

UNCLASSIFIED

PE NUMBER: 0303131F

PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

| | |
|---|------------------------------|
| Exhibit R-2, RDT&E Budget Item Justification | DATE February 2004 |
|---|------------------------------|

| | |
|--|--|
| BUDGET ACTIVITY 07 Operational System Development | PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN) |
|--|--|

| Cost (\$ in Millions) | FY 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total |
|---|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|
| Total Program Element (PE) Cost | 2.253 | 10.595 | 33.183 | 52.035 | 50.880 | 31.508 | 9.698 | Continuing | TBD |
| 2832 MEECN System Improvements | 0.995 | 1.390 | 1.442 | 3.126 | 3.273 | 3.408 | 3.531 | Continuing | TBD |
| 4521 DIRECT | 0.871 | 0.282 | 0.285 | 0.298 | 0.302 | 0.307 | 0.311 | Continuing | TBD |
| 4610 Minuteman MEECN Program (MMP) | 0.387 | 0.282 | 1.498 | 10.946 | 37.206 | 22.934 | 0.905 | Continuing | TBD |
| 5047 Ground Element MEECN System (GEMS) | 0.000 | 8.641 | 29.958 | 37.665 | 10.099 | 4.859 | 4.951 | 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 Improved Emergency Message Automated Transmission System (IEMATS) Replacement Command and Control (C2) Terminal (DIRECT). Upgrades hardware and software for the Emergency Action Messages (EAM) injection at nuclear command centers.
- Minuteman MEECN Program (MMP) - is the combination of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) upgrade efforts with Minuteman ICBM Extremely High Frequency (EHF) band communications capability efforts.
- 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 Ground Element MEECN Systems (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 2004

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 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|--|----------------|----------------|----------------|
| (U) Previous President's Budget | 2.396 | 10.716 | 37.620 |
| (U) Current PBR/President's Budget | 2.253 | 10.595 | 33.183 |
| (U) Total Adjustments | -0.143 | -0.121 | |
| (U) Congressional Program Reductions | | -0.121 | |
| Congressional Rescissions | | | |
| Congressional Increases | | | |
| Reprogrammings | | | |
| SBIR/STTR Transfer | -0.143 | | |
| (U) <u>Significant Program Changes:</u> | | | |
| FY05 reduction due to restructure of Minuteman MEECN Program Advanced EHF upgrade. | | | |

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

| | | | | | | | | | | |
|---|-------------------|---------------------|---------------------|---|---------------------|---------------------|---|---------------------|-------|--|
| 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 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total | |
| 2832 MEECN System Improvements | 0.995 | 1.390 | 1.442 | 3.126 | 3.273 | 3.408 | 3.531 | Continuing | TBD | |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |

(U) A. Mission Description and Budget Item Justification

This project's past (FY04 and prior) efforts supported the design and development of the Modified Miniature Receive Terminal (MMRT) program. The program modifies the Miniature Receive Terminal (MRT) to provide High Data Rate (HIDAR) capability on the E-4B, National Airborne Operations Center (NAOC) and the E-6B, Take Charge and Move Out (TACAMO) aircraft. The MMRT Very Low Frequency/Low Frequency (VLF/LF) receivers are fully interoperable satisfying both Air Force and Navy requirements.

This project continues to fund the Communications Evaluation Program (CEP) for technical analysis of the currently fielded Command, Control, and Communication (C3) systems. CEP is a key factor in determining Assured MEECN Interoperability (AMI). The program implements a detailed test program for Emergency Action Message (EAM) insertion 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.

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. Studies are conducted to assess the use of current communications terminals capability to support future requirements. The MEECN architecture is currently evaluating/planning modernization of the VLF/LF cryptographic capability, application of using DIRECT in mobile configurations (E-4, E-6 and Mobile Consolidated Command Center (MCCC)) and application of HIDAR VLF/LF in other strategic communications platforms.

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 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|---|----------------|----------------|----------------|
| (U) Continue Communications Evaluation Program (CEP) Studies and Analysis and trade studies on current strategic communication systems. | 0.995 | 1.390 | 1.442 |
| (U) Total Cost | 0.995 | 1.390 | 1.442 |

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

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

| | <u>FY 2003</u> | <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>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>Complete</u> | |
| (U) Aircraft Procurement - AF, (MEECN, PE 0303131F, BA-05, P-57) | 4.655 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 36.897 |

(U) **D. Acquisition Strategy**

Modified Miniature Receive Terminal (MMRT) Program. Contract awarded in FY96 for MMRT system development and a procurement contract in FY01 for the E-4B and E-6B . CEP is an annual test and evaluation program of currently fielded command and control systems.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

| | | |
|--|--|--|
| 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</u> & <u>Type</u> | <u>Performing Activity &</u> <u>Location</u> | <u>Total</u> Prior to FY 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Award</u> | <u>FY</u> 2004 <u>Cost</u> | <u>FY</u> 2004 <u>Award</u> | <u>FY</u> 2005 <u>Cost</u> | <u>FY</u> 2005 <u>Award</u> | <u>Cost to</u> <u>Complete</u> | <u>Total</u> <u>Cost</u> | <u>Target</u> <u>Value of</u> <u>Contract</u> |
|---|---|---|--|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---|
| | | | | | | | | | | | | |
| (U) <u>Product Development</u> | | | | | | | | | | | | |
| Rockwell | SS/CPAF | | 13.500 | | | | | | | 0.000 | 13.500 | |
| Rockwell | SS/CPAF | | 49.338 | | | | | | | 0.000 | 49.338 | |
| TRW | SS/CPAF | | 16.788 | | | | | | | 0.000 | 16.788 | |
| JHU-APL (SPAWAR SysCen) | MIPR | | 5.026 | 0.200 | Jan-03 | 0.250 | Jan-04 | 0.300 | Jan-05 | Continuing | TBD | |
| Subtotal Product Development | | | 84.652 | 0.200 | | 0.250 | | 0.300 | | Continuing | TBD | 0.000 |
| Remarks: | | | | | | | | | | | | |
| (U) <u>Support</u> | | | | | | | | | | | | |
| SE/TA [SRC, ASEC, MCR ATT, SAFTAS] | Various | | 3.276 | 0.650 | Mar-03 | 0.822 | Mar-04 | 0.850 | Mar-05 | 0.000 | 5.598 | |
| MITRE | LOE | | 0.131 | | | 0.146 | Dec-03 | 0.150 | Dec-04 | 0.000 | 0.427 | |
| PMA | Various | | 2.355 | 0.145 | | 0.172 | | 0.142 | | Continuing | TBD | |
| ALCs | MIPR | | 0.355 | | | | | | | 0.000 | 0.355 | |
| Subtotal Support | | | 6.117 | 0.795 | | 1.140 | | 1.142 | | Continuing | TBD | 0.000 |
| Remarks: PMA has several award dates | | | | | | | | | | | | |
| (U) <u>Test & Evaluation</u> | | | | | | | | | | | | |
| NavAir Warfare Center | MIPR | | 5.554 | | | | | | | 0.000 | 5.554 | |
| AFOTEC | MIPR | | 0.204 | | | | | | | 0.000 | 0.204 | |
| N/A | | | | | | | | | | | 0.000 | |
| Subtotal Test & Evaluation | | | 5.758 | 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 |
| Remarks: | | | | | | | | | | | | |
| (U) Total Cost | | | 96.527 | 0.995 | | 1.390 | | 1.442 | | Continuing | TBD | 0.000 |

Exhibit R-4, RDT&E Schedule Profile

DATE

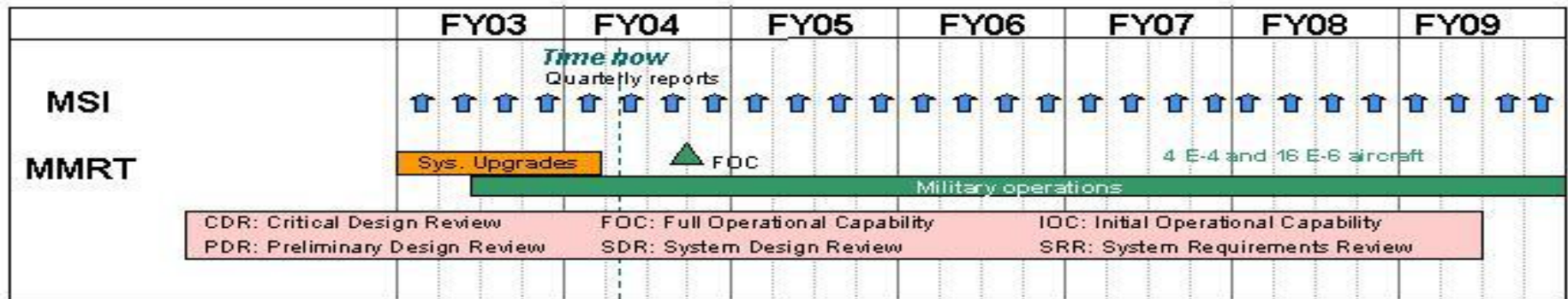
February 2004

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



■ Concept activities
■ Production / fielding

■ Design / development
■ Operations / sustainment

■ Integration / test
 △◇ Key events

UNCLASSIFIED

| | | |
|--|--|------------------------------|
| Exhibit R-4a, RDT&E Schedule Detail | | DATE February 2004 |
|--|--|------------------------------|

| | | |
|--|--|--|
| 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>Schedule Profile</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|--|----------------|----------------|----------------|
| (U) E-4B Full Operational Capability (FOC) | | 2Q | |
| (U) E-6B Full Operational Capability (FOC) | | 4Q | |
| (U) CEP Study and Analysis - Quarterly Report(s) | 1-4Q | 1-4Q | 1-4Q |

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

| | | | | | | | | | |
|---|-------------------|---------------------|---------------------|---|---------------------|---------------------|--|---------------------|-------|
| 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 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total |
| 4521 DIRECT | 0.871 | 0.282 | 0.285 | 0.298 | 0.302 | 0.307 | 0.311 | Continuing | TBD |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

(U) A. Mission Description and Budget Item Justification

The Defense Improved Emergency Message Automated Transmission System (IEMATS) Replacement 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-Single Integrated Operational Plan (SIOP) messaging and reached Full Operational Capability (FOC) on 15 Feb 02. DIRECT interfaces with all current EAM distribution communication systems (as directed by Vol VII of Joint Chiefs of Staff guidance) and has an expansion capability for future communication systems. DIRECT is currently expanding, through the Nuclear Command, Control, and Communications (NC3) Hybrid solution (a DIRECT to Nova/Strategic Command and Control System (SACCS) interface), the user base for EAM dissemination due to the Automatic Digital Network (AUTODIN)/DMS Transitional Hub (DTH) closure.

This project also funds the operational Command and Control Terminals segment of MEECN System Improvement for technical analysis of the currently fielded Command, Control, and Communication (C3) systems. CEP is a key factor in determining Assured MEECN Interoperability (AMI). The program implements a detailed test program for EAM insertion and reception and 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. Trade-off analysis is also performed to identify benefits and drawback of maintaining current systems. Studies are conducted to monitor communications system technology and potential integration complexities into current and future capabilities.

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 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|---|----------------|----------------|----------------|
| (U) Continue EMD to develop interface between DIRECT and NC3 Hybrid Solution, as well as other communication interfaces as directed by Joint Staff in accordance with Vol VII of JCS guidance | 0.691 | 0.282 | 0.285 |
| (U) Communications Evaluation Program (CEP) Studies and Analysis | 0.180 | | |
| (U) Total Cost | 0.871 | 0.282 | 0.285 |

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0303131F Minimum Essential
Emergency Communications Network
(MEECN)

PROJECT NUMBER AND TITLE

4521 DIRECT

(U) C. Other Program Funding Summary (\$ in Millions)(U) D. Acquisition Strategy

An SS/CPAF contract for EMD was awarded to GTE Government Systems (now General Dynamics C4 Systems), Needham, MA on 12 Jul 96.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

| | | |
|--|--|---|
| BUDGET ACTIVITY 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 Method</u> & <u>Type</u> | <u>Performing Activity &</u> <u>Location</u> | <u>Total</u> Prior to FY 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Award</u> | <u>FY</u> 2004 <u>Cost</u> | <u>FY</u> 2004 <u>Award</u> | <u>FY</u> 2005 <u>Cost</u> | <u>FY</u> 2005 <u>Award</u> | <u>Cost to</u> <u>Complete</u> | <u>Total</u> <u>Cost</u> | <u>Target</u> <u>Value of</u> <u>Contract</u> |
|---|---|---|--|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|---|
| | | | | | | | | | | | | |
| (U) <u>Product Development</u> | | | | | | | | | | | | |
| GDCS | SS/CPAF | | 32.549 | 0.543 | Apr-03 | 0.282 | Mar-04 | 0.285 | Mar-05 | Continuing | TBD | |
| National Security Agency (NSA) | MIPR | | 2.300 | | | | | | | 0.000 | 2.300 | |
| JHU-APL | LOE | | 0.399 | 0.180 | Dec-02 | | | | | Continuing | TBD | |
| Subtotal Product Development | | | 35.248 | 0.723 | | 0.282 | | 0.285 | | Continuing | TBD | 0.000 |
| Remarks: | | | | | | | | | | | | |
| (U) <u>Support</u> | | | | | | | | | | | | |
| SETA | LOE | | 3.072 | | | | | | | | 3.072 | |
| MITRE | LOE | | 2.668 | 0.003 | Mar-03 | | | | | | 2.671 | |
| PMA | Various | | 1.459 | 0.145 | | | | | | | 1.604 | |
| Subtotal Support | | | 7.199 | 0.148 | | 0.000 | | 0.000 | | 0.000 | 7.347 | 0.000 |
| Remarks: PMA has several award dates | | | | | | | | | | | | |
| (U) <u>Test & Evaluation</u> | | | | | | | | | | | | |
| Various | Various | | 0.471 | | | | | | | 0.000 | 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 | | | 42.918 | 0.871 | | 0.282 | | 0.285 | | Continuing | TBD | 0.000 |

Exhibit R-4, RDT&E Schedule Profile

DATE

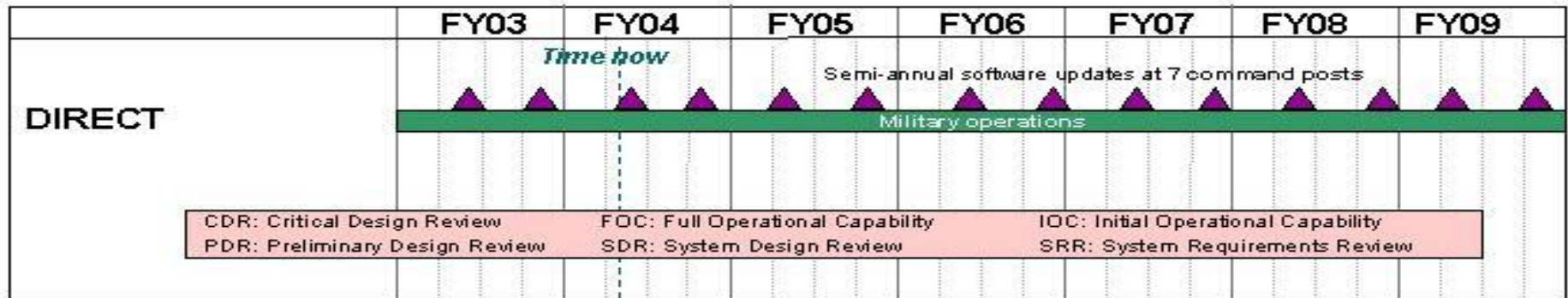
February 2004

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



■ Concept activities
■ Production / fielding

■ Design / development
■ Operations / sustainment

■ Integration / test
 △◇ Key events

UNCLASSIFIED

| | |
|--|------------------------------|
| Exhibit R-4a, RDT&E Schedule Detail | DATE February 2004 |
|--|------------------------------|

| | | |
|--|--|---|
| BUDGET ACTIVITY 07 Operational System Development | PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN) | PROJECT NUMBER AND TITLE 4521 DIRECT |
|--|--|---|

| (U) <u>Schedule Profile</u> | <u>FY 2003</u> | <u>FY 2004</u> | | <u>FY 2005</u> |
|--|----------------|----------------|--|----------------|
| (U) STRFM Software Delivery/Drop | | 2Q | | |
| (U) Hybrid Solution | 1-4Q | 1Q | | |
| (U) Companion UHF TACSAT System (CUTS) | 2-3Q | | | |
| (U) JCS Vol VII Annual Software Revision | 1-4Q | 1-4Q | | 1-4Q |

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

| | | | | | | | | | | |
|--|-------------------|---------------------|---------------------|--|---------------------|---------------------|--|---------------------|-------|--|
| 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 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total | |
| 4610 Minuteman MEECN Program (MMP) | 0.387 | 0.282 | 1.498 | 10.946 | 37.206 | 22.934 | 0.905 | Continuing | 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) band communications capability. The Extremely High Frequency (EHF) band 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 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
| (U) Completed MMP ECPs/Weapon System Test/Operational Test (WST/OT) | 0.387 | 0.282 | |
| (U) Begin AEHF Concept Development Studies | | | 1.498 |
| (U) Total Cost | 0.387 | 0.282 | 1.498 |

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

| | | | | | | | | | |
|--|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|
| | <u>FY 2003</u> | <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>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>Complete</u> | |
| (U) MPAF, Missile Modifications (MEECN, PE 0303131F, BA 03, P-011) | 33.037 | 32.968 | 15.780 | 2.887 | 0.000 | 6.404 | 23.964 | 6.900 | 191.977 |

(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).

The AEHF upgrade for MMP will be a full and open competition.

UNCLASSIFIED

| Exhibit R-3, RDT&E Project Cost Analysis | | | | | | | | | | DATE February 2004 | | |
|--|---------------------------------------|---|--|-----------------------------|--|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|---|-----------------------|---|
| 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) | | |
| (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 2003 Cost</u> | <u>FY 2003 Cost</u> | <u>FY 2003 Award Date</u> | <u>FY 2004 Cost</u> | <u>FY 2004 Award Date</u> | <u>FY 2005 Cost</u> | <u>FY 2005 Award Date</u> | <u>Cost to Complete</u> | <u>Total Cost</u> | <u>Target Value of Contract</u> |
| (U) <u>Product Development</u> | | | | | | | | | | | | |
| NGC | SS/CPAF | | 45.812 | 0.158 | Jan-03 | 0.101 | Nov-03 | | | 0.000 | 46.071 | |
| AEHF Concept Development Studies - TBD | TBD | | | | | | | 1.300 | Dec-04 | | 1.300 | |
| JHU-APL | LOE | | 0.836 | | | | | | | | 0.836 | |
| Subtotal Product Development | | | 46.648 | 0.158 | | 0.101 | | 1.300 | | 0.000 | 48.207 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| (U) <u>Support</u> | | | | | | | | | | | | |
| SETA | LOE | | 0.826 | 0.074 | Mar-03 | | | 0.198 | | | 1.098 | |
| MITRE | LOE | | 0.695 | | | | | | | | 0.695 | |
| PMA | Various | | 0.847 | 0.155 | | 0.061 | | | | | 1.063 | |
| Subtotal Support | | | 2.368 | 0.229 | | 0.061 | | 0.198 | | 0.000 | 2.856 | 0.000 |
| Remarks: Various Award Dates | | | | | | | | | | | | |
| (U) <u>Test & Evaluation</u> | | | | | | | | | | | | |
| WST/OT | | | | | | 0.120 | | | | | 0.120 | |
| Subtotal Test & Evaluation | | | 0.000 | 0.000 | | 0.120 | | 0.000 | | 0.000 | 0.120 | 0.000 |
| Remarks: Various Award Dates | | | | | | | | | | | | |
| (U) <u>Management</u> | | | | | | | | | | | 0.000 | |
| Subtotal Management | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Remarks: | | | | | | | | | | | | |
| (U) Total Cost | | | 49.016 | 0.387 | | 0.282 | | 1.498 | | 0.000 | 51.183 | 0.000 |

Exhibit R-4, RDT&E Schedule Profile

DATE

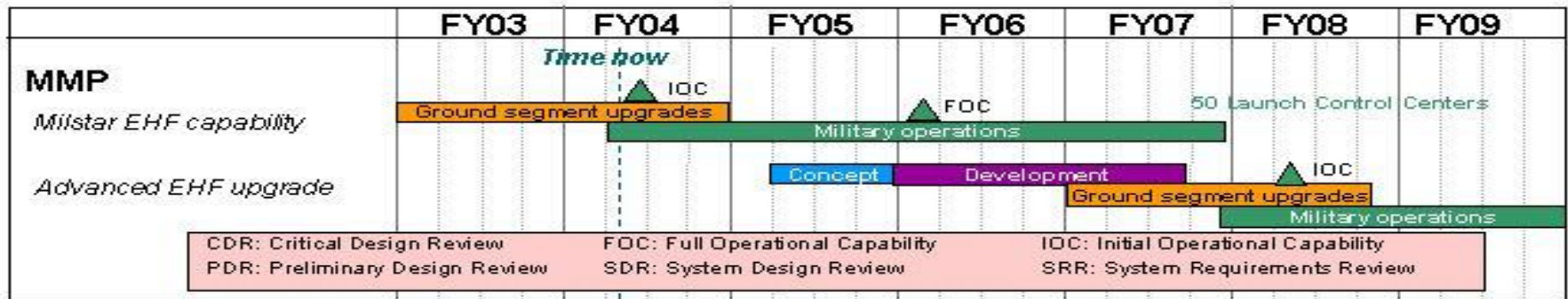
February 2004

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)

Minuteman MEECN Program Schedule



Concept activities
 Production / fielding

Design / development
 Operations / sustainment

Integration / test
 Key events

UNCLASSIFIED

| | |
|--|------------------------------|
| Exhibit R-4a, RDT&E Schedule Detail | DATE February 2004 |
|--|------------------------------|

| | | |
|---|---|---|
| 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) |
|---|---|---|

| | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|--|----------------|----------------|----------------|
| (U) <u>Schedule Profile</u> | | | |
| (U) Exercise MMP Production Option | 2Q | 1Q | |
| (U) MMP IOC | | 2Q | |
| (U) Award AEHF Concept Development Studies | | | 1Q |

Exhibit R-2a, RDT&E Project Justification

DATE
February 2004

| | | | | | | | | | |
|---|--|--|--|---|--|--|--|--|--|
| 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 2003 Actual | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | Cost to Complete | Total |
|---|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|
| 5047 Ground Element MEECN System (GEMS) | 0.000 | 8.641 | 29.958 | 37.665 | 10.099 | 4.859 | 4.951 | Continuing | TBD |
| Quantity of RDT&E Articles | 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 MILSTAR 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 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> |
|--|----------------|----------------|----------------|
| (U) Concept & Technology Demonstration Study | | 6.557 | |
| (U) PMA/Analytical Support | | 2.084 | 2.187 |
| (U) Award Increment 1 - Systems Demonstration & Development (SDD) Contract | | | 27.771 |
| (U) Total Cost | 0.000 | 8.641 | 29.958 |

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

| | <u>FY 2003</u> <u>Actual</u> | <u>FY 2004</u> <u>Estimate</u> | <u>FY 2005</u> <u>Estimate</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>Cost to</u> <u>Complete</u> | <u>Total Cost</u> |
|---|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------|
| (U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-050) | | | | 25.410 | 111.390 | 73.923 | 20.923 | Continuing | TBD |

(U) D. Acquisition Strategy

Award up to 3 Concept and Technology Development (CTD) contracts following full and open competition. Upon completion of CTD, award a single SDD contract following full & open competition.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

| | | |
|--|--|---|
| 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 Method</u> & <u>Type</u> | <u>Performing Activity &</u> <u>Location</u> | <u>Total</u> Prior to FY 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Cost</u> | <u>FY</u> 2003 <u>Award</u> <u>Date</u> | <u>FY</u> 2004 <u>Cost</u> | <u>FY</u> 2004 <u>Award</u> <u>Date</u> | <u>FY</u> 2005 <u>Cost</u> | <u>FY</u> 2005 <u>Award</u> <u>Date</u> | <u>Cost to</u> <u>Complete</u> | <u>Total</u> <u>Cost</u> | <u>Target</u> <u>Value of</u> <u>Contract</u> |
|---|---|---|--|----------------------------------|--|----------------------------------|--|----------------------------------|--|-----------------------------------|-----------------------------|---|
| | | | | | | | | | | | | |
| (U) <u>Product Development</u> | | | | | | | | | | | | |
| CTD Contract | TBD | | 0.000 | 0.000 | | 6.557 | Apr-04 | | | Continuing | TBD | |
| SDD Contract | | | | | | | | 27.771 | Dec-04 | | 27.771 | |
| Subtotal Product Development | | | 0.000 | 0.000 | | 6.557 | | 27.771 | | Continuing | TBD | 0.000 |
| Remarks: | | | | | | | | | | | | |
| (U) <u>Support</u> | | | | | | | | | | | | |
| ITSP | | | | | | 0.670 | Mar-04 | 0.703 | Mar-05 | Continuing | TBD | |
| MITRE | | | | | | 1.164 | Jan-04 | 1.222 | Nov-04 | Continuing | TBD | |
| PMA | | | | | | 0.250 | | 0.262 | | | 0.512 | |
| Subtotal Support | | | 0.000 | 0.000 | | 2.084 | | 2.187 | | Continuing | TBD | 0.000 |
| Remarks: PMA has several award dates | | | | | | | | | | | | |
| (U) <u>Test & Evaluation</u> | | | | | | | | | | | | |
| N/A | | | | | | | | | | | 0.000 | |
| Subtotal Test & Evaluation | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 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 |
| Remarks: | | | | | | | | | | | | |
| (U) Total Cost | | | 0.000 | 0.000 | | 8.641 | | 29.958 | | Continuing | TBD | 0.000 |

Exhibit R-4, RDT&E Schedule Profile

DATE

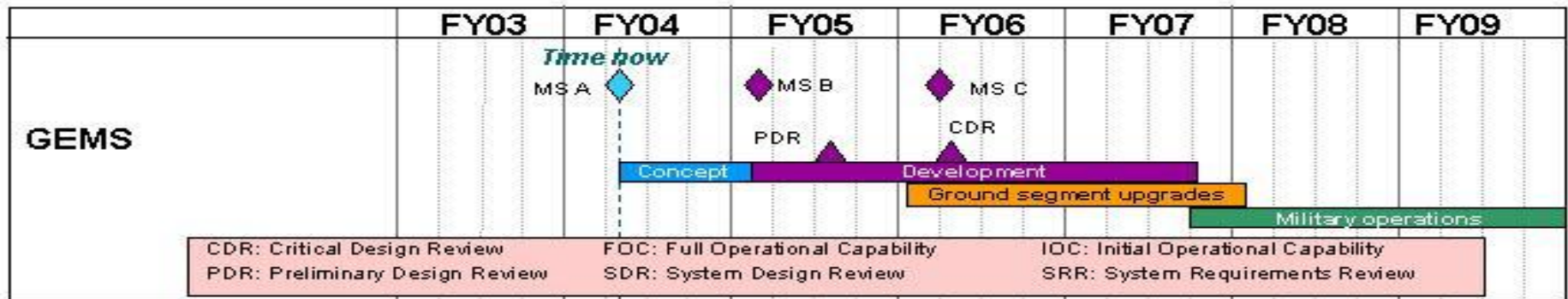
February 2004

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



■ Concept activities
■ Production / fielding

■ Design / development
■ Operations / sustainment

■ Integration / test
 △◇ Key events

UNCLASSIFIED

| | |
|--|------------------------------|
| Exhibit R-4a, RDT&E Schedule Detail | DATE February 2004 |
|--|------------------------------|

| | | |
|---|---|--|
| 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>Schedule Profile</u> (U) ORD Approval (U) C&TD Study (U) MS B/SDD Start | <u>FY 2003</u> | <u>FY 2004</u> 2Q 2-3Q | <u>FY 2005</u> 1Q |
|---|----------------|------------------------------|------------------------------|