| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Office of Secretary Of Defense | | | | | | | | | | | DATE: April 2013 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | | | | | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | | | | | | | |
| **COST ($ in Millions)** | **All Prior Years** | **FY 2012** | **FY 2013#** | **FY 2014 Base** | **FY 2014 OCO ##** | **FY 2014 Total** | **FY 2015** | **FY 2016** | **FY 2017** | **FY 2018** | **Cost To Complete** | **Total Cost** |
| Total Program Element | - | 24.161 | 12.368 | 8.300 | - | 8.300 | 4.321 | 3.653 | 3.979 | 4.375 | Continuing | Continuing |
| P440: *UAS Airspace Integration* | - | 13.591 | 8.482 | 4.740 | - | 4.740 | 2.311 | 1.633 | 1.848 | 2.133 | Continuing | Continuing |
| P442: *Interoperability* | - | 10.282 | 3.455 | 3.060 | - | 3.060 | 1.500 | 1.500 | 1.600 | 1.700 | Continuing | Continuing |
| P443: *Unmanned Systems Road Maps* | - | 0.288 | 0.431 | 0.500 | - | 0.500 | 0.510 | 0.520 | 0.531 | 0.542 | Continuing | Continuing |

# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## The FY 2014 OCO Request will be submitted at a later date

**Note**

PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING contains funding for the Common-ABSAA development.
PE 0305219A: MQ-1 Sky Warrior A UAV contains additional funding for GBSAA development.
PE 0305220N: RQ-4 UAV (BAMS UAS) contains funding for an initial common RQ/MQ-4 ABSAA capability via a Pilot In The Loop (PITL) Due Regard system.
The FY2014 President's Budget transfers $83.169M (FYDP) to the above UAS programs' PEs.

**A. Mission Description and Budget Item Justification**

The level of resourcing for the Unmanned Aircraft Systems (UAS) Common Development program reflects iterative reductions from efficiencies and budget reductions, which reduces the Department's ability to develop flexible responsive solutions to emerging war fighter needs. The Department of Defense (DOD) UAS Common Development is a joint effort to develop and demonstrate common standards, architectures, and technologies that address UAS-specific issues across all Military Services. The intent is to increase interoperability and effectiveness by promoting cooperative development of solutions that are applicable across major classes of UAS. This effort will initially focus on addressing DOD UAS integration into the National Airspace System (NAS) and demonstration of a common, interoperable ground station architecture and associated interface standards.

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Office of Secretary Of Defense | DATE: April 2013 |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* |

| B. Program Change Summary ($ in Millions) | FY 2012 | FY 2013 | FY 2014 Base | FY 2014 OCO | FY 2014 Total |
|---|---|---|---|---|---|
| Previous President's Budget | 24.289 | 12.368 | 25.745 | - | 25.745 |
| Current President's Budget | 24.161 | 12.368 | 8.300 | - | 8.300 |
| Total Adjustments | -0.128 | 0.000 | -17.445 | - | -17.445 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Adjustments | -0.128 | - | -17.445 | - | -17.445 |

**Change Summary Explanation**

The FY2014 President’s Budget transfers $83.169M (FYDP) to the above UAS programs’ PEs. In FY2014 the transfer is $17.445M.

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P440: *UAS Airspace Integration* | |

| COST ($ in Millions) | All Prior Years | FY 2012 | FY 2013# | FY 2014 Base | FY 2014 OCO ## | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P440: *UAS Airspace Integration* | - | 13.591 | 8.482 | 4.740 | - | 4.740 | 2.311 | 1.633 | 1.848 | 2.133 | Continuing | Continuing |
| Quantity of RDT&E Articles | | | | | | | | | | | | |

# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## The FY 2014 OCO Request will be submitted at a later date

**Note**

ABSAA and GBSAA technology development transitions to UAS programs of record during FY2013.

**A. Mission Description and Budget Item Justification**

Global Hawk (GH) and the Triton, as well as other Group 3-5 UAS, need a sense-and-avoid (SAA) capability as an alternate means of compliance to Title 14 Code of Federal Regulations, Part 91.111 and Part 91.113, requirement to see-and-avoid other aircraft. The Global Hawk was selected as the as the flagship platform for Airborne Sense and Avoid (ABSAA). The MQ-4C Triton, MQ-1B Predator, MQ-1C Gray Eagle, and MQ-9 Reaper have similar requirements for SAA capability; their SAA technology development will leverage the Common-ABSAA technology. Development of a Ground Based Sense-and-Avoid (GBSAA) system using existing technology can provide a near-term solution for improved airspace access, both for terminal operations (e.g., Beale AFB, GH transit to/from controlled airspace) and for operations/training within the GBSAA system's coverage area (e.g., Gray Eagle at El Mirage, Shadow operations at Cherry Point).

Provides joint funding to support development of standards, modeling and simulation tools, and technology to enable DoD UAS to routinely access the national and international airspace systems.

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| ***Title:*** Unmanned Aircraft System Airspace Integration Initiatives | 13.591 | 8.482 | 4.740 |
| ***Description:*** Starting in FY 2010 the Department's sense-and-avoid (SAA) developmental efforts are enhanced by this defense-wide program element. This program provides joint funding to accelerate the development of SAA technology and standards to enable UAS to routinely access the national and international airspace systems. This program also develops UAS airspace integration requirements and standards, as well as the modeling, simulation, and operational analysis tools needed to validate the systems and standards. | | | |
| ***FY 2012 Accomplishments:***<br>ABSAA - Concluded the Phase 1A effort after delivery of initial software requirements. The ABSAA design includes an integrated suite of sensors, decision logic algorithms, data recording, pilot displays, and prognostics & health management (P&HM) necessary to manage collision risk to an acceptable level of safety across the expected range of operational scenarios and mission environments for Global Hawk and other Group 3-5 UAS. | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P440: *UAS Airspace Integration* |

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| Standards Development - Updated MIL-HDBK-516 for UAS airworthiness (100% complete on criteria, 70% complete on standards, 35% complete on methods of compliance)for both fixed and rotary wing UAS. Developed a proposed methodology for conducting a system safety assessment to calculate the accepted risk for operating UAS within the National Airspace System. Through a series of workshops captured Services' UAS airspace integration lessons learned. Coordinated performance requirements and safety guidelines within appropriate standards development organizations (SDOs). Developed UAS Airspace Integration (AI) Use Cases based upon the current AI CONOPs and operational assessments of current and planned UAS AI Terminal Area and Lateral Transit operations. Developed an Operational Capability Tracking Tool for assessing progress of the airspace integration activities needed to support a predefined set of UAS operational capabilities.<br><br>Modeling & Simulation (M&S) - Provided modeling, simulation and analysis (MS&A) to the FY2012 requirements and standards efforts, as well as the safety analysis activities. Completed development of a Common Intruder Database, with representative radar cross section models. Developed a deterministic tool for evaluating sense and avoid algorithms and CONOPS.<br><br>GBSAA – The Army completed development of system level requirements for their GBSAA system. The GBSAA IPT used these requirements as a starting point and with Service participation focused on development and demonstration of a common set of requirements for a universal GBSAA solution. The collaborative effort included a workshop to identify commonalities among the Services' processes for Software Certification for Airworthiness. The Army continued development of GBSAA technology and demonstrated their Phase 1 and 2 GBSAA systems in June 2012 utilizing the Army Test Bed at Dugway Proving Grounds. | | | |
| ***FY 2013 Plans:***<br>ABSAA - Development transitions to Service Programs of Record funding with a re-planned acquisition strategy.<br><br>Standards Development - Continue the update of MIL-HDBK-516 for airworthiness criteria, standards, and methods of compliance for both fixed and rotary wing UAS, and SAA systems. Refine tool developed to determine Target Level of Safety (TLS) to 3rd parties on the ground for calculating accepted risk for operating UAS within the National Airspace System over populated areas. Conduct an ongoing analysis of UAS Airspace Integration Safety Case lessons learned. Conduct analysis to address high priority safety gaps as identified by the Sense and Avoid Research Panel (SARP). Coordinate system requirements and safety guidelines within appropriate standards development organizations (SDOs). Update the current UAS AI CONOPS and conduct operational analysis to assist DoD in overcoming UAS AI challenges. Continue to maintain the Operational Capability Tracking Tool for assessing progress of the AI activities needed to support all UAS operational capabilities.<br><br>Modeling & Simulation (M&S) - Support modeling, simulation and analysis (MS&A) to address high priority research gaps, as identified by the SARP. | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P440: *UAS Airspace Integration* |

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| GBSAA – Continue efforts begun in FY2012 to provide a common set of GBSAA requirements for Phase 2 Block 0 and Block 1, applicable across all Services. Specific focus of the collaborative effort will include maneuver algorithms and operator displays. Develop a common set of templates for the Safety Case documentation for submission to certifying authorities by leveraging U.S. Army work. Continue design and development of GBSAA system technology. Begin deliberate planning for GBSAA Phase 3, which is the integration of GBSAA and ABSAA. GBSAA development begins transition to Service Programs of Record funding.<br>***FY 2014 Plans:***<br>Standards Development - Complete and publish the update of MIL-HDBK-516 for airworthiness criteria, standards, and methods of compliance for both fixed and rotary wing UAS, and SAA systems. Conduct an ongoing analysis of UAS Airspace Integration Safety Case lessons learned. Conduct analysis to address high priority safety gaps as identified by the SARP. Coordinate system requirements and safety guidelines within appropriate standards development organizations (SDOs). Conduct operational analysis to assist DoD in overcoming UAS AI challenges. Continue to maintain the Operational Capability Tracking Tool for assessing progress of the AI activities needed to support all UAS operational capabilities.<br><br>Modeling & Simulation (M&S) - Support modeling, simulation and analysis (MS&A) to address high priority research gaps, as identified by the SARP. | | | |
| **Accomplishments/Planned Programs Subtotals** | 13.591 | 8.482 | 4.740 |

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P440: *UAS Airspace Integration* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABSAA | MIPR | Various:Various | - | 1.441 | | 1.400 | | 0.000 | | - | | 0.000 | Continuing | Continuing | |
| GBSAA | Various | PM UAS / NAVAIR:AL / MD | - | 6.233 | | 2.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | |
| Airworthiness | Various | AED / AFMC / NAVAIR:AL / OH / MD | - | 2.247 | | 1.627 | | 1.300 | | - | | 1.300 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 9.921 | | 5.027 | | 1.300 | | 0.000 | | 1.300 | | | |

**Remarks**

ABSAA and GBSAA technology development transitions to the Services during FY2013.

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Integration Analysis | MIPR | Various:Various | - | 1.667 | | 2.000 | | 2.000 | | - | | 2.000 | Continuing | Continuing | |
| UAS Task Force | MIPR | Various:Various | - | 2.003 | | 1.455 | | 1.440 | | - | | 1.440 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 3.670 | | 3.455 | | 3.440 | | 0.000 | | 3.440 | | | |

| | All Prior Years | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 0.000 | 13.591 | | 8.482 | | 4.740 | | 0.000 | | 4.740 | | | |

**Remarks**

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P442: *Interoperability* | |

| COST ($ in Millions) | All Prior Years | FY 2012 | FY 2013# | FY 2014 Base | FY 2014 OCO ## | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P442: *Interoperability* | - | 10.282 | 3.455 | 3.060 | - | 3.060 | 1.500 | 1.500 | 1.600 | 1.700 | Continuing | Continuing |
| Quantity of RDT&E Articles | | | | | | | | | | | | |

# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## The FY 2014 OCO Request will be submitted at a later date

**A. Mission Description and Budget Item Justification**

The UAS Common Ground Station Demonstration project will develop and demonstrate an interoperable, standards-based, open ground station architecture for RQ/MQ-4 (Global Hawk/Triton), MQ-1 (Predator/Gray Eagle), MQ-5 (Hunter), MQ-8 (Fire Scout), MQ-9 (Reaper), and future UAS. The intent is to improve joint- and coalition-interoperability and to promote competition through the implementation of open standards and open architectures.

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| ***Title:*** UAS Common Ground Station Demonstration | 10.282 | 3.455 | 3.060 |
| ***Description:*** Develop and demonstrate an interoperable, standards-based, open ground station architecture for RQ/MQ-4 (Global Hawk/TRITON), MQ-1 (Predator/Gray Eagle), MQ-5 (Hunter), MQ-8 (Fire Scout), MQ-9 (Reaper), and future UAS. The intent is to improve joint- and coalition-interoperability and to promote competition through the implementation of open standards and open architectures.<br><br>***FY 2012 Accomplishments:***<br>Completed development of an "Open" approach to v2.2 (buildable architecture) which can be transitioned to Programs of Record and user communities. Capitalized on new opportunities for synergy in the areas of common display nomenclature. Demonstrated Bi-Directional Remote Video Terminal control of a Shadow UAS system using the developed open architecture.<br><br>***FY 2013 Plans:***<br>Develop and demonstrate an interoperable, standards-based, open ground station architecture for RQ/MQ-4 (Global Hawk/TRITON), MQ-1 (Predator/Gray Eagle), MQ-5 (Hunter), MQ-8 (Fire Scout), MQ-9 (Reaper), and future UAS. Ensure open architecture requirements are adopted across the Military Departments and are incorporated into v3.0 of the architecture.<br><br>***FY 2014 Plans:***<br>Develop and sustain governance over ground station open architecture, ensure model driven architecture stays current, and maintain software and architecture repository. | | | |
| **Accomplishments/Planned Programs Subtotals** | 10.282 | 3.455 | 3.060 |

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P442: *Interoperability* |

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

N/A

**Remarks**

**D. Acquisition Strategy**

n/a

**E. Performance Metrics**

n/a

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Office of Secretary Of Defense | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P442: *Interoperability* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UCS Architecture | MIPR | COLSA:Huntsville, AL | - | 8.259 | | 2.670 | | 2.403 | | - | | 2.403 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 8.259 | | 2.670 | | 2.403 | | 0.000 | | 2.403 | | | |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UAS Control Segment (UCS) Working Group | MIPR | Various:Various | - | 0.677 | | 0.095 | | - | | - | | - | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 0.677 | | 0.095 | | 0.000 | | 0.000 | | 0.000 | | | |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contract Management | MIPR | SMDC:Huntsville, AL | - | 0.462 | | 0.150 | | 0.135 | | - | | 0.135 | Continuing | Continuing | |
| Contract Execution | MIPR | COLSA:Huntsville, AL | - | 0.527 | | 0.180 | | 0.162 | | - | | 0.162 | Continuing | Continuing | |
| Program Management | MIPR | NSWC Panama City, FL:Panama City, FL | - | 0.357 | | 0.360 | | 0.360 | | - | | 0.360 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 1.346 | | 0.690 | | 0.657 | | 0.000 | | 0.657 | | | |

| | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 0.000 | 10.282 | | 3.455 | | 3.060 | | 0.000 | | 3.060 | | | |

**Remarks**

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P443: *Unmanned Systems Road Maps* | |

| COST ($ in Millions) | All Prior Years | FY 2012 | FY 2013# | FY 2014 Base | FY 2014 OCO ## | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P443: *Unmanned Systems Road Maps* | - | 0.288 | 0.431 | 0.500 | - | 0.500 | 0.510 | 0.520 | 0.531 | 0.542 | Continuing | Continuing |
| Quantity of RDT&E Articles | | | | | | | | | | | | |

# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## The FY 2014 OCO Request will be submitted at a later date

**A. Mission Description and Budget Item Justification**

This effort supports the Department's Unmanned Systems Roadmap and updates. The Unmanned Systems Roadmap provides a DoD vision for the continuing development, fielding and employment of unmanned systems technologies. This roadmap defines a common vision, establishes the current state of unmanned systems in today's force, and outlines a strategy for the common challenges that must be addressed to achieve the shared vision. Funding for this effort was contained within P440 and P442 of this Program Element before FY 2012.

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| ***Title:*** Unmanned Systems Roadmap | 0.288 | 0.431 | 0.500 |
| ***Description:*** Develops the Department's Unmanned Systems Roadmap and updates.<br><br>***FY 2012 Accomplishments:***<br>Began the update for the Department's Unmanned Systems Roadmap, 2013 - 2038 and performed related studies supporting the Department's vision for unmanned systems.<br><br>***FY 2013 Plans:***<br>Update the Department's Unmanned Systems Roadmap and perform related studies supporting the Department's vision for unmanned systems.<br><br>***FY 2014 Plans:***<br>Update the Department's Unmanned Systems Roadmap and perform related studies supporting the Department's vision for unmanned systems. | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.288 | 0.431 | 0.500 |

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

N/A

**Remarks**

| Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P443: *Unmanned Systems Road Maps* |

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Provide up-to-date Unmanned Systems Roadmap providing a DoD vision for the continuing development, fielding and employment of unmanned systems technologies.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Office of Secretary Of Defense | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>0400: *Research, Development, Test & Evaluation, Defense-Wide*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0604400D8Z: *Unmanned Aircraft Systems Common Development* | PROJECT<br>P443: *Unmanned Systems Road Maps* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UMS Roadmap | Various | Various:Various | - | 0.288 | | 0.431 | | 0.500 | | - | | 0.500 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 0.288 | | 0.431 | | 0.500 | | 0.000 | | 0.500 | | | |

| | All Prior Years | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 0.000 | 0.288 | | 0.431 | | 0.500 | | 0.000 | | 0.500 | | | |

**Remarks**