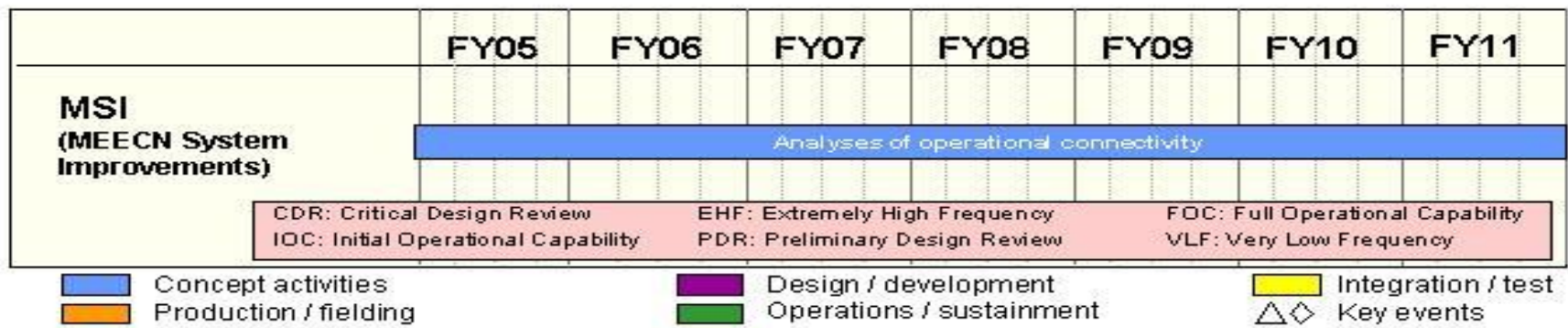
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PE NUMBER AND TITLE

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PROJECT NUMBER AND TITLE

2832 MEECN System Improvements



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Exhibit R-4a, RDT&E Schedule Detail

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PROJECT NUMBER AND TITLE

2832 MEECN System Improvements

(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) CEP Study and Analysis - Quarterly Report(s)

1-4Q

1-4Q

1-4Q

(U) Trade studies and analyses

4Q

4Q

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PE NUMBER AND TITLE

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PROJECT NUMBER AND TITLE

4521 DIRECT

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4521 DIRECT	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

The Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) is a Strategic Nuclear Command and Control (C2) system directly supporting the President, Secretary of Defense, and the Chairman of the Joint Chiefs of Staff (CJCS). DIRECT enforces all Emergency Action Message (EAM) processing requirements, including the build and release of EAMs, to allow the warfighter to remain responsive to the directives of the President and Secretary of Defense. DIRECT is certified to Top Secret and supports OPLAN 8044 (formally SIOP) messaging systems. DIRECT reached Full Operational Capability (FOC) on 15 Feb 02. In addition, DIRECT must implement interfaces to new EAM dissemination systems when required by updates to Vol VII of JCS emergency action procedures.

Continued System Development and Demonstration (SDD) to develop interfaces between DIRECT and other communication interfaces will be accomplished in BPAC 672832 - MEECN System Improvement.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Develop interface between DIRECT and Strategic Automated Command and Control System (SACCS) in accordance with Vol VII of JCS emergency action procedures.	0.228		
(U) Total Cost	0.228	0.000	0.000

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

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) None									

(U) **D. Acquisition Strategy**

An SS/CPAF contract was awarded to General Dynamics C4 Systems, Needham, MA on 12 Jul 1996.

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Exhibit R-3, RDT&E Project Cost Analysis

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07 Operational System Development

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PROJECT NUMBER AND TITLE

4521 DIRECT

(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>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</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> DIRECT Development	SS/CPAF	General Dynamice C4 Systems, MA	33.374								33.374	
Security Interfaces	MIPR	National Security Agency	2.300								2.300	
SACCS Interface	FPIF	General Dynamice C4 Systems, MA	0.000	0.158	Oct-04						0.158	
Subtotal Product Development			35.674	0.158		0.000		0.000		0.000	35.832	0.000
Remarks:												
(U) <u>Support</u>												
SETA	LOE	SPO	3.072	0.070	Oct-04						3.142	
MITRE	LOE	SPO	2.671								2.671	
JHU/APL	LOE	Laurel, MD	0.579								0.579	
PMA	Various	SPO	1.604								1.604	
Subtotal Support			7.926	0.070		0.000		0.000		0.000	7.996	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
Various		Various	0.471								0.471	
Subtotal Test & Evaluation			0.471	0.000		0.000		0.000		0.000	0.471	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			44.071	0.228		0.000		0.000		0.000	44.299	0.000

Exhibit R-4, RDT&E Schedule Profile

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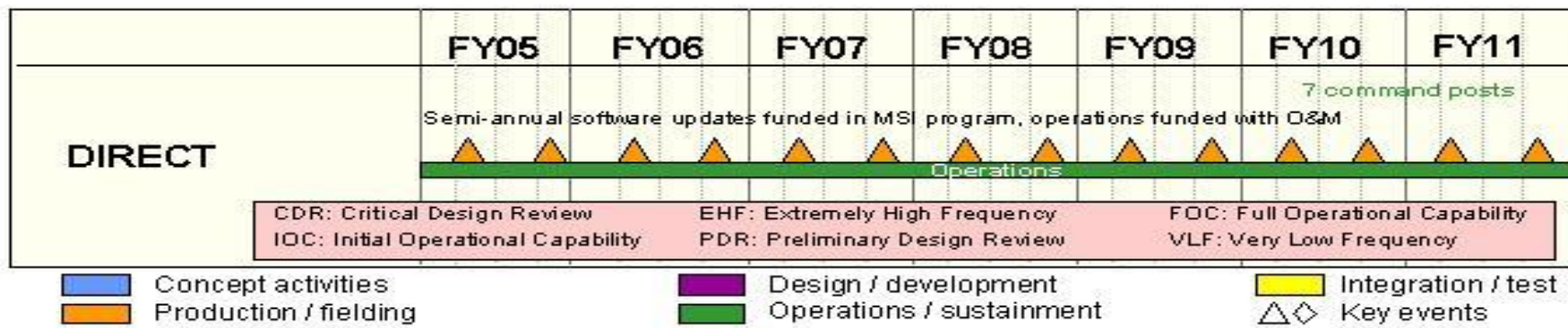
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PE NUMBER AND TITLE

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Emergency Communications Network
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PROJECT NUMBER AND TITLE

4521 DIRECT



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Exhibit R-4a, RDT&E Schedule Detail

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07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
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(MEECN)

PROJECT NUMBER AND TITLE

4521 DIRECT

(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) Hybrid Solution Support

1-2Q

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Exhibit R-2a, RDT&E Project Justification

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PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

4610 Minuteman MEECN Program
(MMP)

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4610 Minuteman MEECN Program (MMP)	1.198	2.581	22.633	36.175	5.139	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

This project implements a Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) capability and a Minuteman ICBM Extremely High Frequency (EHF) communications capability. The Extremely High Frequency (EHF) terminal provides both receive and report-back capability. Specifically, the EHF effort replaces the Ultra High Frequency (UHF) satellite link with a MILSTAR EHF link.

The MMP system will be upgraded to provide a capability for the Combat Crew Members to have operator control in the Launch Control Center to switch among various 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 frequencies above 20 GHz.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) MMP Upgrade Concept Development Studies	1.198		
(U) MMP Upgrade Technology Development		1.498	10.566
(U) System Development and Demonstration (SDD) to include: AEHF terminal integration, AEHF modem design, cryptographic upgrade, weapon system hardness analysis, hardware development and software development for AEHF and improved operator control, analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA).			10.567
(U) Analytical Support		1.083	1.500
(U) Total Cost	1.198	2.581	22.633

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

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) MPAF, Missile Modifications (MEECN, PE 0303131F, BA 03, P-012)	15.666	2.886		6.467	24.793	6.935	0.000	0.000	56.747

(U) **D. Acquisition Strategy**

The ICBM Prime Integrating Contract (through OO-ALC, Hill AFB, UT) is being used as a contracting vehicle for the Minuteman MEECN Program (MMP).

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4610 Minuteman MEECN Program
(MMP)

The MMP Upgrade program will be a full and open competition.

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Exhibit R-3, RDT&E Project Cost Analysis

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Emergency Communications Network (MEEP)
(MEEP)

PROJECT NUMBER AND TITLE

4610 Minuteman MEEP Program

(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>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</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>												
MMP Development	SS/CPAF	Northrup Grumman	46.069								46.069	
MMP Upgrade Concept Development	Open Competitio n	TBD		0.898	Dec-04						0.898	
MMP Upgrade Technology Development						1.492	Jul-06	10.566			12.058	
MMP Upgrade System Development and Demonstration (SDD)	Open Competitio n	TBD						10.567	Jun-07	Continuing	TBD	
Subtotal Product Development			46.069	0.898		1.492		21.133		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u>												
SETA	LOE	Various	0.900	0.200	Apr-05	0.900	Apr-06	1.000	Apr-07	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.695	0.100	Oct-04	0.189	Jan-06	0.500	Oct-06	Continuing	TBD	
Subtotal Support			1.595	0.300		1.089		1.500		Continuing	TBD	0.000
Remarks:		Various Award Dates										
(U) <u>Test & Evaluation</u>												
Various	Various	Various	0.000	0.000							0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			47.664	1.198		2.581		22.633		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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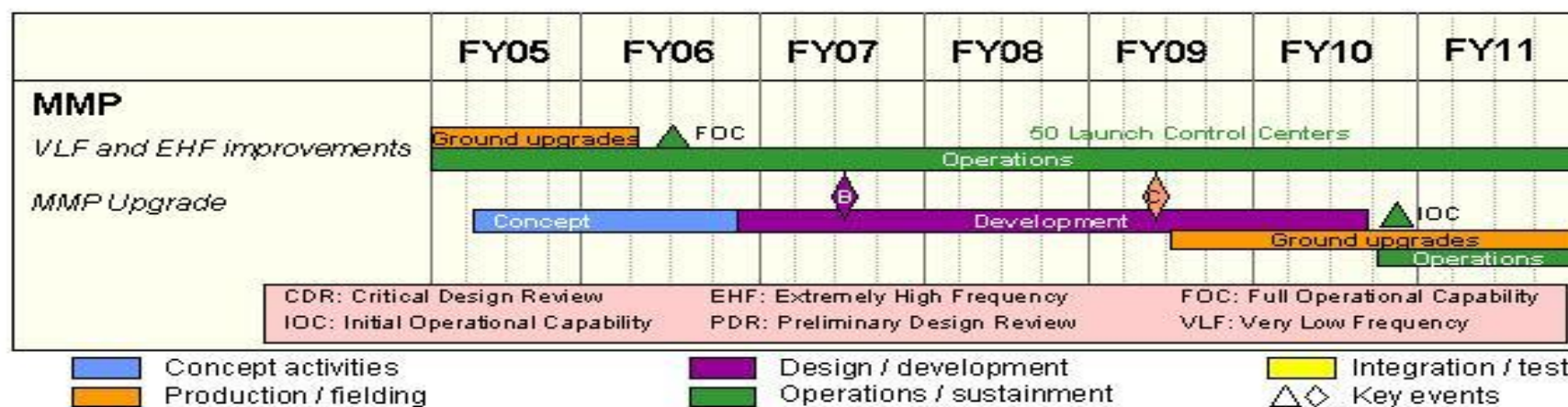
07 Operational System Development

PE NUMBER AND TITLE

**0303131F Minimum Essential
Emergency Communications Network
(MEECN)**

PROJECT NUMBER AND TITLE	
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4610 Minuteman MEECN Program (MMP)



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Exhibit R-4a, RDT&E Schedule Detail

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(MEECN)

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4610 Minuteman MEECN Program
(MMP)(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) Exercise MMP Production Option

1Q

(U) MMP Operational Deployment Complete

1Q

(U) Award MMP Upgrade Technology Development

4Q

(U) Award MMP Upgrade Program System Design & Development

3Q

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0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5047 Ground Element MEECN System (GEMS)	14.454	42.352	38.362	4.760	4.836	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	8	0	0	0	0		

(U) **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.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) System Development and Demonstration (SDD) contract to include: EHF, VLF, HF, and UHF terminal integration; EHF, VLF, HF, and UHF modem design; cryptographic upgrade; weapon system hardness analysis; EHF, VLF, HF, and UHF hardware development; EHF, VLF, HF, and UHF software development; analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA); and pager/klaxon system development.	11.436	39.393	35.600
(U) Analytical Support	3.018	2.959	2.762
(U) Total Cost	14.454	42.352	38.362

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

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-053)		0.000	3.413	93.740	87.216	72.388	21.471	0.000	278.228

(U) **D. Acquisition Strategy**

Two Concept and Technology Demonstration (C&TD) contracts awarded to separate vendors following full and open competition. Rockwell Collins of Rapid City, IA was awarded research, development, and production contract.

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Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)

(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>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</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> C&TD Contracts	Full and open competition	General Dynamics C4 System, MA Rockwell Collins, IA	6.557							Continuing	TBD	
SDD Contract		Rockwell Collins, IA	0.000	11.436	Jun-05	39.393	Jan-06	35.600	Dec-06		86.429	
Subtotal Product Development Remarks:			6.557	11.436		39.393		35.600		Continuing	TBD	0.000
(U) <u>Support</u> ITSP	SETA Contract	Various	0.670	1.750	Apr-05	1.451	Apr-06	1.550	Apr-07	Continuing	TBD	
MITRE	MIPR	Bedford, MA	1.164	1.010	Oct-04	1.208	Oct-05	1.112	Oct-06	Continuing	TBD	
PMA			0.250	0.258	Oct-04	0.300	Jan-06	0.100			0.908	
Subtotal Support Remarks:			2.084	3.018		2.959		2.762		Continuing	TBD	0.000
(U) <u>Test & Evaluation</u> Subtotal Test & Evaluation Remarks:			0.000	0.000		0.000		0.000		0.000	0.000	0.000
(U) <u>Management</u> Subtotal Management Remarks:			0.000	0.000		0.000		0.000		0.000	0.000	0.000
(U) Total Cost			8.641	14.454		42.352		38.362		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2006

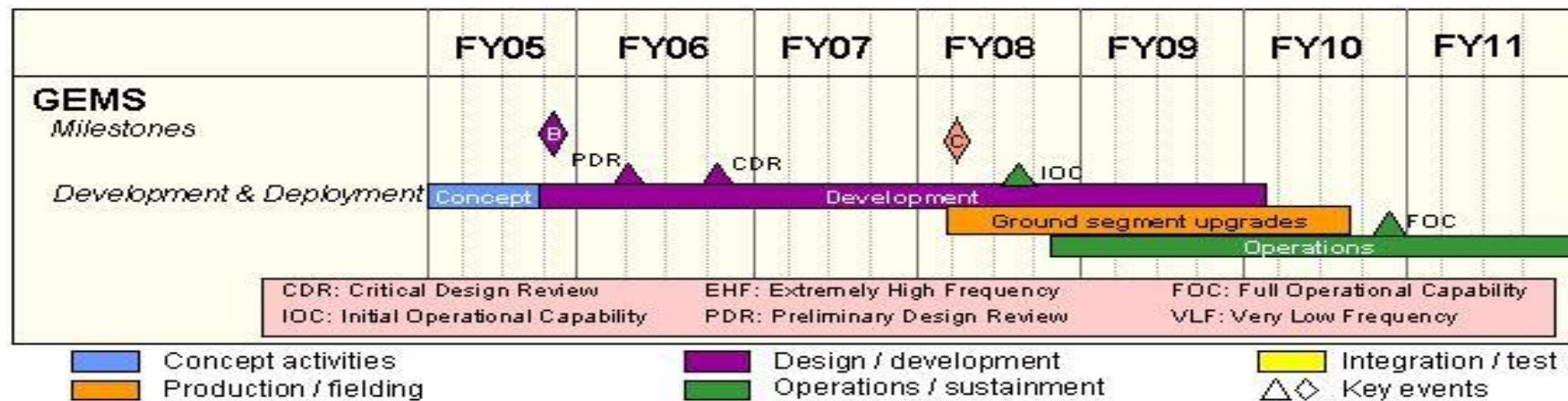
BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) MS B

4Q

(U) SDD

3Q

(U) Preliminary Design Review

2Q

(U) Critical Design Review

4Q

(U) Development Testing

1-4Q