

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) | | | | | | | | February 2006 | | | |
|--|----------------------|--|---|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|------------|
| BUDGET ACTIVITY 7 - Operational system development | | | PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement Program | | | | | | PROJECT 036 | | |
| 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 |
| 036 | PATRIOT PROD IMP PGM | | 32067 | 15957 | 10770 | 11051 | 11297 | 12227 | 12734 | 180300 | 190952 |
| A. Mission Description and Budget Item Justification: Patriot is an advanced Surface-to-Air guided missile system with a high probability of kill capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missile likely to be encountered by US Forces. The Patriot Product Improvement Program provides for the upgrade of the Patriot System through individual materiel changes. Program objective is to define and implement software changes necessary to enhance system capabilities against evolving Tactical Ballistic Missile (TBM) and Cruise Missile threats. Development efforts address Mode V/S Identification Friend or Foe (IFF), launcher and design improvements. RDTE costs associated with developing and implementing Operation Iraqi Freedom (OIF) fixes are funded through this PE. | | | | | | | | | | | |
| <u>Accomplishments/Planned Program</u> | | | | | | | | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | |
| Post Deployment Software Development | | | | | | | | 5752 | 7548 | 10770 | |
| Recapitalization | | | | | | | | 19463 | 8409 | 0 | |
| SIAP, Block 0 Integration | | | | | | | | 4852 | 0 | 0 | |
| Advanced Composite Radome | | | | | | | | 2000 | 0 | 0 | |
| Total | | | | | | | | 32067 | 15957 | 10770 | |
| | | | | | | | | | | | |

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| BUDGET ACTIVITY 7 - Operational system development | | PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement Program | | | | | | PROJECT 036 | | |
| B. Program Change Summary | | FY 2005 | FY 2006 | FY 2007 | | | | | | |
| Previous President's Budget (FY 2006) | | 32082 | 16188 | 10607 | | | | | | |
| Current BES/President's Budget (FY 2007) | | 32067 | 15957 | 10770 | | | | | | |
| Total Adjustments | | -15 | -231 | 163 | | | | | | |
| Congressional Program Reductions | | | -70 | | | | | | | |
| Congressional Rescissions | | | -161 | | | | | | | |
| Congressional Increases | | | | | | | | | | |
| Reprogrammings | | -15 | | | | | | | | |
| SBIR/STTR Transfer | | | | | | | | | | |
| Adjustments to Budget Years | | | | 163 | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| C. Other Program Funding Summary | | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Compl | Total Cost |
| MSLS PROC C50700 Patriot Mod | | 66287 | 76393 | 69856 | 76479 | 49746 | 53977 | 56361 | CONT | CONT |
| MSLS PROC CA0267 Patriot Mod Initial Spares | | 6404 | 9422 | 15585 | 18798 | 18942 | 20851 | 7237 | CONT | CONT |
| 0604865A, Project 01C PAC-3 | | 60408 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60408 |
| 0603869A, Project 01B MEADS | | 251298 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 488121 |
| 0604869A, Project M06 Patriot/MEADS Combined Aggregate Program (CAP) | | 0 | 284695 | 329583 | 459684 | 517049 | 592013 | 422005 | CONT | CONT |
| MSLS PROC C49100, PAC-3 Missile | | 496990 | 483260 | 489067 | 472907 | 478795 | 0 | 0 | 0 | 2421019 |
| MSLS PROC C50001, Patriot/MEADS CAP | | 0 | 0 | 0 | 89735 | 65296 | 429735 | 674386 | CONT | CONT |
| 0102419A, Project E55 JLENS Development | | 79279 | 105888 | 264491 | 465214 | 353856 | 335490 | 301143 | 0 | 1905361 |
| OPA BZ0525, JLENS Procurement | | 0 | 0 | 0 | 0 | 0 | 30471 | 476728 | 0 | 507199 |
| 0604802A, Project S23, SLAMRAAM | | 63084 | 35587 | 26961 | 10132 | 0 | 0 | 0 | 0 | 135764 |
| MSLS PROC C81001, SLAMRAAM Production | | 2438 | 19061 | 22039 | 59314 | 82656 | 82143 | 60979 | 0 | 328630 |
| 0604820, Project SENTINEL Development | | 5848 | 5008 | 2527 | 2622 | 0 | 0 | 0 | 0 | 16005 |
| OPA WK5057, SENTINEL | | 10566 | 8289 | 15125 | 20914 | 33394 | 33239 | 25314 | 0 | 146841 |
| 0603327, Project S23, Integrated Fire Control | | 19984 | 24480 | 41746 | 47995 | 50096 | 0 | 0 | 0 | 184301 |
| | | | | | | | | | | |

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) | | February 2006 |
|---|--|-----------------------|
| BUDGET ACTIVITY 7 - Operational system development | PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement Program | PROJECT 036 |
| <p>Comment: This PE is an integral part of the PEO, Integrated Air and Missile Defense Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, JTAGS, and SENTINEL.</p> <p>D. Acquisition Strategy The design objective of the Patriot system was to provide a baseline system capable of modification to cope with the evolving threat. This alternative minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The Patriot Product Improvement program upgrades the Patriot system to address operational lessons learned, enhancements to joint force interoperability, and other system performance improvements to provide overmatch capability with the emerging threat. Upgrades are implemented through individual hardware and software materiel changes and fielded incrementally. This incremental approach to fielding will continue through the Combined Aggregate Program (CAP) as Patriot is evolved to MEADS.</p> | | |

| ARMY RDT&E COST ANALYSIS (R3) | | | | | | | | | | February 2006 | | |
|---|------------------------|---|----------------|---|--------------------|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY | | | | PE NUMBER AND TITLE | | | | | | PROJECT | | |
| 7 - Operational system development | | | | 0203801A - Missile/Air Defense Product Improvement Program | | | | | | 036 | | |
| 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 |
| Post Deployment Software Development | 1095/SS-CPIF | AMRDEC, AL/Raytheon, MA, LMMFC-D,TX | 9253 | 2726 | 2-3Q | 4952 | 2Q | 8670 | 2Q | Continue | 0 | Continue |
| Recapitalization | SS-CPIF/MIPR | LM/CECOM/Raytheon | 61514 | 19463 | 1-2Q | 8409 | 2Q | 0 | | 0 | 0 | 0 |
| SIAP | SS-FP | Raytheon, MA | 10000 | 4852 | 2Q | 0 | | 0 | | 0 | 14852 | 0 |
| Advanced Composite Radome | SS-CPIF | AMRDEC, AL, LMMFC - D, TX, Holloman AFB, NM | 1100 | 2000 | | 0 | | 0 | | 0 | 3100 | 0 |
| Subtotal: | | | 81867 | 29041 | | 13361 | | 8670 | | Continue | 17952 | Continue |
| | | | | | | | | | | | | |
| 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 |
| In-House Support | 1095 | RSA/AL | 15911 | 850 | 1-4Q | 550 | 1-2Q | 500 | 1-2Q | Continue | 0 | Continue |
| Matrix Support | 1095 | RSA/AL | 4217 | 520 | 1-2Q | 500 | 1-2Q | 400 | 1-2Q | Continue | 0 | Continue |
| Subtotal: | | | 20128 | 1370 | | 1050 | | 900 | | Continue | 0 | Continue |
| | | | | | | | | | | | | |
| 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 |
| Missile Command | 1095 | RSA/AL | 17321 | 500 | 1Q | 446 | | 350 | | Continue | 0 | Continue |
| White Sands Missile Range | MIPR | WSMR/NM | 13367 | 400 | 2Q | 300 | | 250 | | Continue | 0 | Continue |
| RDEC and Other Govt Agent | 1095/MIPR | RSA/AL | 98436 | 756 | 1Q | 800 | | 600 | | Continue | 100592 | Continue |
| Subtotal: | | | 129124 | 1656 | | 1546 | | 1200 | | Continue | 100592 | Continue |
| | | | | | | | | | | | | |

| ARMY RDT&E COST ANALYSIS (R3) | | | | | | | | | February 2006 | | | |
|---|------------------------|--------------------------------|----------------|---|--------------------|--------------|--------------------|--------------|--------------------|------------------|----------------|--------------------------|
| BUDGET ACTIVITY 7 - Operational system development | | | | PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement Program | | | | | | | PROJECT 036 | |
| | | | | | | | | | | | | |
| 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 |
| Subtotal: | | | 0 | | | | | | | | | |
| | | | | | | | | | | | | |
| Project Total Cost: | | | 231119 | 32067 | | 15957 | | 10770 | | 0 | 118544 | 0 |
| | | | | | | | | | | | | |

| Schedule Profile (R4 Exhibit) | | | | | | | | | | | | | | | | | | February 2006 | | | | | | | | | | | | | | | | | |
|------------------------------------|--|--|--|--|--|--|--|--|---|---|---|-------|---|---|---|-------|---|---------------|---|-------|---|---|---|-------|---|---------|---|-------|---|---|---|-------|---|---|---|
| BUDGET ACTIVITY | | | | | | | | PE NUMBER AND TITLE | | | | | | | | | | | | | | | | | | PROJECT | | | | | | | | | |
| 7 - Operational system development | | | | | | | | 0203801A - Missile/Air Defense Product Improvement Program | | | | | | | | | | | | | | | | | | 036 | | | | | | | | | |
| 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 |
| RECAPITALIZATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mode V IFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Launcher Electronics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Surveillance/Detection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Post Deployment Software Build | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) PDB 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (2) PDB 6.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) PDB 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Schedule Detail (R4a Exhibit) | | February 2006 |
|---|---|---------------|
| BUDGET ACTIVITY | PE NUMBER AND TITLE | PROJECT |
| 7 - Operational system development | 0203801A - Missile/Air Defense Product Improvement Program | 036 |
| <p><u>Schedule Detail:</u> Not applicable for this item.</p> | | |
| | | |