| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) | | | | | | | February 2006 |
|---|---|---|---|---|---|---|---|

| BUDGET ACTIVITY<br>**7 - Operational system development** | PE NUMBER AND TITLE<br>**0203740A - Maneuver Control System** | | | | | | PROJECT<br>**484** |
|---|---|---|---|---|---|---|---|

| COST (In Thousands) | 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 Cost |
|---|---|---|---|---|---|---|---|---|---|
| 484    MANEUVER CONTROL SYSTEM (MCS) | 31050 | 40813 | 37976 | 22020 | 21621 | 15013 | 15125 | 0 | 262977 |

**A. Mission Description and Budget Item Justification:** This program element funds the development, integration and testing of the Maneuver Control System (MCS) to include injectors for Joint Tactical COP Workstation (JTCW) and Command Post of the Future (CPOF).  Project satisfies an urgent need for the efficient command and control (C2) of tactical operations on the battlefield.  MCS is the Army's tactical C2 system used in command posts from corps to battalion to provide automated C2 for the commander and staff at and between echelons (i.e., Force Level Control).  MCS is an essential component of the Army Battle Command System (ABCS) and provides critical coordination among Battlefield Functional Areas (BFAs) within each echelon.  The primary component of Force Level Control is MCS's provision of the Common Operational Picture (COP).  The COP depicts information provided by all the BFAs and includes a Situation Map (SITMAP) using Defense Mapping Agency data to display friendly and enemy unit locations, control measures (e.g., boundaries, phase lines, etc.), Intelligence and Electronic Warfare graphics, Fire Support plans, combat service support location information, air corridors and air defense weapons control information.

MCS software is based on the Defense Information Infrastructure(DII) Common Operating Environment (COE) standard architecture with applications to automate C2 operations. The MCS software uses the Joint Mapping Tool Kit (JMTK), a Defense Information Infrastructure Common Operating Environment (DII COE) product, for terrain analysis, planning and SITMAP graphical displays.  The Task Organization (TO) tool provides the commander and staff a means of organizing (graphically and textually) tactical Army units.  Unit commanders and their staffs can quickly and efficiently prepare and disseminate combat orders with MCS's automated Operations Order (OPORD) generating tool. MCS report displays provide resource information roll-ups on all battlefield units.  MCS supports battlefield situation displays for all ABCS BFAs.  MCS provides the Global Command and Control System - Army (GCCS-A) the Army "ground track" segment of the joint tactical common picture.

| **Accomplishments/Planned Program** | FY 2005 | FY 2006 | FY 2007 |
|---|---|---|---|
| Conduct MCS software development and support | 13171 | 6450 | 6225 |
| Plan and participate in test events, and prepare for the MCS Operational Tests | 2555 | 0 | 0 |
| Conduct MCS 6.4 IOT&E | 3942 | 0 | 0 |
| JTCW System Engineering & Development | 3600 | 19467 | 8762 |
| CPOF Development | 7782 | 14896 | 22989 |
| Total | 31050 | 40813 | 37976 |

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MANEUVER CONTROL SYSTEM (MCS)

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Exhibit R-2
Budget Item Justification

| **B. Program Change Summary** | FY 2005 | FY 2006 | FY 2007 |
|---|---|---|---|
| Previous President's Budget (FY 2006) | 23350 | 44903 | 14987 |
| Current BES/President's Budget (FY 2007) | 31050 | 40813 | 37976 |
| Total Adjustments | 7700 | -4090 | 22989 |
|    Congressional Program Reductions | | -3500 | |
|    Congressional Rescissions | -20 | -590 | |
|    Congressional Increases | | | |
|    Reprogrammings | 7720 | | |
|    SBIR/STTR Transfer | | | |
|    Adjustments to Budget Years | | | 22989 |

Change Summary Explanation:
Funding
FY05: Funds increased for Command Post of the Future (CPOF) development.
FY06: Congressional decrease.
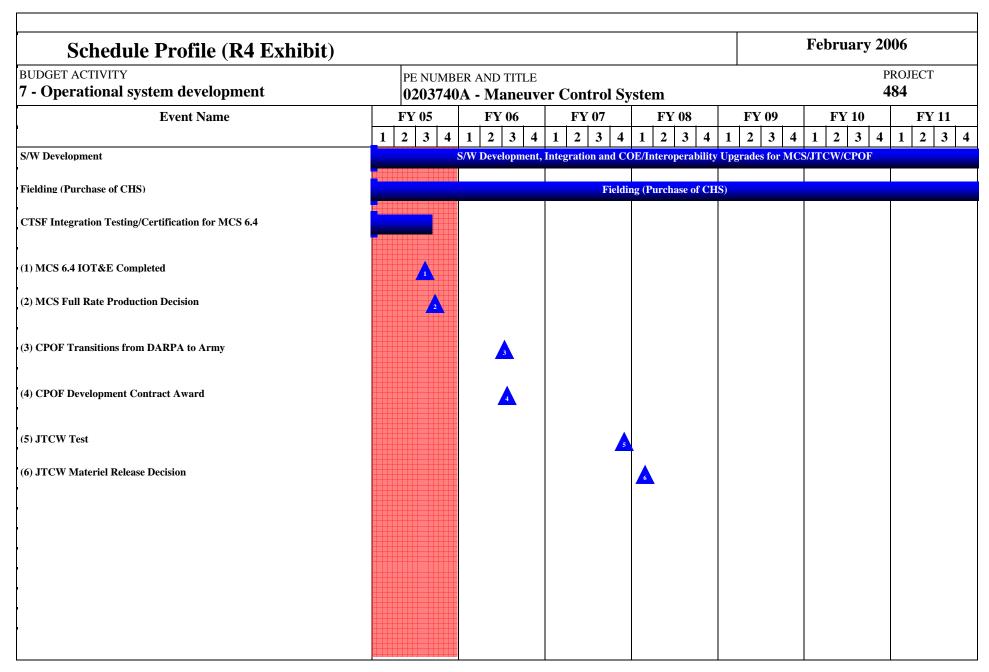FY07: Funds increased for CPOF development and integration.

| **C. Other Program Funding Summary** | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Compl | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| BA9320 - Maneuver Control System (MCS) | 43861 | 73948 | 77023 | 89152 | 97629 | 91700 | 53034 | CONT | CONT |
| BS9710 - MCS Spares | 1973 | 1834 | 1785 | 1519 | 1555 | 0 | 0 | CONT | CONT |

Comment:

**D. Acquisition Strategy** The MCS acquisition strategy is based on modular development of application software, integrated with the common system software, hosted on the ruggedized commercial off-the-shelf Common Hardware/ Software (CHS) computers and peripheral hardware that are procured under the Army CHS ordering contract.  Software will be developed, tested, integrated and trained as necessary to meet warfighter tactical and training requirements.  Upon completion of the base capability that is to be fielded, development will continue for Joint Interoperability, Common Operating Environment and Safety requirements as necessary to continue the life of the software in the field. Priced options on the MCS Software Development contract will be exercised for JTCW development.  Fielding of the JTCW will begin upon obtaining Materiel Release planned for 1QFY08.  Army acquisition strategy for technical insertion of Command Post of the Future (CPOF) capabilities into the MCS program is being implemented within this line.

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MANEUVER CONTROL SYSTEM (MCS)

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Exhibit R-2
Budget Item Justification

# ARMY RDT&E COST ANALYSIS (R3)

**February 2006**

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| **7 - Operational system development** | **0203740A - Maneuver Control System** | **484** |

| I. Product Development | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2005 Cost | FY 2005 Award Date | FY 2006 Cost | FY 2006 Award Date | FY 2007 Cost | FY 2007 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MCS 6.4 Software Development | C/CPAF | Lockheed Martin Corp., Tinton Falls, NJ | 171367 | 7100 | 1-2Q | 6160 | 1-2Q | 4750 | 1-2Q | 4750 | 194127 | 197327 |
| JTCW System Engineering & Development | C/CPAF | Lockheed Martin Corp., Tinton Falls, NJ | 0 | 3600 | 1-2Q | 14226 | 1-2Q | 4509 | 1-2Q | Continue | Continue | 0 |
| CPOF Development | MIPR | DARPA | 5700 | 6037 | | 4500 | 2Q | 0 | | 0 | 16237 | 0 |
| CPOF Development | TBD | To be selected | 0 | 0 | | 5534 | 3Q | 13689 | 2Q | Continue | Continue | 0 |
| Misc Contracts | Various | Various | 13933 | 1168 | 1-2Q | 1880 | 1-2Q | 1958 | 1-2Q | Continue | Continue | 0 |
| Software Development & Technical Support | MIPR | CECOM, NJ | 25245 | 4363 | 1-2Q | 2500 | 1-2Q | 3167 | 1-2Q | Continue | Continue | 0 |
| Technical Support | In House | PM Battle Command, NJ | 12037 | 2079 | 1-4Q | 2183 | 1-4Q | 2830 | 1-4Q | Continue | Continue | 0 |
| PSE H/W & S/W | Various | Various | 2575 | 0 | | 200 | 2Q | 200 | 2Q | Continue | Continue | 0 |
| MITRE System Engineering | CPFF | MITRE Corp., Eatontown, NJ | 8615 | 1106 | 1Q | 875 | 1Q | 755 | 1Q | Continue | Continue | 0 |
| ABCS SE&I | MIPR | PEO C3T, NJ | 1830 | 0 | | 0 | | 0 | | 0 | 1830 | 0 |
| Subtotal: | | | 241302 | 25453 | | 38058 | | 31858 | | Continue | Continue | 197327 |

| II. Support Costs | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2005 Cost | FY 2005 Award Date | FY 2006 Cost | FY 2006 Award Date | FY 2007 Cost | FY 2007 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Misc Support | In House | PM Battle Command, NJ | 3386 | 478 | 1-4Q | 490 | 1-4Q | 550 | 1-4Q | Continue | Continue | 0 |
| Misc Contracts | Various | Various | 1963 | 165 | 1-2Q | 200 | 1-3Q | 475 | 1-2Q | Continue | Continue | 0 |
| Subtotal: | | | 5349 | 643 | | 690 | | 1025 | | Continue | Continue | 0 |

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MANEUVER CONTROL SYSTEM (MCS)

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Exhibit R-3
ARMY RDT&E COST ANALYSIS

# ARMY RDT&E COST ANALYSIS (R3)

**February 2006**

BUDGET ACTIVITY
**7 - Operational system development**

PE NUMBER AND TITLE
**0203740A - Maneuver Control System**

PROJECT
**484**

| III. Test And Evaluation | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2005 Cost | FY 2005 Award Date | FY 2006 Cost | FY 2006 Award Date | FY 2007 Cost | FY 2007 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OGA | MIPR | Various | 2938 | 727 | 1-2Q | 435 | 1-2Q | 267 | 1Q | Continue | Continue | 0 |
| Misc Contracts | Various | Various | 4071 | 508 | 1-2Q | 422 | 1-2Q | 250 | 1Q | Continue | Continue | 0 |
| Operational Test/Planning | MIPR | Various | 16463 | 3065 | 1-2Q | 524 | 2-3Q | 3221 | 1-3Q | Continue | Continue | 0 |
| Subtotal: | | | 23472 | 4300 | | 1381 | | 3738 | | Continue | Continue | 0 |

| IV. Management Services | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2005 Cost | FY 2005 Award Date | FY 2006 Cost | FY 2006 Award Date | FY 2007 Cost | FY 2007 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Office Mgmt | In House | PM Battle Command, NJ | 2105 | 654 | 1-4Q | 684 | 1-4Q | 1355 | 1-4Q | Continue | Continue | 0 |
| Subtotal: | | | 2105 | 654 | | 684 | | 1355 | | Continue | Continue | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Total Cost:** | | | **272228** | **31050** | | **40813** | | **37976** | | **Continue** | **Continue** | **197327** |

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MANEUVER CONTROL SYSTEM (MCS)

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Exhibit R-3
ARMY RDT&E COST ANALYSIS

# Schedule Profile (R4 Exhibit)

| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
|---|---|---|
| 7 - Operational system development | 0203740A - Maneuver Control System | 484 |

| Event Name | FY 05 | | | | FY 06 | | | | FY 07 | | | | FY 08 | | | | FY 09 | | | | FY 10 | | | | FY 11 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |

**S/W Development** — S/W Development, Integration and COE/Interoperability Upgrades for MCS/JTCW/CPOF

**Fielding (Purchase of CHS)** — Fielding (Purchase of CHS)

**CTSF Integration Testing/Certification for MCS 6.4**

**(1) MCS 6.4 IOT&E Completed** — △1

**(2) MCS Full Rate Production Decision** — △2

**(3) CPOF Transitions from DARPA to Army** — △3

**(4) CPOF Development Contract Award** — △4

**(5) JTCW Test** — △5

**(6) JTCW Materiel Release Decision** — △6

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MANEUVER CONTROL SYSTEM (MCS)

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Exhibit R-4
Budget Item Justification

# Schedule Detail (R4a Exhibit)

**February 2006**

| BUDGET ACTIVITY<br>**7 - Operational system development** | PE NUMBER AND TITLE<br>**0203740A - Maneuver Control System** | PROJECT<br>**484** |
| --- | --- | --- |

| **Schedule Detail** | **FY 2005** | **FY 2006** | **FY 2007** | **FY 2008** | **FY 2009** | **FY 2010** | **FY 2011** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CTSF Integration/Certification for MCS 6.4 | 1-3Q | | | | | | |
| Complete MCS Initial Operational Test & Evaluation | 2-3Q | | | | | | |
| MCS Full Rate Production Decision | 3Q | | | | | | |
| Initial Operational Capability | 4Q | | | | | | |
| Joint Tactical Common Operational Picture (COP) Workstation (JCTW) Test | | | 4Q | 1Q | | | |
| JTCW Materiel Release Decision | | | | 1Q | | | |
| Software Development of MCS & JTCW | 1-4Q | 1-4Q | 1-4Q | | | | |
| Software Development of CPOF | 1-4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q |
| Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.) | 4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q | 1-4Q |

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Exhibit R-4a
Budget Item Justification