

UNCLASSIFIED

PE NUMBER: 0303131F

PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential Emergency Communications Network (MEECN)

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	9.776	32.539	57.344	47.622	44.454	13.978	3.878	3.489	Continuing	TBD
2832 MEECN System Improvements	2.284	1.204	3.443	3.496	3.734	3.809	3.878	3.489	Continuing	TBD
4521 DIRECT	0.100	0.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.319
4610 Minuteman MEECN Program (MMP)	0.260	1.484	11.006	22.627	35.773	5.112	0.000	0.000	Continuing	TBD
5047 Ground Element MEECN System (GEMS)	7.132	29.569	42.895	21.499	4.947	5.057	0.000	0.000	Continuing	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:

- The Modified Miniature Receive Terminal (MMRT), that provides High Data Rate (HIDAR) receive capability for E-4B and E-6B aircraft. MMRT replaces 1960s-era strategic aircraft low frequency receivers with a common receive capability
- 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.

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential Emergency Communications Network (MEECN)

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	10.716	33.190	52.035	50.880
(U) Current PBR/President's Budget	9.776	32.539	57.344	47.622
(U) Total Adjustments	-0.940	-0.651		
(U) Congressional Program Reductions	-0.031	-0.651		
Congressional Rescissions	-0.090			
Congressional Increases				
Reprogrammings	-0.565			
SBIR/STTR Transfer	-0.254			
(U) <u>Significant Program Changes:</u>				
None.				

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Exhibit R-2a, RDT&E Project Justification

DATE

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BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)			PROJECT NUMBER AND TITLE 2832 MEECN System Improvements		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	2.284	1.204	3.443	3.496	3.734	3.809	3.878	3.489	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

- 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. In addition, MSI will build 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 will now fund System Development and Demonstration (SDD) to develop interface between DIRECT and Strategic Automated Command and Control System (SACCS), as well as other communication interfaces as directed by Joint Staff in accordance with Vol VII of JCS guidance.
- 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 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue Communications Evaluation Program (CEP) Studies	0.250	0.250	0.265	0.265
(U) AEHF risk reduction study, DIRECT mobile application, Advanced C2 for land based strategic deterrence	1.034			
(U) Analysis and trade studies on current/future communication systems/architectures.	1.000	0.954	3.178	3.231
(U) Total Cost	2.284	1.204	3.443	3.496

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) None										

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Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE 2832 MEECN System Improvements
<p>(U) <u>D. Acquisition Strategy</u> Johns Hopkins University is on contract to provide CEP Analysis. Other trade-off studies will be full and open competitions.</p>		
<p>Project 2832</p> <p>R-1 Shopping List - Item No. 170-5 of 170-22</p> <p>Exhibit R-2a (PE 0303131F)</p>		

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Exhibit R-3, RDT&E Project Cost Analysis												DATE February 2005		
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)						PROJECT NUMBER AND TITLE 2832 MEECN System Improvements			
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> CEP Analysis	MIPR	Johns Hopkins Univ, MD	5.226	0.250	Oct-04	0.250	Oct-04	0.265	Oct-05	0.265	Oct-06	Continuing	TBD	
Various (Trade studies and analysis)	Open Competiti on	Various		1.084	Dec-04			1.768	Dec-05	1.611	Dec-06		4.463	
Development Prior to FY04	Various	Various	79.626										79.626	
Subtotal Product Development			84.852	1.334		0.250		2.033		1.876		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u> SE/TA [Integrated Technical Support Program (ITSP)]	Various	Various	3.926	0.804	Oct-04	0.804	Oct-04	1.250	Oct-05	1.450	Oct-06	Continuing	TBD	
MITRE	LOE	Bedford, MA	2.500	0.146	Oct-04	0.150	Oct-04	0.160	Oct-05	0.170	Oct-06	Continuing	TBD	
Support Prior to FY04	Various	Various	0.486										0.486	
Subtotal Support			6.912	0.950		0.954		1.410		1.620		Continuing	TBD	0.000
Remarks:														
(U) <u>Test & Evaluation</u> T&E Prior to FY04	Various	Various	5.758										5.758	
Subtotal Test & Evaluation			5.758	0.000		0.000		0.000		0.000		0.000	5.758	0.000
Remarks:														
(U) <u>Management</u> Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			97.522	2.284		1.204		3.443		3.496		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

07 Operational System Development

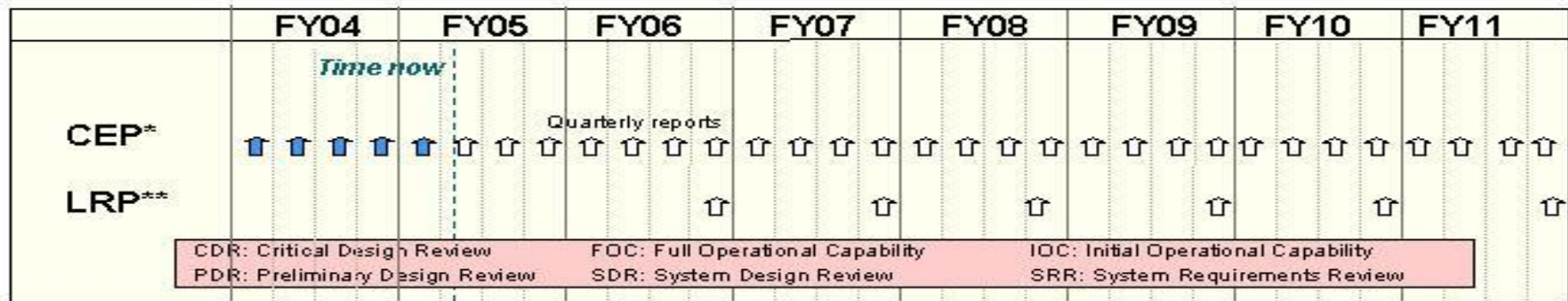
PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

2832 MEECN System Improvements

MEECN System Improvement Schedule



* CEP: Continuing Evaluation Program

** LRP: Long Range Plan

Concept activities

Production / fielding

Design / development

Operations / sustainment

Integration / test

△◇ Key events

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Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

2832 MEECN System Improvements

(U) **Schedule Profile**FY 2004FY 2005FY 2006FY 2007

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

1-4Q

1-4Q

1-4Q

1-4Q

(U) Trade studies and analyses

4Q

4Q

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Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

4521 DIRECT

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4521 DIRECT	0.100	0.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.319
Quantity of RDT&E Articles	0	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 2004</u>	<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.	0.100	0.282		
(U) Total Cost	0.100	0.282	0.000	0.000

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) None										

(U) **D. Acquisition Strategy**

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

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Exhibit R-3, RDT&E Project Cost Analysis

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07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

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>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</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</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u> SACCS Interface	FPIF	General Dynamice C4 Systems, MA		0.098	Oct-03	0.212	Oct-04						0.310	
Development Prior to FY04			35.971										35.971	
Subtotal Product Development			35.971	0.098		0.212		0.000		0.000		0.000	36.281	0.000
Remarks:														
(U) <u>Support</u> SETA				0.002	Oct-03	0.070	Oct-04						0.072	
Support Prior to FY04			7.347										7.347	
Subtotal Support			7.347	0.002		0.070		0.000		0.000		0.000	7.419	0.000
Remarks:														
(U) <u>Test & Evaluation</u> T&E Prior to FY04			0.471										0.471	
Subtotal Test & Evaluation			0.471	0.000		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	0.000
Remarks:														
(U) Total Cost			43.789	0.100		0.282		0.000		0.000		0.000	44.171	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

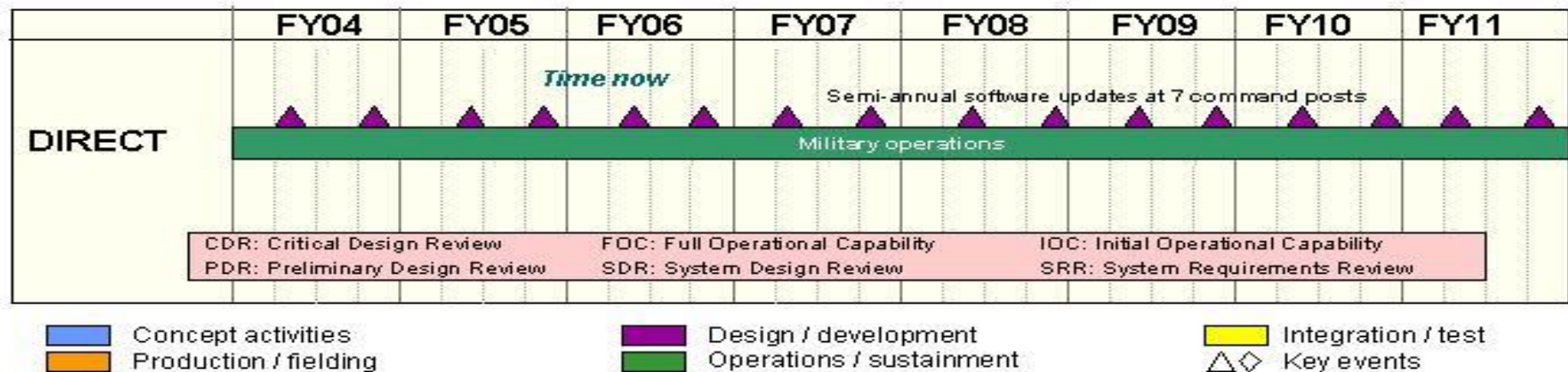
PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

4521 DIRECT

DIRECT Schedule



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Exhibit R-4a, RDT&E Schedule Detail

DATE

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

4521 DIRECT

(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) Hybrid Solution Support

1-4Q

1-2Q

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Exhibit R-2a, RDT&E Project Justification

DATE

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BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)			PROJECT NUMBER AND TITLE 4610 Minuteman MEECN Program (MMP)		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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)	0.260	1.484	11.006	22.627	35.773	5.112	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	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 EHF system will be upgraded to 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 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Completed MMP ECPs/Weapon System Test/Operational Test (WST/OT)	0.260			
(U) Begin AEHF Concept Development Studies		1.484		
(U) Continue AEHF System Development and Demonstration (SDD) to include: AEHF terminal integration, AEHF modem design, cryptographic upgrade, weapon system hardness analysis, AEHF hardware development, AEHF software development, analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA).			9.856	20.677
(U) Analytical Support			1.150	1.950
(U) Total Cost	0.260	1.484	11.006	22.627

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
MPAF, Missile Modifications										
(U) (MEECN, PE 0303131F, BA 03, P-012)	32.265	15.720	22.180	16.220	6.540	24.540	7.090	0.000	0.000	124.555

(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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Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE 4610 Minuteman MEECN Program (MMP)
<p>The AEHF upgrade for MMP will be a full and open competition.</p>		
<p>Project 4610</p>		

R-1 Shopping List - Item No. 170-14 of 170-22

Exhibit R-2a (PE 0303131F)

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Exhibit R-3, RDT&E Project Cost Analysis

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07 Operational System Development

PE NUMBER AND TITLE

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

PROJECT NUMBER AND TITLE

4610 Minuteman MEECN 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>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</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</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>														
AEHF Concept Development	Open	TBD				0.984	Dec-04						0.984	
	Competition													
AEHF System Development and Demonstration(SDD)	Open	TBD						10.006	Dec-05	20.127	Dec-06		30.133	
	Competiti on													
NGC	SS/CPAF		45.970	0.060	Oct-03								46.030	
Development Prior to FY04	Various	Various	0.836										0.836	
Subtotal Product Development			46.806	0.060		0.984		10.006		20.127		0.000	77.983	0.000
Remarks:														
(U) <u>Support</u>														
SETA	LOE	Various		0.080		0.200	Apr-05	0.500	Apr-06	2.000	Apr-07		2.780	
MITRE	LOE	Bedford, MA			Oct-03	0.300	Oct-04	0.500	Oct-05	0.500	Oct-06		1.300	
Support Prior to FY04	Various	Various	2.597										2.597	
Subtotal Support			2.597	0.080		0.500		1.000		2.500		0.000	6.677	0.000
Remarks:		Various Award Dates												
(U) <u>Test & Evaluation</u>														
Various	Various	Various		0.120									0.120	
Subtotal Test & Evaluation			0.000	0.120		0.000		0.000		0.000		0.000	0.120	0.000
Remarks:														
(U) <u>Management</u>														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			49.403	0.260		1.484		11.006		22.627		0.000	84.780	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

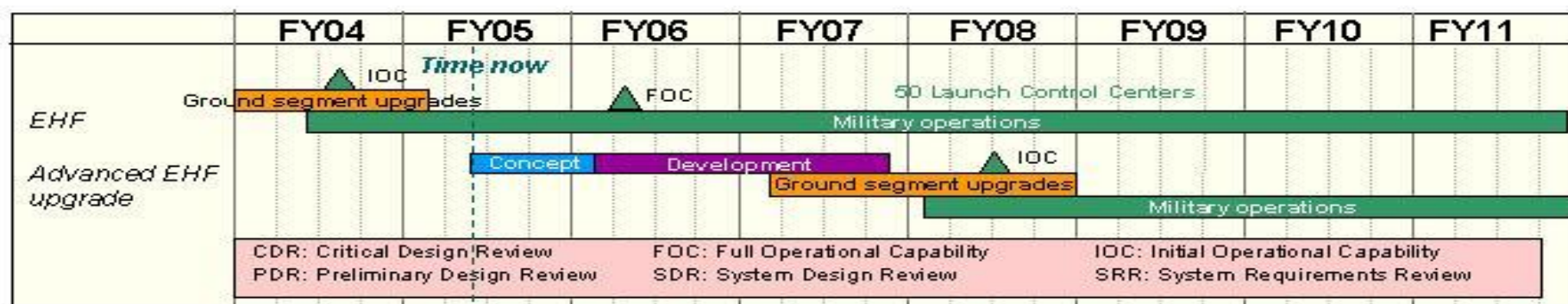
PE NUMBER AND TITLE	DATE	BY	REMARKS
101	10/10/10	10/10/10	10/10/10
102	10/10/10	10/10/10	10/10/10
103	10/10/10	10/10/10	10/10/10
104	10/10/10	10/10/10	10/10/10
105	10/10/10	10/10/10	10/10/10
106	10/10/10	10/10/10	10/10/10
107	10/10/10	10/10/10	10/10/10
108	10/10/10	10/10/10	10/10/10
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110	10/10/10	10/10/10	10/10/10
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112	10/10/10	10/10/10	10/10/10
113	10/10/10	10/10/10	10/10/10
114	10/10/10	10/10/10	10/10/10
115	10/10/10	10/10/10	10/10/10
116	10/10/10	10/10/10	10/10/10
117	10/10/10	10/10/10	10/10/10
118	10/10/10	10/10/10	10/10/10
119	10/10/10	10/10/10	10/10/10
120	10/10/10	10/10/10	10/10/10
121	10/10/10	10/10/10	10/10/10
122	10/10/10	10/10/10	10/10/10
123	10/10/10	10/10/10	10/10/10
124	10/10/10	10/10/10	10/10/10
125	10/10/10	10/10/10	10/10/10
126	10/10/10	10/10/10	10/10/10
127	10/10/10	10/10/10	10/10/10
128	10/10/10	10/10/10	10/10/10
129	10/10/10	10/10/10	10/10/10
130	10/10/10	10/10/10	10/10/10
131	10/10/10	10/10/10	10/10/10
132	10/10/10	10/10/10	10/10/10
133	10/10/10	10/10/10	10/10/10
134	10/10/10	10/10/10	10/10/10
135	10/10/10	10/10/10	10/10/10
136	10/10/10	10/10/10	10/10/10
137	10/10/10	10/10/10	10/10/10
138	10/10/10	10/10/10	10/10/10
139	10/10/10	10/10/10	10/10/10
140	10/10/10	10/10/10	10/10/10
141	10/10/10	10/10/10	10/10/10
142	10/10/10	10/10/10	10/10/10
143	10/10/10	10/10/10	10/10/10
144	10/10/10	10/10/10	10/10/10
145	10/10/10	10/10/10	10/10/10
146	10/10/10	10/10/10	10/10/10
147	10/10/10	10/10/10	10/10/10
148	10/10/10	10/10/10	10/10/10
149	10/10/10	10/10/10	10/10/10
150	10/10/10	10/10/10	10/10/10
151	10/10/10	10/10/10	10/10/10
152	10/10/10	10/10/10	10/10/10
153	10/10/10	10/10/10	10/10/10
154	10/10/10	10/10/10	10/10/10
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156	10/10/10	10/10/10	10/10/10
157	10/10/10	10/10/10	10/10/10
158	10/10/10	10/10/10	10/10/10
159	10/10/10	10/10/10	10/10/10
160	10/10/10	10/10/10	10/10/10
161	10/10/10	10/10/10	10/10/10
162	10/10/10	10/10/10	10/10/10
163	10/10/10	10/10/10	10/10/10
164	10/10/10	10/10/10	10/10/10
165	10/10/10	10/10/10	10/10/10
166	10/10/10	10/10/10	10/10/10
167	10/10/10	10/10/10	10/10/10
168	10/10/10	10/10/10	10/10/10
169	10/10/10	10/10/10	10/10/10
170	10/10/10	10/10/10	



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



PROJECT NUMBER AND TITLE	
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4610 Minuteman MEECN Program (MMP)

Minuteman MEECN Program Schedule



 Concept activities
 Production / fielding

 Design / development
 Operations / sustainment

 Integration / test
 Key events

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Exhibit R-4a, RDT&E Schedule Detail

DATE

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

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(MEECN)

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4610 Minuteman MEECN Program
(MMP)(U) **Schedule Profile**FY 2004FY 2005FY 2006FY 2007

(U) Exercise MMP Production Option

1Q

(U) MMP IOC

3Q

(U) Award AEHF Concept Development Studies

1Q

(U) Award AEHF SDD

3Q

1Q

(U) MMP FOC

1Q

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Exhibit R-2a, RDT&E Project Justification

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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)		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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)	7.132	29.569	42.895	21.499	4.947	5.057	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

Nuclear Command and Control Technical Performance Criteria require that communication facilities with strategic responsibilities receive Emergency Action Messages (EAMs) and function as part of the strategic force. Ground Element MEECN Systems (GEMS) will be comprised of EHF/AEHF, VLF/LF, 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 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Concept & Technology Demonstration Studys	3.942			
(U) System Development and Demonstration (SDD) contract to include: EHF, VLF and UHF terminal integration; EHF, VLF and UHF modem design; cryptographic upgrade; weapon system hardness analysis; EHF, VLF and UHF hardware development; EHF, VLF and UHF software development; analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA); and pager/klaxon system development.		26.819	39.345	19.549
(U) Analytical Support	3.190	2.750	3.550	1.950
(U) Total Cost	7.132	29.569	42.895	21.499

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-053)			20.550	102.870	93.730	87.280	72.440	21.530	0.000	398.400

(U) **D. Acquisition Strategy**

Two Concept and Technology Demonstration (C&TD) contracts awarded to separate vendors following full and open competition. Upon completion of C&TD, there will

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Exhibit R-2a, RDT&E Project Justification		DATE February 2005
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)
<p>be full and open competition to award a single SDD contract.</p>		
<p>Project 5047</p>		
<p>R-1 Shopping List - Item No. 170-19 of 170-22</p>		
<p>Exhibit R-2a (PE 0303131F)</p>		

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

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Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> C&TD Contracts	Full and open competitio n	General Dynamics C4 System, MA Rockwell Collins, TX TBD		3.942	Jan-04							Continuing	TBD	
SDD Contract						26.738	Apr-05	41.295	Dec-05	19.793	Dec-06		87.826	
Subtotal Product Development			0.000	3.942		26.738		41.295		19.793		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u> ITSP	SETA Contract	Various		0.728	Apr-04	0.839	Apr-05	0.600	Apr-06	0.650	Apr-07	Continuing	TBD	
MITRE	MIPR	Bedford, MA		0.927	Oct-03	1.050	Oct-04	0.900	Oct-05	0.950	Oct-06	Continuing	TBD	
PMA				1.535	Oct-03	0.942	Oct-04	0.100	Oct-05	0.106			2.683	
Subtotal Support			0.000	3.190		2.831		1.600		1.706		Continuing	TBD	0.000
Remarks:														
(U) <u>Test & Evaluation</u>														
Subtotal Test & Evaluation			0.000	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	0.000
Remarks:														
(U) Total Cost			0.000	7.132		29.569		42.895		21.499		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

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BUDGET ACTIVITY

07 Operational System Development

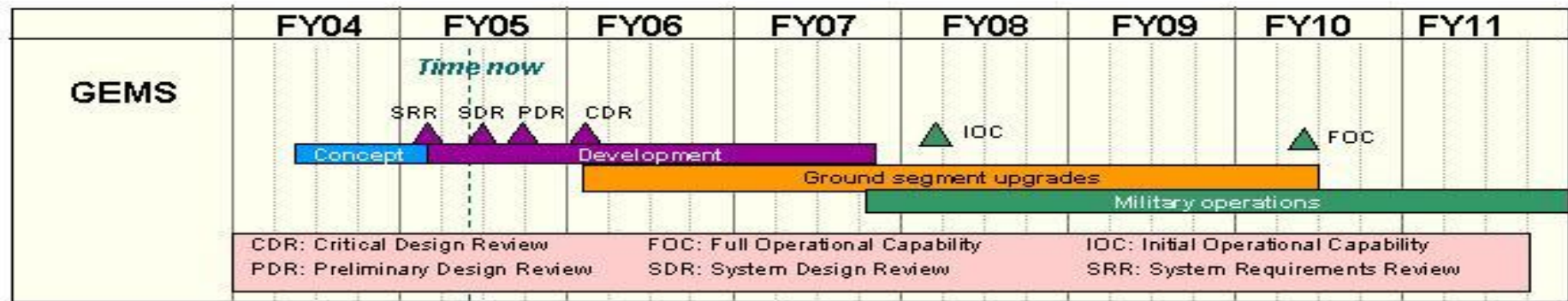
PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

5047 Ground Element MEECN System
(GEMS)

Ground Element MEECN System Schedule



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Exhibit R-4a, RDT&E Schedule Detail

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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 2004FY 2005FY 2006FY 2007

(U) ORD Approval

4Q

(U) C&TD Study

3Q

(U) MS B

2Q

(U) SSD

3Q