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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0603890C: <i>BMD Enabling Programs</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	401.113	415.048	362.711	-	362.711	339.197	373.346	395.350	394.085	Continuing	Continuing
MD24: <i>System Engineering & Integration</i>	139.703	133.890	88.315	-	88.315	90.534	95.782	99.527	99.369	Continuing	Continuing
MT23: <i>Enabling - Test</i>	-	-	32.386	-	32.386	28.277	52.276	44.979	39.393	Continuing	Continuing
MD28: <i>Intelligence & Security</i>	10.514	18.382	36.886	-	36.886	35.651	37.712	39.579	40.000	Continuing	Continuing
MD29: <i>Producibility & Manufacturing Technology</i>	30.565	-	-	-	-	-	-	-	-	0.000	30.565
MD30: <i>BMD Information Management Systems</i>	105.904	116.508	107.744	-	107.744	92.425	100.250	107.469	109.657	Continuing	Continuing
MD31: <i>Modeling & Simulation</i>	61.456	56.617	46.608	-	46.608	45.402	38.740	51.280	52.393	Continuing	Continuing
MD32: <i>Quality, Safety, and Mission Assurance</i>	27.476	33.045	34.388	-	34.388	31.454	32.477	35.097	35.254	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	25.495	56.606	16.384	-	16.384	15.454	16.109	17.419	18.019	Continuing	Continuing

Note

In FY 2012, funding from MD29 transferred to the Standard Missile-3 Block IIB, Program Element 0603902C, MD70

In FY 2012, funding from MD40 PE 0603888C transfers in as directed by the Consolidated Appropriation Act of FY 2012 (Public Law 112-74).

In FY 2013, funding from MD40 PE 0603892C Program Wide Support is transferred to the MD28 PE 0603890C Intelligence & Security Project in the amount of \$16.679 million dollars for Intelligence and Security civilian salaries and the Research, Development and Security Program.

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense (BMD) System Enabling Programs provide the Missile Defense Agency (MDA) with the critical processes needed to integrate element missile defense systems into a layered Ballistic Missile Defense System (BMDS) providing the capability required by BMD Review, while improving protection performance with increased defended area, and minimizing force structure costs. The Enabling Programs, embedded within a single Program Element (PE), independently evaluate the integrated BMD System methodology, threat, manufacturing maturity, technical safeguards, and mission assurance effectiveness while simultaneously assessing whether the System is proficient at maintaining its integrity and superiority with advances in technology development.

The MDA Enabling Programs are:

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603890C: <i>BMD Enabling Programs</i>

-(MD24) Systems Engineering and Integration - Systems Engineering and Integration (SE&I) leads the integration of the Ballistic Missile Defense (BMD) System using Element and Component capabilities to provide the Warfighter with the ability to defend the United States and its friends and allies from ballistic missile attacks. Systems Engineering defines and develops integrated BMD System capability improvements such as Aegis Ashore through BMD level control of system requirements, and allocates those requirements to the Element and Component levels most capable of supporting intercepts in a particular Phased Adaptive Approach (PAA) phase.

-(MT23) Enabling-Test - The Enabling Programs Test project drives Ballistic Missile Defense System test planning, execution and post-test assessment and provides critical data for proving that missile defense works.

-(MD31) Modeling and Simulation - As missile defense technologies continually advance and the threat changes, Modeling and Simulation develops system-level models, simulations, and environments, then evaluates performance of the Elements, Components, and overall BMD System.

-(MD29) Producibility and Manufacturing Technology - Producibility and Manufacturing focuses on technology development for future generation interceptors.

-(MD32) Quality, Safety, and Mission Assurance - Quality, Safety, and Mission Assurance has the distinct management role of improving quality, safety, and mission assurance throughout the product life cycle of design, manufacturing, test and system operation, in order to achieve a safe and reliable BMD System.

-(MD28) Intelligence and Security - MDA develops data from intelligence sources into the necessary engineering products that drive the design, development, and testing used to inform and support internal MDA decisions and BMD System design reviews. Engineering processes translate missile data into threat parameter space and generate threat scenarios contained in the SE&I-developed Adversary Capability Document. These products are also necessary for system ground testing, hardware-in-the-loop testing, and the target development for live-fire testing necessary to assess system operation and verify and validate system performance. Security is also provided as an Enabling Program to apply protection across the entire BMDS.

-(MD30) Information Management Systems - Information Management is vital to the efficient operation and safeguarding of all information, from development to fielding new BMDS capabilities.

MD40 consists of Program-Wide Support (PWS) non-headquarters management costs in support of MDA functions and activities across the entire Ballistic Missile Defense System (BMDS).

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	402.769	373.563	331.203	-	331.203
Current President's Budget	401.113	415.048	362.711	-	362.711
Total Adjustments	-1.656	41.485	31.508	-	31.508
• Congressional General Reductions	-2.760	-0.483			
• Congressional Directed Reductions	-40.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	43.500	41.968			
• Reprogrammings	2.203	-			
• SBIR/STTR Transfer	-4.799	-			
• Other Adjustment	0.200	-	31.508	-	31.508

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APPROPRIATION/BUDGET ACTIVITY
0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE
PE 0603890C: *BMD Enabling Programs*

Change Summary Explanation

FY 2011 changes include: -\$40.000 million Congressional Reduction; +\$43.500 million Congressional Transfer in from 0603888C Test and Targets engineering efforts as directed by the Department of Defense and Full Year Continuing Appropriation Act, FY 2011 (Public Law 112-10); and SBIR/STTR -\$4.799 million. Other adjustments include General Provision reductions for 8024(f) FFRDC of -\$0.427 million, Economic Assumption 8117 of - \$2.065 million, and Civilian Pay - \$0.268 million.

The FY 2012 increase includes \$41.968 million Congressional transfer directed by the Consolidated Appropriation Act of FY 2012 (Public Law 112-74) transfer from MD40 Program Wide Support, BMDS Test and Targets Program Element 0603888C.

The FY 2013 \$31.508 million increase includes the transfer of a portion of the Intelligence and Security personnel from Program Wide Support (Budget Project MD40) from the BMD Aegis Program Element (PE) 0603892C to the Intelligence & Security Project MD28 in the Enabling Program Element (PE) 0603890C, plus realignment to Department of Defense priorities.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>				PROJECT MD24: <i>System Engineering & Integration</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD24: <i>System Engineering & Integration</i>	139.703	133.890	88.315	-	88.315	90.534	95.782	99.527	99.369	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

Systems Engineering and Integration (SE&I) continues to develop and improve the integrated Ballistic Missile Defense System (BMDS) architectures, engineer major improvements to regional Ballistic Missile Defense (BMD) capabilities, and provide system improvements that enable earlier Ballistic Missile Defense engagements and develops the BMDS level Models and Simulations (M&S) necessary to support BMDS testing and delivery to the War-fighter. SE&I develops technical roadmaps, knowledge points, and capability trades at the Ballistic Missile Defense System level to balance integration and improvement efforts. The SE&I workforce, including Industry and Contractor Support Services (CSS), also provides analysis, decision-making and planning activities for real-world operations to the White House, Joint Staff, Military Services, North Atlantic Treaty Organization (NATO), Combatant Commanders (Military Utility Assessment), Operational Test Agencies, Director of Operational Test and Evaluation, Allies, and others. Systems Engineering and Integration is the single team that applies its technical expertise, tools, and facilities across many disciplines and specialties to lead the collaborative effort to define, design, test and integrate the Ballistic Missile Defense System.

System Engineering and Integration (SE&I) Major Program Goals:

- Develop, design, test and integrate the layered Ballistic Missile Defense System that provides the required Ballistic Missile Defense performance.
- Develop a four-phased European Phased Adaptive Approach (EPAA) architecture and requirements to respond to the proliferation of short and medium range ballistic missiles, provide a more effective missile defense capability for U.S. deployed forces, allies, and partners in Europe, and enhanced homeland defense.
- Provide system-level support to the Elements for definition, design, and integration of the Ballistic Missile Defense System capabilities
- Provide technical direction to Element and Component developers and provide System-level forums to track, assess, and improve hardware and software reliability
- Lead collaborative and cross-Element and cross-Component engineering
- Verify and Assess through testing and Ballistic Missile Defense System performance and capabilities
- Develop Ballistic Missile Defense System Performance Assessment parameters
- Identify the Critical Engagement Conditions and data required to develop the test campaigns that will demonstrate regional defense performance, and verify and assess the capability of each Phased Adaptive Approach
- Define the test objectives necessary to anchor Ballistic Missile Defense System-level models and simulations, enable independent verification and validation, and identify System issues occurring in ground and flight tests

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<ul style="list-style-type: none"> -Identify Ballistic Missile Defense System capabilities and limitations -Develop, manage and use BMDS level Modeling and Simulation (M&S) to verify BMDS performance in system operational regions outside the live fire testing regions. -Analyze Architecture Alternatives and New Technologies -Provide detailed analysis to support MDA leadership and US policy decisions -Pursue architecture alternatives that are complementary to and interoperable with North Atlantic Treaty Organization systems and other theaters around the world and improve the System`s performance -Establish technical roadmaps for future defense capabilities -Evaluate mature capabilities using Engineering and Manufacturing Readiness Level assessments to analyze risks in advance of manufacturing processes -Develop anti-tamper approaches to enable international fielding of the Ballistic Missile Defense System <p>Products: Fundamental to the System Engineering and Integration (SE&I) approach is development, coordination, and dissemination of fully vetted products at each stage of the SE&I process. These products document and communicate key information such as: technical goals and objectives, design trades and resulting decisions to update system design and interface requirements; integration plans and schedules; test objectives that include the collection of data needed to anchor the system representative models and simulations and enable independent verification and validation; assessment through ground and flight test results and fielding plans. Ballistic Missile Defense Systems Engineering provides significant and thorough guidance through the Ballistic Missile Defense System Description Document (BMD SDD) and Ballistic Missile Defense System Specifications (BMD SS) for Elements to design, build, and integrate the Ballistic Missile Defense System. The Ballistic Missile Defense System Interface Control Documents (SICDs), the Modeling and Simulation Master Plan (MSMP), and the Master Integration Plan (MIP) provide additional guidance to the Ballistic Missile Defense System Elements and Components.</p> <p>The system engineering process defines required system-wide behavior, validates Element system designs, and assesses and verifies system capabilities in 5 stages: 1) Future concepts and planning; 2) Requirements and Design; 3) Integrated Master Test Plan (IMTP) Engineering; 4) Integration; and 5) Verification and Assessment. Additional engineering efforts which cross multiple stages of the system engineering process include the Countermeasures/Counter-countermeasures (CM/CCM), Threat Systems Engineering, Engineering Analysis and Quick Response Team, and Anti-Tamper, International Engineering, and Engineering Manufacturing Readiness Levels Development programs. This process occurs in a collaborative environment in close partnership with key stakeholders such as the Element developers, Combatant Commands, and international partners. Systems Engineering and Integration further collaborates with the Director for Operations on the system content and activities described in the Ballistic Missile Defense System Single Acquisition Master Plan (SAMP).</p> <p>The Ballistic Missile Defense System Future Concepts directorate conducts the first step stage of the System Engineering and Integration process and directs the enterprise-wide lethality program, which ensures lethality, post-engagement assessment (miss/hit/kill assessment), collateral effects (such as debris) and consequences (identified for use by other agencies to determine management/mitigation strategies) are accounted for throughout the engineering process.</p> <p>The Design and Specification directorate performs the second step of the engineering process using data developed during the planning process and collaborates with the Ballistic Missile Defense System Element and Component engineers to develop functional performance, interface, and design suitability requirements. Design and Specification activities culminate in System/Subsystem Requirements Reviews to ensure correct technical execution and understanding needed to realize the Phased Adaptive Approach (PAA) and increase the flexibility and capability of the Ballistic Missile Defense System.</p>		

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Integration and Assessment conducts the third, fourth, and fifth stages of the Systems Engineering and Integration process to prove that Missile Defense works: 3) horizontal integration of software and hardware; 4) test integration, verification and model validation; and 5) operational assessments with the Warfighter to facilitate fielding. During horizontal integration, Systems Engineering and Integration builds a time-phased Master Integration Plan and defines model data validation requirements that form the basis of the required test program in the Integrated Master Test Plan (IMTP) and Ballistic Missile Defense System Level Testing.

During test integration, verification, and model validation, engineering studies and analyses enable the allocation of test requirements to individual test events, design of test architectures, definition of target requirements, and generation of appropriate scenarios for ground and flight tests, in order to collect the required model validation data. Along with the support of the Director of Operational Test and Evaluation (DOT&E), System Engineering and Integration works with the Services' Operational Test Agencies (OTA) to incorporate operational test requirements under development to ensure the incremental capability being transferred to the Warfighter will be operationally effective, suitable, and survivable. System Engineering and Integration participates in test failure review boards, identifies shortfalls in data collection, and reallocates objectives to future test events until all identified model validation data is collected. Suitability data is collected through the Joint Reliability and Maintainability Engineering Team (JRMET) and quarterly data scoring boards with the Elements, to Warfighter commanders and increases the confidence levels in the predicted performance of the Ballistic Missile Defense System. BMDS Test Incident Reports document abnormal system behavior that occurs during System-level tests and alert MDA to issues with test article reliability. The Failure Reporting, Analysis, and Corrective Action System (FRACAS) provides a framework to investigate System test failures and identify solutions that will ultimately improve BMDS reliability.

Finally, System Engineering and Integration uses a compilation of flight tests, ground tests, performance assessments and other analyses to perform a technical assessment of the incrementally delivered capability. This assessment activity links the Warfighter community and the Systems Engineering team, and provides sustaining engineering and analysis for configuration management, operations, and sustainment of Ballistic Missile Defense System capabilities.

Additional Systems Engineering and Integration efforts include the Countermeasures/Counter-countermeasures (CM/CCM) program, Threat Systems Engineering, Engineering Analysis/Quick Response Team support, and Technology Protection and Standards support. The Countermeasures/Counter-countermeasures program conducts tailored system engineering to facilitate Ballistic Missile Defense System capability improvement and works collaboratively with the Threat Systems Engineering team to synchronize and integrate adversary capability development efforts. Within the Countermeasures/Counter-countermeasures program, a Blue Team, comprised of Ballistic Missile Defense System, element, and Component technical experts, a White Team comprised of senior experts, and a Black Team comprised of adversary/conceptual countermeasures experts assessed Ballistic Missile Defense System performance and risk, identified mitigation approaches, and recommended priorities for MDA investments in counter-countermeasures. This effort concluded in FY 2011.

The Threat Systems Engineering team specifies adversary missile capabilities, defines parametric threat space, develops real world test scenarios, establishes system level and common and consistent threat data to support all five stages of the system engineering process, and provides threat input to key system engineering products. Threat Systems engineering products directly support the Phased Adaptive Approach (PAA) and International Cooperative Programs such as the enhanced Israeli Interceptor program, US-Japan Cooperative Program, and other North Atlantic Treaty Organization cooperative programs.

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<p>The Engineering Analysis and Quick Response Team provides force-on-force effectiveness analyses, identifies system level gaps and shortfalls, formulates system alternatives and their relative contributions, conducts engineering trade studies, provides Warfighter/war game analysis support, responds to Warfighter BMDS operational questions and builds rapid responses to senior Department (MDA Director/Deputy Director, Defense Secretary) and external (State Department, National Security Council) questions and scenarios. The team produces analyses for each stage of the systems engineering process, provides the technical basis and rationale for developing and balancing the integrated, layered Ballistic Missile Defense System, as well as performance predictions for each phase of the Phased Adaptive Approach.</p> <p>The BMDS Engineering Technology Protection and Standards includes Ballistic Missile Defense System, Anti-Tamper, and Engineering Manufacturing Readiness Level (EMRL) effort. The Ballistic Missile Defense System Anti-Tamper program provides protection against reverse engineering of Ballistic Missile Defense System critical technologies, supports coalition warfare, and extends the effective operational life of the Ballistic Missile Defense System. The Engineering and Manufacturing Readiness Levels effort provides a means of evaluating the maturity of the Ballistic Missile Defense System elements, systems, and components, by assessing the program or product against quantifiable criteria.</p> <p>BMDS Level Testing: In conjunction with the Director for Test, the Director for Engineering supplies test objectives that define the basic test development and ensure BMDS requirements are being met by the BMD System under test. Systems Engineering plays a key role in Ballistic Missile Defense test design and development through definition and tracking of the Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs), as documented in the Integrated Master Test Plan (IMTP). The CECs and EMEs ensure that the design of the BMDS test includes data collection to show proper system operation; they also provide validation, verification, and assessment data for the digital models and simulations used to predict Ballistic Missile Defense System performance. These models and simulations, along with the rigorous test and verification process, will be used to demonstrate BMDS performance in areas where no live-fire-testing is performed and provide direct support to the fielding decisions and BMDS deployed operations.</p> <p>System Pre- and Post-Flight Reconstruction: System Engineering and Integration (SE&I) supports System Pre-Flight predictions for system level flight tests using the test framework set up with the Ballistic Missile Defense System configuration for a particular flight test. This provides confidence in Flight Test execution by predicting BMDS performance and exercising element interfaces. This work also ensures the flight test will collect the required data (including CECs and EMEs) and the data management plan will support System Post-Flight Reconstruction (SPFR) objectives. System Post-Flight Reconstruction uses a hardware-in-the-loop (HWIL) and/or a Digital Modeling and Simulation Environment to replicate the day of flight for the Ballistic Missile Defense System configuration, including the actual environmental conditions and target dynamics observed in the test. The results of this process increase confidence in the models and simulations by anchoring the results to the real world event, with emphasis on the Critical Engagement Conditions and Empirical Measurement Events. System Post-Flight Reconstruction is used for validation (anchoring) of the BMDS models and simulations.</p> <p>Interdependencies: Integrated ballistic missile defense capabilities draw on space-, land-, and sea-based assets operated by multiple Services to provide the most accurate track of enemy ballistic missile threats that may cross regions and fly higher and faster, as well as a more diverse and effective set of weapons and sensors for the Combatant Commander to defeat the attack; all connected by a unifying Command and Control Battle Management and Communications (C2BMC). Integrated Ballistic Missile Defense capabilities can result in an effort funded in one Program Element being critical to the success of efforts in other Program Elements. Such</p>		

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results are referred to as interdependencies. Throughout the budget justification material, System Engineering`s interdependencies with the MDA directorates and the Ballistic Missile Defense System Elements and Components are highlighted in order to explain fully the relationship between different parts of the proposed program.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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Title: Future Concepts and Planning	13.238	8.033	10.181
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments:			
-Completed the future capability System Concept review (Part 3) refining the baseline for the future Ballistic Missile Defense System (BMDS) architecture and the allocation of functional and performance requirements			
-Conducted analyses and supported analysis of alternatives for Precision Tracking Space System (PTSS), Standard Missile 3 (SM-3) Block IIB, and Advanced Remote Infrared planning, creating a foundation for System-Element architectural trade studies.			
-Updated the Future Systems Capability Document based on results of ongoing trade studies and architectural balancing activities			
-Updated the Capability Planning specifications for Precision Tracking Space System (PTSS) and the future Command and Control, Battle Management, and Communications (C2BMC) Components			
-Supported the execution of the Aegis Weapon System 5.1 BMD Standard Missile-3 (SM-3) Block IIA System Requirements Review			
-Conducted joint United States/United Kingdom virtual debris data benchmark testing that provides unique data points crucial in anchoring first principle and fast running debris prediction codes			
-Conducted two sub-scale virtual debris data benchmark tests against non-reentry vehicle objects			
-Completed work to add uncertainty estimation to virtual debris data predictions			
-Added ability to predict small debris to increase accuracy and fidelity of radar debris scene modeling			
-Provided 50+ virtual debris data sets to fill debris modeling data gaps			
-Assessed and added emerging threats to Missile Defense Agency lethality prediction models			
-Supported the North Atlantic Treaty Organization Consequence of Intercept Analysis Team (COIAT) with intercept consequence technical analysis			
-Maintained the Ballistic Missile Defense System (BMDS) System Engineering Plan ensuring synchronization of Element System Engineering Plans with the document			
FY 2012 Plans:			
-Complete the ongoing Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies and update the concept capability documentation based on its results and the results of technology development experiments			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Refine the Capability Planning specifications for Precision Tracking Space System (PTSS) and the future Command and Control Battle Management and Communications (C2BMC) components, leading to BMD System Requirements Reviews based on the architectural trade studies. -Support technology development reviews for Precision Tracking Space System (PTSS), and Standard Missile-3 (SM-3) Block IIB in support of follow on development efforts, leading to BMD System Requirements Reviews based on the architectural trade studies. -Develop the Capability Planning Specification for the Aegis 5.x weapon system and the Standard Missile 3 (SM-3) Block IIB -Produce an updated Ballistic Missile Defense System Lethality Program Plan to encompass lethality assessment, collateral effects and consequences -Assess and add emerging threats to Missile Defense Agency lethality prediction models -Support Defense Threat Reduction Agency (DTRA)/Missile Defense Agency efforts to provide consequence model predictive capabilities -Maintain the System Engineering Plan ensuring synchronization of Element System Engineering Plans with the System document -Countermeasures (CM)/Counter-countermeasures (CCM) Red Team: <ul style="list-style-type: none"> -Complete initial independent adversary (Red Team) perspective on Phased Adaptive Approach (PAA) capabilities -Complete independent adversary (Red Team) perspective on adversary attack strategy against PAA -Complete independent adversary (Red Team) selection of integrated countermeasure suites to be evaluated in FY 2013 <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Complete concept capability documentation updates based on the results of the Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies and technology development experiments -Refine the Capability Planning specifications for Precision Tracking Space System (PTSS) and the future Command and Control Battle Management and Communications (C2BMC) components -Support technology development reviews for Precision Tracking Space System (PTSS), and Standard Missile-3 (SM-3) Block IIB in support of follow on development efforts. -Develop the Capability Planning Specification for the Aegis 5.x weapon system and the Standard Missile 3 (SM-3) Block IIB -Produce an updated Ballistic Missile Defense System Lethality Program Plan to encompass lethality assessment, collateral effects and consequences -Assess and add emerging threats to Missile Defense Agency lethality prediction models -Support Defense Threat Reduction Agency (DTRA)/Missile Defense Agency efforts to provide consequence model predictive capabilities 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Maintain the System Engineering Plan ensuring synchronization of Element System Engineering Plans with the System document</p> <p>-Countermeasures (CM)/Counter-countermeasures (CCM) red Team:</p> <p>-Update independent adversary (Red Team) perspective on Phased Adaptive Approach (PAA)</p> <p>-Complete independent adversary (Red Team) evaluation of three integrated countermeasure suites against PAA</p> <p>-Complete independent adversary (Red Team) detailed evaluation of attack strategy against two selected PAA components</p>				
<p>Title: Countermeasures/Counter-Countermeasures (CM/CCM)</p> <p>Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <p>-Initiated the characterization of the Ballistic Missile Defense System architecture and elements assessed to be employed in the defense of Europe from ballistic missile attack based solely on open sources of information, basic scientific principles, and engineering judgment</p> <p>-Defined three generic threat systems that may be encountered in a defense of Europe</p> <p>-Assessed the European defense architecture for potential weaknesses and vulnerabilities</p> <p>-Initiated development of conceptual countermeasures to exploit assessed weaknesses</p> <p>-Initiated assessment of Ballistic Missile Defense System capabilities in regional engagement scenarios against short to intermediate range adversary ballistic missiles</p> <p>FY 2012 Plans:</p> <p>Please see FY 2012 Future Concepts and Planning accomplishments in MD24.</p> <p>FY 2013 Plans:</p> <p>Please see FY 2013 Future Concepts and Planning accomplishments in MD24.</p>		1.126 0	- 0	- 0
<p>Title: Requirements and Design</p> <p>Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <p>-Conducted Engineering Reviews for MDA Engineering:</p>		30.233 0	30.653 0	26.485 0

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Conducted Ballistic Missile Defense System/Subsystem Design Reviews following Element Requirement Reviews to assess the maturity of the technical baseline at both the System and Subsystem levels, as well as the plans for integration, test and verification prior to execution</p> <p>-Continued technical evaluation of emerging adversary characteristics to be included within future Adversary Data Packages (ADP)</p> <p>-Developed updates to the Ballistic Missile Defense System Description Document, Ballistic Missile Defense System Specifications, and Ballistic Missile Defense System Interface Control Documents to document integrated system build content approved for design, development and integration</p> <p>-Conducted engineering analyses and performed trade studies for system design and development products to include Ballistic Missile Defense System Specification and Ballistic Missile Defense System Interface Control Documents</p> <p>-Provided updated requirements traceability and certification guidance and conduct detailed System/Element requirements reconciliation to resolve technical disconnects and ensure common System/Element requirements interpretation</p> <p>FY 2012 Plans:</p> <p>-Conduct Engineering Reviews for MDA Engineering, which include new Phased Adaptive Approach capabilities:</p> <p>-Conduct Ballistic Missile Defense System/Subsystem Design Reviews following Element Requirement Reviews to assess the maturity of the technical baseline at both the System and Subsystem levels, as well as the plans for integration, test and verification prior to execution</p> <p>-Ensure requirements for the new Phased Adaptive Approach capabilities are adequately addressed</p> <p>-Continue technical evaluation of emerging adversary characteristics to be included within future Adversary Data Packages</p> <p>-Develop updates to the Ballistic Missile Defense System Description Document, Ballistic Missile Defense System Specification, and Ballistic Missile Defense System Interface Control Documents to document integrated system build content approved for design, development and integration, including new Phased Adaptive Approach capabilities (e.g., Phase III and IV documentation in the Ballistic Missile Defense System Description Document)</p> <p>-Conduct engineering analyses and perform trade studies for system design and development products, including the Ballistic Missile Defense System Specification and Ballistic Missile Defense System Interface Control Documents</p> <p>-Provide updated requirements traceability and certification guidance and conduct detailed System/Element requirements reconciliation to resolve technical disconnects and ensure common System/Element requirements interpretation</p> <p>FY 2013 Plans:</p> <p>-Conduct Engineering Reviews for MDA Engineering, which include new Phased Adaptive Approach capabilities:</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Conduct Ballistic Missile Defense System/Subsystem Design Reviews following Element Requirement Reviews to assess the maturity of the technical baseline at both the System and Subsystem levels, as well as the plans for integration, test and verification prior to execution -Ensure requirements for the new Phased Adaptive Approach capabilities are adequately addressed -Continue technical evaluation of emerging adversary characteristics to be included within future Adversary Data Packages -Develop updates to the Ballistic Missile Defense System Description Document, Ballistic Missile Defense System Specification, and Ballistic Missile Defense System Interface Control Documents to document integrated system build content approved for design, development and integration, including new Phased Adaptive Approach capabilities (e.g., Phase III and IV documentation in the Ballistic Missile Defense System Description Document) -Conduct engineering analyses and perform trade studies for system design and development products, including the Ballistic Missile Defense System Specification and Ballistic Missile Defense System Interface Control Documents -Provide updated requirements traceability and certification guidance and conduct detailed System/Element requirements reconciliation to resolve technical disconnects and ensure common System/Element requirements interpretation 				
<p>Title: Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment</p> <p align="right">Articles:</p>		26.099	22.265	-
<p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> -Updated the Master Integration Plan (MIP) to incorporate changes in planned delivery of Ballistic Missile Defense System content -Provided engineering inputs for Integrated Master Test Plan (IMTP) updates using the Planning Allocation Matrix (PAM) tool to identify integration, test, assessment, and verification activities -Provided test definition, risk assessment, and anomaly and test incident report review, assessment, and closure to enable execution of the ground and flight test program -Allocated and tracked Critical Engagement Condition (CEC) and Empirical Measurement Events (EME) data requirements and sufficiency for ground and flight tests in accordance with the Integrated Master Test Plan -Defined test objectives and evaluation criteria for all system level test events -Designed and certified scenarios for Ground Test Events to meet required data collection and satisfy System Engineering and Integration, Operational Test Agencies, and Warfighter objectives -Collected Ballistic Missile Defense System suitability data through the Joint Reliability and Maintainability Engineering Team (JRMET) Data Scoring Boards -Defined and executed required performance assessments to support incremental capability deliveries -Provided monthly updates for Ballistic Missile Defense System verification status 		0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>-Performed System-level analysis and interoperability analysis on BMDS test events listed in the Integrated Master Test Plan (IMTP).</p> <p>-Developed Analysis Execution Plans (AEP) and final Test Analysis Reports (TAR) for BMDS test events listed in the IMTP.</p> <p>-Led Joint Analysis Teams (JAT) for BMDS test events listed in the IMTP.</p> <p>-Developed, delivered, and briefed Quick Look Brief (QLB), Executive QLB (EQLB), Mission Data Review (MDR), and Execution MDR (EMDR) for Ballistic Missile Defense System (BMDS) test events listed in the IMTP.</p> <p>-Incorporated software changes to Modular Analysis and Reporting Suite (MARS) to enhance analyst efficiency and capability.</p> <p>-Continued to populate the MARS Analysis Database with most current test data to support analysis and capability assessments.</p> <p>-Led performance assessment to support Phased Adaptive Approach Phase I delivery.</p> <p>FY 2012 Plans:</p> <p>-Update the Master Integration Plan (MIP) to incorporate changes in planned delivery of Ballistic Missile Defense System content</p> <p>-Provide engineering inputs for Integrated Master Test Plan updates using the Planning Allocation Matrix (PAM) tool to identify integration, test, assessment, and verification activities</p> <p>-Collect Ballistic Missile Defense System Suitability Data through the Joint Reliability and Maintainability Engineering Team (JRMET) Data Scoring Boards</p> <p>-Provide pre- and post-test support for the Failure Reporting, Analysis, and Corrective Action System, which investigates BMDS test failures and identifies solutions that enhance reliability</p> <p>-Define and execute required performance assessments to support incremental capability deliveries</p> <p>-Provide monthly updates for Ballistic Missile Defense System verification status</p> <p>-Conduct BMD System Critical Design Review to document requirements used for performance assessments of incremental deliveries.</p> <p>-Perform System-level analysis and interoperability analysis on BMDS test events listed in the Integrated Master Test Plan (IMTP).</p> <p>-Develop Analysis Execution Plans (AEP) and final Test Analysis Reports (TAR) for BMDS test events listed in the IMTP.</p> <p>-Lead Joint Analysis Teams (JAT) for BMDS test events listed in the IMTP.</p> <p>-Develop, deliver, and brief Quick Look Brief (QLB), Executive QLB (EQLB), Mission Data Review (MDR), and Executive MDR (EMDR) for BMDS test events listed in the IMTP.</p> <p>-Incorporate software changes to Modular Analysis and Reporting Suite (MARS) to enhance analyst efficiency and capability.</p> <p>-Continue to populate the MARS Analysis Database with most current test data to support analysis and capability assessments.</p> <p>-Lead performance analysis planning and data collection to support upcoming capability deliveries.</p> <p>FY 2013 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
-FY 2013 plans are in budget project MT23 0603890C beginning in FY 2013 under accomplishment `IMTP Engineering, Integration, Verification and Assessment - SE&I`				
Title: Systems Engineering, Engineering Analysis and Quick Response Team		31.563	43.328	6.923
Description: See Description Below		Articles: 0	0	0
FY 2011 Accomplishments: -Conducted system level performance analysis to support Ballistic Missile Defense System Architecture and Systems Engineering -Developed expected BMD System performance for each Phased Adaptive Approach (PAA) phase as input to System architecture and design effort, including extensive support for the Phased Adaptive Approach (PAA) Phase 3/4 architectural trade studies -Provided analysis in support of various BMD System Reviews -Updated the Element/Component Characterizations for Analysis (E/CCA) with latest performance data to improve capability -Maintained the Effective Metrics Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders -Provided engineering technical assessments in Ballistic Missile Defense System and Element programs to examine critical areas as designated by the Director for Engineering -Provided analysis and assessment support to the Combatant Commands to respond to Warfighter requests for analyses and requests for information				
FY 2012 Plans: -Conduct overall Systems Engineering and Integration program operations and management. -Conduct system level performance analysis to support Ballistic Missile Defense System Architecture and Systems Engineering, including completion of the PAA Phase 3/4 architectural trade studies and System and Element Requirements Reviews -Develop expected performance for each Phased Adaptive Approach phase as input to System architecture and design effort -Conduct technical analyses and provide engineering assessments of the Standard Missile 3 Block IIB -Update the Element/Component Characterizations for Analysis (E/CCA) with latest performance data to improve capability -Maintain the Effective Metric Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders -Provide engineering technical assessments in Ballistic Missile Defense System and Element programs to examine critical areas as designated by the Director for Engineering				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Provide analysis and assessment support to the Combatant Commands to respond to Warfighter requests for analyses and requests for information</p> <p>FY 2013 Plans:</p> <p>-Conduct overall Systems Engineering and Integration program operations and management</p> <p>-Conduct system level performance analysis to support Ballistic Missile Defense System Architecture and Systems Engineering</p> <p>-Develop expected performance for each Phased Adaptive Approach phase as input to System architecture and design effort</p> <p>-Conduct technical analyses and provide engineering assessments of the Standard Missile 3 Block IIB</p> <p>-Update the Element/Component Characterizations for Analysis (E/CCA) with latest performance data to improve capability</p> <p>-Maintain the Effective Metric Standard (EMS) necessary for systematic presentation of alternatives to MDA senior leaders and the Combatant Commanders</p> <p>-Provide engineering technical assessments in Ballistic Missile Defense System and Element programs to examine critical areas as designated by the Director for Engineering</p> <p>-Provide analysis and assessment support to the Combatant Commands to respond to Warfighter requests for analyses and requests for information</p>				
<p>Title: Threat Engineering</p> <p>Articles:</p>		11.238	3.205	8.788
<p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <p>-Developed a parametric threat space to support all phases of the BMDS Phased Adaptive Approach</p> <p>-Maintained and updated the agency-wide common and consistent Ballistic Missile Defense System threat to provide data for future Ballistic Missile Defense System design, verification, and assessment</p> <p>-Updated adversary missile capabilities and characterizations consistent with projected threat environment for the Ballistic Missile Defense System Phased Adaptive Approach (PAA)</p> <p>-Produced all the threat data required to enable Ballistic Missile Defense System Ground Tests for Phased Adaptive Approach Phase-1, Flight Tests, Ballistic Missile Defense System Performance Assessment, war games and exercises as documented in the Ballistic Missile Defense System Integrated Master Test Plan</p> <p>-Produced parametric threat space and scenario data for Element and Component design and assessment for Ballistic Missile Defense System in accordance to the Phased Adaptive Approach</p> <p>-Developed threat data for special projects</p>		0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Delivered analysis of threat representations of Ballistic Missile Defense System test targets, including analysis for Flight Test, Ground-Based Interceptor-06a (FTG-06a), Flight Test, Standard Missile-15 (FTM-15), and Flight Test, Terminal High Altitude Area Defense (THAAD)-24 (FTT-24)</p> <p>FY 2012 Plans:</p> <p>-Maintain and update the agency-wide common and consistent Ballistic Missile Defense System threat to provide data for future Ballistic Missile Defense System design, verification, and assessment</p> <p>-Update adversary missile capabilities and characterizations consistent with projected threat environment for the Ballistic Missile Defense System Phased Adaptive Approach</p> <p>FY 2013 Plans:</p> <p>-Maintain and update the agency-wide common and consistent Ballistic Missile Defense System threat to provide data for future Ballistic Missile Defense System design, verification, and assessment</p> <p>-Update adversary missile capabilities and characterizations consistent with projected threat environment for the Ballistic Missile Defense System Phased Adaptive Approach</p>				
<p>Title: Anti-Tamper and Engineering Manufacturing Readiness Levels Development</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Anti-Tamper:</p> <p>-Developed Anti-Tamper technologies to enable response and sensing capabilities for the Ballistic Missile Defense System (BMDS).</p> <p>Engineering and Manufacturing Readiness Levels (EMRLs):</p> <p>-Applied Engineering and Manufacturing Readiness Levels as a means of evaluating the engineering and manufacturing maturity of the Ballistic Missile Defense System elements, systems, and components, by assessing the program or product against quantifiable criteria</p> <p>-Used Engineering and Manufacturing Readiness Levels to assess the maturity of MDA development programs, and to report readiness for transition to production, in a standard format across all MDA Elements</p> <p>FY 2012 Plans: Anti-Tamper:</p>		<p>5.166</p> <p>0</p>	<p>6.521</p> <p>0</p>	<p>5.011</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Develop Anti-Tamper technologies to enable response and sensing capabilities for the Ballistic Missile Defense System (BMDS). Engineering and Manufacturing Readiness Levels (EMRLs):</p> <p>-Apply Engineering and Manufacturing Readiness Levels as a means of evaluating the engineering and manufacturing maturity of the Ballistic Missile Defense System elements, systems, and components, by assessing the program or product against quantifiable criteria -Use Engineering and Manufacturing Readiness Levels to assess the maturity of MDA development programs, and to report readiness for transition to production, in a standard format across all MDA Elements</p> <p>FY 2013 Plans: Anti-Tamper:</p> <p>-Develop Anti-Tamper technologies to enable response and sensing capabilities for the Ballistic Missile Defense System (BMDS). Engineering and Manufacturing Readiness Levels (EMRLs):</p> <p>-Apply Engineering and Manufacturing Readiness Levels as a means of evaluating the engineering and manufacturing maturity of the Ballistic Missile Defense System elements, systems, and components, by assessing the program or product against quantifiable criteria -Use Engineering and Manufacturing Readiness Levels to assess the maturity of MDA development programs, and to report readiness for transition to production, in a standard format across all MDA Elements</p>				
<p>Title: Independent Technical Assessment</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <p>-Performed independent analyses and assessments for the MDA Director and MDA Director for Engineering including Failure Investigations, system architecture studies, and test event data analysis. -Conducted non-advocate assessments of the Ballistic Missile Defense System (BMDS) capabilities and limitations prior to capability delivery decisions to determine fielding readiness. These assessments included Defense of the Homeland, Defense of Israel and Theater/Regional BMD.</p>		12.437 0	9.324 0	11.313 0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Conducted extensive, first-hand analysis of all data collected in Ballistic Missile Defense (BMD) test events (digital, hardware-in-the-loop, and flight test), resulting in analysis key to developing understanding of BMD operations and performance.</p> <p>-Identified mitigation approaches for system performance issues uncovered during the course of analysis and assessment.</p> <p>-Monitored the progress in improving digital simulation Performance Assessment events and produced an independent assessment of the validity of the models and simulations.</p> <p>-Produced independent assessments of each Capability Delivery for Terminal High Altitude Defense, Patriot, Aegis Ballistic Missile Defense (BMD), forward-based Army-Navy Transportable Radar Surveillance (AN/TPY-2) and Command, Control, Battle Management and Communications (C2BMC) in support of fielding readiness for Phased Adaptive Approach.</p> <p>FY 2012 Plans:</p> <p>-Conduct non-advocate assessments of the BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness. These assessments include Defense of the Homeland, Phased Adaptive Approach (PAA), Defense of Israel and Theater/Regional BMD configurations (e.g., SITE B).</p> <p>-Perform independent analyses and assessments for the MDA Director and MDA Director for Engineering including investment prioritization, system architecture studies, design reviews, and failure investigations.</p> <p>-Monitor the development and recommend improvements to the digital simulation enterprise based on an evaluation of the validity of component-, Element- and System-level models (and frameworks) and participation in Performance Assessment and other digital Modeling and Simulation events.</p> <p>FY 2013 Plans:</p> <p>-Conduct non-advocate assessments of the BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness. These assessments include Defense of the Homeland, Phased Adaptive Approach (PAA), Defense of Israel and Theater/Regional BMD configurations (e.g., SITE B).</p> <p>-Perform independent analyses and assessments for the MDA Director and MDA Director for Engineering including investment prioritization, system architecture studies, design reviews, and failure investigations.</p> <p>-Monitor the development and recommend improvements to the digital simulation enterprise based on an evaluation of the validity of component-, Element- and System-level models (and frameworks) and participation in Performance Assessment and other digital Modeling and Simulation events.</p>				
Title: Knowledge Centers		8.603	9.443	13.686
		Articles: 0	0	0
Description: See Description Below				
FY 2011 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013	
<p>-Identified and mitigated BMDS element (C2BMC, Interceptor, Space, and Sensor) technical risks, and served as independent technical advisors to the BMDS program offices.</p> <p>-Provided independent review of BMDS Knowledge Point closure, and participated in Failure Review Boards as necessary.</p> <p>FY 2012 Plans:</p> <p>-Identify and mitigate BMDS element (Command, Control, Battle Management and Communications, Interceptor, Space, and Sensor) technical risks, and serve as independent technical advisors to BMDS program offices</p> <p>-Provide independent review of BMDS Knowledge Point closure, and participate in Failure Review Boards as necessary</p> <p>-Provide program managers a mechanism to reach back to Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs) to support development of technical approaches to improve Command, Control, Battle Management and Communications (C2BMC), Interceptor, Space, and Sensor reliability</p> <p>FY 2013 Plans:</p> <p>-Identify and mitigate BMDS element (C2BMC, Interceptor, Space, and Sensor) technical risks, and serve as independent technical advisors to BMDS program offices</p> <p>-Provide independent review of BMDS Knowledge Point closure, and participate in Failure Review Boards as necessary</p> <p>-Provide program managers a mechanism to reach back to Federally Funded Research and Development Centers and University Affiliated Research Centers to support development of technical approaches to improve C2BMC, Interceptor, Space, and Sensor reliability</p>					
<p>Title: Risk Management</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Funding for Risk Management was not previously identified in FY 2011 (MD24)</p> <p>FY 2012 Plans: -Review, approve and configuration manage program risks across the BMDS.</p> <p>FY 2013 Plans: -Review, approve and configuration manage program risks across the BMDS.</p>		Articles:	- 0	1.118 0	5.928 0
Accomplishments/Planned Programs Subtotals		139.703	133.890	88.315	

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	420.839	290.076	316.929		316.929	313.212	338.353	249.475	279.758	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,245.489	1,159.456	903.172		903.172	914.603	954.069	948.650	862.884	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	999.068	85.569	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,084.637
• 0603892C: <i>AEGIS BMD</i>	1,530.767	988.928	992.407		992.407	960.870	950.097	1,030.201	958.680	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration & Operations Center (MDIOC)</i>	83.112	69.249	63.043		63.043	54.299	55.409	54.693	55.844	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	0.000	487.699	454.400		454.400	420.357	446.542	373.395	421.632	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	0.000	454.357	435.747		435.747	475.175	505.591	406.931	485.950	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Future Concepts and Planning Industry	C/CPAF	Boeing:AL	11.403	4.326	Oct 2011	5.481	Oct 2012	-		5.481	Continuing	Continuing	Continuing
Future Concepts and Planning CSS	C/CPAF	CSC:AL	10.292	1.385	Oct 2011	3.715	Oct 2012	-		3.715	Continuing	Continuing	Continuing
Future Concepts and Planning FFRDC / UARC	MIPR	SNL:CA	0.942	0.248	Oct 2011	0.314	Oct 2012	-		0.314	Continuing	Continuing	Continuing
Future Concepts and Planning FFRDC / UARC 1	MIPR	LLNL:CA	1.104	0.279	Oct 2011	0.354	Oct 2012	-		0.354	Continuing	Continuing	Continuing
Future Concepts and Planning Various	C/CPFF	Various:Various	0.794	0.249	Oct 2011	0.317	Oct 2012	-		0.317	Continuing	Continuing	Continuing
Future Concepts and Planning Planning CSS	C/CPFF	CSC:VA	-	1.546	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Countermeasures/Counter-Countermeasures (CM/CCM) CSS	C/CPFF	CSC:VA	0.813	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Countermeasures/Counter-Countermeasures (CM/CCM) CSS 1	C/CPFF	Cobham:CA	0.681	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Countermeasures/Counter-Countermeasures (CM/CCM) FFRDC/UARC	MIPR	IDA:VA	0.164	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Countermeasures/Counter-Countermeasures (CM/CCM) FFRDC/UARC 1	MIPR	MIT-LL:MA	0.480	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Countermeasures/Counter-Countermeasures (CM/CCM) CSS	C/CPFF	STS, LLC:VA	0.253	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Countermeasures/Counter-Countermeasures (CM/CCM) Industry	C/CPAF	Boeing:AL	0.716	-		-		-		-	Continuing	Continuing	Continuing
Requirements and Design Industry	C/CPAF	Boeing:AL	31.095	17.274	Oct 2011	18.210	Oct 2012	-		18.210	Continuing	Continuing	Continuing
Requirements and Design CSS	C/CPFF	CSC:various	9.979	6.174	Oct 2011	6.510	Oct 2012	-		6.510	Continuing	Continuing	Continuing
Requirements and Design FFRDC/UARC	MIPR	MIT/LL:MA	1.251	0.542	Oct 2011	0.573	Oct 2012	-		0.573	Continuing	Continuing	Continuing
Requirements and Design Other DoD	MIPR	NSWC:IN	2.784	1.032	Oct 2011	1.089	Oct 2012	-		1.089	Continuing	Continuing	Continuing
Requirements and Design FFRDC/UARC	MIPR	LLNL:CA	0.190	0.099	Oct 2011	0.103	Oct 2012	-		0.103	Continuing	Continuing	Continuing
Requirements and Design FFRDC/UARC 1	MIPR	JHU-APL:VA	2.274	-		-		-		-	Continuing	Continuing	Continuing
Requirements and Design CSS 1	C/CPFF	Cobham:CA	-	5.532	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment Industry	C/CPAF	Boeing:AL	16.979	15.371	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment CSS	C/CPFF	CSC:Various	13.601	2.000	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment FFRDC/UARC 1	FFRDC	JHU APL:VA	2.989	2.004	Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment FFRDC/UARC 2	MIPR	MITRE:VA	0.664	0.445	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment FFRDC/UARC 3	MIPR	SNL:CA	0.765	0.445	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment FFRDC - 201112195672415	MIPR	Aerospace:CA	0.405	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment CSS 1	C/CPFF	Cobham:CA	-	2.000	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team Industry	C/CPAF	Boeing:AL	26.380	32.929	Oct 2011	5.263	Oct 2012	-		5.263	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team CSS	C/CPFF	CSC:various	10.548	7.799	Oct 2011	1.246	Oct 2012	-		1.246	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team FFRDC/UARC	MIPR	Aerospace:VA	0.487	-	Oct 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team FFRDC/UARC 1	MIPR	MITRE:VA	2.888	2.600	Oct 2011	0.414	Oct 2012	-		0.414	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and	FFRDC	JHU-APL:VA	0.767	-	Oct 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Quick Response Team FFRDC/UARC 2													
Systems Engineering, Engineering Analysis and Quick Response Team FFRDC/UARC 3	MIPR	MIT/LL:MA	0.434	-	Oct 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing
Systems Engineering, Engineering Analysis and Quick Response Team FFRDC/UARC 4	MIPR	LLNL:CA	0.293	-	Oct 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing
Threat Engineering CSS	C/CPFF	Torch Technologies:Various	5.747	1.219	Oct 2011	3.344	Oct 2012	-		3.344	Continuing	Continuing	Continuing
Threat Engineering FFRDC/UARC	FFRDC	JHU APL:VA	1.565	0.226	Oct 2011	0.617	Oct 2012	-		0.617	Continuing	Continuing	Continuing
Threat Engineering FFRDC/UARC 1	MIPR	MIT-LL:MA	4.411	0.974	Oct 2011	2.671	Oct 2012	-		2.671	Continuing	Continuing	Continuing
Threat Engineering FFRDC/UARC 2	MIPR	SNL:CA	3.478	0.652	Oct 2011	1.787	Oct 2012	-		1.787	Continuing	Continuing	Continuing
Threat Engineering FFRDC/UARC 3	MIPR	LLNL:CA	0.865	0.134	Oct 2011	0.369	Oct 2012	-		0.369	Continuing	Continuing	Continuing
Threat Engineering CSS	C/CPFF	Schafer:VA	3.389	-		-		-		-	Continuing	Continuing	Continuing
Threat Engineering Industry	C/CPAF	Boeing:AL	2.783	-		-		-		-	Continuing	Continuing	Continuing
Anti-Tamper and Engineering Manufacturing Readiness Levels Development Anti-Tamper Support	MIPR	NSWC Crane:IN	2.674	2.280	Oct 2011	1.751	Oct 2012	-		1.751	Continuing	Continuing	Continuing
Anti-Tamper and Engineering Manufacturing Readiness Levels Development CSS/Travel	C/CPFF	DRC, Cobham:CA	2.092	0.798	Oct 2011	0.614	Oct 2012	-		0.614	Continuing	Continuing	Continuing
Anti-Tamper and Engineering Manufacturing Readiness Levels Development Commonality and Standards	C/CPFF	DRAPER:MA	2.822	3.443	Oct 2011	2.646	Oct 2012	-		2.646	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Independent Technical Assessment FFRDC/UARC	MIPR	Aerospace:CA	8.605	2.331	Oct 2011	2.829	Oct 2012	-		2.829	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 1	FFRDC	JHU APL:VA	3.746	1.305	Oct 2011	1.583	Oct 2012	-		1.583	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 2	FFRDC	Draper :MA	1.446	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 3	MIPR	GTRI:GA	5.337	1.399	Oct 2011	1.697	Oct 2012	-		1.697	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 4	MIPR	JPL:CA	0.931	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 5	MIPR	MIT/LL:MA	10.416	2.704	Oct 2011	3.281	Oct 2012	-		3.281	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 6	MIPR	MITRE:VA	6.120	1.585	Oct 2011	1.923	Oct 2012	-		1.923	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 7	MIPR	ORNL:TN	0.746	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Independent Technical Assessment FFRDC/UARC 8	MIPR	LLNL:CA	0.240	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC	MIPR	Aerospace:CA	1.912	2.365	Oct 2011	3.428	Oct 2012	-		3.428	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 1	MIPR	MIT/LL:MA	1.050	1.298	Oct 2011	1.882	Oct 2012	-		1.882	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 2	FFRDC	MITRE:VA	0.812	1.004	Oct 2011	1.453	Oct 2012	-		1.453	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 3	FFRDC	JHU/APL:VA	0.967	1.195	Oct 2011	1.731	Oct 2012	-		1.731	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 4	FFRDC	SDL:MA	0.096	0.119	Oct 2011	0.172	Oct 2012	-		0.172	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 5	MIPR	Draper:MA	0.755	0.933	Oct 2011	1.350	Oct 2012	-		1.350	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 6	MIPR	GTRI:GA	1.009	1.247	Oct 2011	1.809	Oct 2012	-		1.809	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Knowledge Centers FFRDC/UARC 7	MIPR	JPL:CA	0.490	0.606	Oct 2011	0.878	Oct 2012	-		0.878	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 8	MIPR	ORNL:TN	0.382	0.472	Oct 2011	0.684	Oct 2012	-		0.684	Continuing	Continuing	Continuing
Knowledge Centers FFRDC/UARC 9	MIPR	SEI:PA	0.064	0.079	Oct 2011	0.116	Oct 2012	-		0.116	Continuing	Continuing	Continuing
Knowledge Centers OGA	MIPR	ARMDEC:AB	0.025	0.031	Oct 2011	0.047	Oct 2012	-		0.047	Continuing	Continuing	Continuing
Knowledge Centers Other	MIPR	Northrop Grumman:VA	0.076	0.094	Oct 2011	0.136	Oct 2012	-		0.136	Continuing	Continuing	Continuing
Risk Management CSS	C/CPFF	MEI:AL	-	0.656	Oct 2011	3.490	Oct 2012	-		3.490	Continuing	Continuing	Continuing
Risk Management Other	MIPR	DAU:VA	-	0.026	Oct 2011	0.139	Oct 2012	-		0.139	Continuing	Continuing	Continuing
Risk Management Other 1	MIPR	MDA/DOI:VA	-	0.044	Oct 2011	0.231	Oct 2012	-		0.231	Continuing	Continuing	Continuing
Risk Management FFRDC/UARC	MIPR	MITRE:VA	-	0.392	Oct 2011	2.068	Oct 2012	-		2.068	Continuing	Continuing	Continuing
Subtotal			227.466	133.890		88.315		-		88.315			

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment BMDS Level Testing	C/CPAF	Boeing:VA	12.057	-		-		-		-	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment BMDS Level Testing 1	C/CPFF	CSC:VA	2.462	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment BMDS Level Testing 2	FFRDC	JHU APL:VA	1.731	-		-		-		-	Continuing	Continuing	Continuing
Threat Engineering Industry	C/CPAF	Boeing:VA	4.585	-		-		-		-	Continuing	Continuing	Continuing
Threat Engineering CSS	C/CPFF	CSC:VA	1.974	-		-		-		-	Continuing	Continuing	Continuing
Threat Engineering CSS 1	C/CPFF	Cobham:CA	1.385	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			24.194	-		-		-		-			

Remarks

N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	251.660	133.890		88.315		-		88.315			

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Adversary Data Package (ADP) - FY 2011	2	2011	2	2011
Adversary Data Package (ADP) - FY 2012	2	2012	2	2012
Adversary Data Package (ADP) - FY 2013	1	2013	1	2013
Adversary Data Package (ADP) - FY 2014	1	2014	1	2014
Adversary Data Package (ADP) - FY 2015	1	2015	1	2015
Adversary Data Package (ADP) - FY 2016	1	2016	1	2016
Aegis Ashore Critical Design Review	1	2012	1	2012
Aegis Ashore Preliminary Design Review	3	2011	3	2011
Aegis Ashore System Design Review	2	2011	2	2011
Aegis Ashore System Requirements Review	2	2011	2	2011
Aegis BMD 5.1 Critical Design Review (CDR)	4	2014	4	2014
Aegis BMD 5.1 Preliminary Design Review (PDR)	4	2013	4	2013
Aegis BMD 5.1 System Design Review (SDR) #1	2	2012	2	2012
Aegis BMD 5.1 System Design Review (SDR) #2	1	2013	1	2013
Aegis BMD 5.1 System Design Review (SDR) #3	3	2013	3	2013
Aegis BMD 5.1 System Requirements Review #1 (SRR#1)	3	2011	3	2011
Aegis BMD 5.1 System Requirements Review #2 (SRR#2)	1	2012	1	2012
Aegis BMD 5.1 System Requirements Review #3 (SRR#3)	4	2012	4	2012
Airborne Infrared Sensors Program - Delta System Concept Review (SCR)	1	2011	1	2011
BMD System Requirements Review (SRR) Part 1	3	2012	3	2012
BMD System Requirements Review (SRR) Part 2	4	2012	4	2012
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2012	1	2012	1	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2014	1	2014	1	2014
Ballistic Missile Defense System Description Document (BMD SDD) - FY 2016	1	2016	1	2016
Ballistic Missile Defense System Design Review - FY 2011	2	2011	2	2011
Ballistic Missile Defense System Design Review - FY 2012	3	2012	3	2012
Ballistic Missile Defense System Design Review - FY 2013	3	2013	3	2013
Ballistic Missile Defense System Design Review - FY 2014	3	2014	3	2014
Ballistic Missile Defense System Design Review - FY 2015	3	2015	3	2015
Ballistic Missile Defense System Design Review - FY 2016	3	2016	3	2016
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2012	3	2012	3	2012
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2014	3	2014	3	2014
Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2016	3	2016	3	2016
Ballistic Missile Defense System Specification (BMD SS) - FY 2011/12	2	2012	2	2012
Ballistic Missile Defense System Specification (BMD SS) - FY 2013	2	2013	2	2013
Ballistic Missile Defense System Specification (BMD SS) - FY 2015	2	2015	2	2015
Element Preliminary Design Reviews - FY 2011	2	2011	2	2011
Element Preliminary Design Reviews - FY 2012	2	2012	2	2012
Element Preliminary Design Reviews - FY 2013	2	2013	2	2013
Element Preliminary Design Reviews - FY 2014	2	2014	2	2014
Element Preliminary Design Reviews - FY 2015	2	2015	2	2015
Element Preliminary Design Reviews - FY 2016	2	2016	2	2016
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2011	3	2011	3	2011
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2012	2	2012	2	2012
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2013	2	2013	2	2013
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2014	2	2014	2	2014
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2015	2	2015	2	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Element/Component Characterization for Analysis (E/CCA) - 2Q - FY 2016	2	2016	2	2016
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2012	4	2012	4	2012
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2013	4	2013	4	2013
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2014	4	2014	4	2014
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2015	4	2015	4	2015
Element/Component Characterization for Analysis (E/CCA) - 4Q - FY 2016	4	2016	4	2016
Enhanced Command, Control, Battle Management, and Communications (C2BMC) Delta System Concept Review (SCR)	2	2011	2	2011
Enhanced Command, Control, Battle Management, and Communications (C2BMC) Delta System Requirements Review (SRR)/Preliminary Design Review (PDR)	2	2011	2	2011
Integrated Master Assessment Plan (IMAP) / Update - FY 2011	2	2011	2	2011
Integrated Master Assessment Plan (IMAP) / Update - FY 2012	2	2012	2	2012
Integrated Master Assessment Plan (IMAP) / Update - FY 2013	2	2013	2	2013
Integrated Master Assessment Plan (IMAP) / Update - FY 2014	2	2014	2	2014
Integrated Master Assessment Plan (IMAP) / Update - FY 2015	2	2015	2	2015
Integrated Master Assessment Plan (IMAP) / Update - FY 2016	2	2016	2	2016
Master Integration Plan (MIP) - FY 2011	4	2014	4	2014
Master Integration Plan (MIP) - FY 2012	4	2012	4	2012
Master Integration Plan (MIP) - FY 2013	4	2013	4	2013
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2011-PTSS	2	2011	2	2011
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012-C2BMC	3	2012	3	2012
Phased Adaptive Approach (PAA) Capability Planning Specifications (CPS) - FY 2012	4	2012	4	2012
Phased Adaptive Approach (PAA) System Concept Review (SCR) 2011	1	2011	1	2011
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #1	3	2012	3	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Phased Adaptive Approach Ballistic Missile Defense System Requirements Review #2	4	2012	4	2012
Phased Adaptive Approach Quarterly Status Review #1	4	2011	4	2011
Phased Adaptive Approach Quarterly Status Review #2	4	2011	4	2011
Phased Adaptive Approach Quarterly Status Review #3	1	2012	1	2012
Phased Adaptive Approach Quarterly Status Review #4	2	2012	2	2012
Phased Adaptive Approach Quarterly Status Review #7	1	2013	1	2013
Phased Adaptive Approach Quarterly Status Review #8	2	2013	2	2013
Precision Tracking Space System First Article Critical Design Review	1	2015	1	2015
Precision Tracking Space System First Article Preliminary Design Review	1	2013	1	2013
Provide Independent Assessments to MDA - FY 2011	4	2011	4	2011
Provide Independent Assessments to MDA - FY 2012	4	2012	4	2012
Provide Independent Assessments to MDA - FY 2013	4	2013	4	2013
Provide Independent Assessments to MDA - FY 2014	4	2014	4	2014
Provide Independent Assessments to MDA - FY 2015	4	2015	4	2015
Provide Independent Assessments to MDA - FY 2016	4	2016	4	2016
System Engineering Plan (SEP) Update - FY 2011	3	2011	3	2011
System Engineering Plan (SEP) Update - FY 2012	2	2012	2	2012
System Engineering Plan (SEP) Update - FY 2013	2	2013	2	2013
System Engineering Plan (SEP) Update - FY 2014	2	2014	2	2014
System Engineering Plan (SEP) Update - FY 2015	2	2015	2	2015
System Engineering Plan (SEP) Update - FY 2016	2	2016	2	2016
System/Subsystem Requirements Review - FY 2011	2	2011	2	2011
System/Subsystem Requirements Review - FY 2013	1	2013	1	2013
System/Subsystem Requirements Review - FY 2015	1	2015	1	2015
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2012	4	2012	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD24: <i>System Engineering & Integration</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2013	4	2013	4	2013
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2014	4	2014	4	2014
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2015	4	2015	4	2015
Technical Objectives & Goals / Effectiveness Metrics Standard Updates - FY 2016	4	2016	4	2016
Update Phased Adaptive Approach Capability Planning Specifications (CPS) - FY 2013	4	2013	4	2013
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY 2013	1	2013	1	2013
Update to Ballistic Missile Defense System Description Document (BMD SDD) - FY2015	1	2015	1	2015
Update to Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2011	3	2011	3	2011
Update to Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2013	3	2013	3	2013
Update to Ballistic Missile Defense System Interface Control Documents (SICD) - FY 2015	3	2015	3	2015
Update to Ballistic Missile Defense System Specification (BMD SS) - FY 2013	2	2013	2	2013
Update to Ballistic Missile Defense System Specification (BMD SS) - FY 2015	2	2015	2	2015
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2011	2	2011	2	2011
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2012	2	2012	2	2012
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2011	4	2011	4	2011
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2012	4	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MT23: <i>Enabling - Test</i>	-	-	32.386	-	32.386	28.277	52.276	44.979	39.393	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

System Engineering and Integration (SE&I) Major Program Goals for the IMTP:

- Verify and Assess through testing and Ballistic Missile Defense System performance and capabilities
- Develop Ballistic Missile Defense System Performance Assessment parameters
- Identify the Critical Engagement Conditions and data required to develop the test campaigns that will demonstrate regional defense performance, and verify and assess the capability of each Phased Adaptive Approach
- Define the test objectives necessary to anchor Ballistic Missile Defense System-level models and simulations, enable independent verification and validation, and identify System issues occurring in ground and flight tests
- Identify Ballistic Missile Defense System capabilities and limitations
- Develop, manage and use BMDS level Modeling and Simulation (M&S) to verify BMDS performance in system operational regions outside the live fire testing regions.

During test integration, verification, and model validation, engineering studies and analyses enable the allocation of test requirements to individual test events, design of test architectures, definition of target requirements, and generation of appropriate scenarios for ground and flight tests, in order to collect the required model validation data. Along with the support of the Director of Operational Test and Evaluation (DOT&E), System Engineering and Integration works with the Services' Operational Test Agencies (OTA) to incorporate operational test requirements under development to ensure the incremental capability being transferred to the Warfighter will be operationally effective, suitable, and survivable. System Engineering and Integration participates in test failure review boards, identifies shortfalls in data collection, and reallocates objectives to future test events until all identified model validation data is collected. Suitability data is collected through the Joint Reliability and Maintainability Engineering Team (JRMET) and quarterly data scoring boards with the Elements, to Warfighter commanders and increases the confidence levels in the predicted performance of the Ballistic Missile Defense System. BMDS Test Incident Reports document abnormal system behavior that occurs during System-level tests and alert MDA to issues with test article reliability. The Failure Reporting, Analysis, and Corrective Action System (FRACAS) provides a framework to investigate System test failures and identify solutions that will ultimately improve BMDS reliability.

BMDS Level Testing: In conjunction with the Director for Test, the Director for Engineering supplies test objectives that define the basic test development and ensure BMDS requirements are being met by the BMD System under test. Systems Engineering plays a key role in Ballistic Missile Defense test design and development through definition and tracking of the Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs), as documented in the Integrated Master Test Plan (IMTP). The CECs and EMEs ensure that the design of the BMDS test includes data collection to show proper system operation; they also provide validation,

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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verification, and assessment data for the digital models and simulations used to predict Ballistic Missile Defense System performance. These models and simulations, along with the rigorous test and verification process, will be used to demonstrate BMDS performance in areas where no live-fire-testing is performed and provide direct support to the fielding decisions and BMDS deployed operations.

System Pre- and Post-Flight Reconstruction: System Engineering and Integration (SE&I) supports System Pre-Flight predictions for system level flight tests using the test framework set up with the Ballistic Missile Defense System configuration for a particular flight test. This provides confidence in Flight Test execution by predicting BMDS performance and exercising element interfaces. This work also ensures the flight test will collect the required data (including CECs and EMEs) and the data management plan will support System Post-Flight Reconstruction (SPFR) objectives. System Post-Flight Reconstruction uses a hardware-in-the-loop (HWIL) and/or a Digital Modeling and Simulation Environment to replicate the day of flight for the Ballistic Missile Defense System configuration, including the actual environmental conditions and target dynamics observed in the test. The results of this process increase confidence in the models and simulations by anchoring the results to the real world event, with emphasis on the Critical Engagement Conditions and Empirical Measurement Events. System Post-Flight Reconstruction is used for validation (anchoring) of the BMDS models and simulations.

Modeling & Simulation (M&S) Integrated Master Test Plan (IMTP) Mission Description:

Testing: The distinct capabilities of the MDA’s M&S systems and products are ingrained throughout the MDA Elements and provide the Warfighter and Operational Test Agency (OTA) with an evaluation capability for individual components as well as overall M&S system-of-systems. MDA works to validate and accredits system-level models and simulations by anchoring them to real-world events to support accurate and comprehensive assessments of the BMDS. Future M&S development activities will focus on the model and simulation frameworks, BMDS Element models, as well as threat, phenomenology, lethality, communications, and environmental modeling. The success of the missile defense program is enabled by quality M&S systems and products that help prove BMDS technologies work. In particular, MDA M&S System and Product testing is based on an integrated, comprehensive, and phased test program as outlined in MDA’s Integrated Master Test Plan (IMTP). Within the construct of the IMTP, MDA Element unique M&S systems, subsystems, and components are tested as part of their respective development and integration, a necessary precursor to conducting BMD System-level M&S testing (e.g., integrated ground test, performance/technical assessment venues). Resources for the planning, design, execution and management of this testing are provided in accordance with the BMDS Test Policy, as listed in the most current version of the IMTP.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>Title: Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I</p> <p style="text-align: right;">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: FY 2011 accomplishments are reported under MD24 (\$26.099 million).</p> <p>FY 2012 Plans:</p>	<p>-</p> <p>0</p>	<p>-</p> <p>0</p>	<p>18.136</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>FY 2012 planned accomplishments are reported under MD24 (\$22.265 million).</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Update the Master Integration Plan (MIP) to incorporate changes in planned delivery of Ballistic Missile Defense System content -Provide engineering inputs for Integrated Master Test Plan updates using the Planning Allocation Matrix (PAM) tool to identify integration, test, assessment, and verification activities -Collect Ballistic Missile Defense System Suitability Data through the Joint Reliability and Maintainability Engineering Team (JRMET) Data Scoring Boards -Provide pre- and post-test support for the Failure Reporting, Analysis, and Corrective Action System, which investigates BMDS test failures and identifies solutions that enhance reliability -Define and execute required performance assessments to support incremental capability deliveries -Provide monthly updates for Ballistic Missile Defense System verification status -Conduct BMD System Critical Design Review to document requirements used for performance assessments of incremental deliveries. 				
<p>Title: Modeling & Simulation (M&S) Verification, Validation and Accreditation (VV&A) and Test Operations</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: FY 2011 accomplishments are reported under MD31 / MD09 (\$38.119 million).</p> <p>FY 2012 Plans: FY 2012 planned accomplishments are reported under MD31 (\$15.002 million).</p> <p>FY 2013 Plans: -Event Support Operations</p>		Articles:	-	-
		0	0	14.250
				0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p>-Collaborate with Elements, Test Community, System Engineering, and Operational Test Agencies (OTAs) to ensure Modeling and Simulation (M&S) for each event meet intended uses and objectives, and have proper Verification, Validation, and Accreditation (VV&A) documentation and evidence, to include benchmarking/anchoring pedigree</p> <p>-System Level Education, Validation and Accreditation (VV&A)</p> <p>-Planned/On-going: Develop integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for Focused Ground Tests, Integrated Ground Tests, Performance Assessments, Assured Response and Global Defender Exercises in accordance with events planned per the current approved Integrated Master Test Plan (IMTP)</p> <p>-Provide Annual Accreditation Assessment, Report and Briefing with Recommendations for critical M&S Improvements to align with end of year BMDS Operational Test Agency (OTA) Accreditation reporting and MDA President’s Budget (PB) investment strategy efforts.</p> <p>-Planned/On-going: Plan and specify system post-flight reconstructions events so as to optimize the body of evidence and analysis supporting system-level BMDS accreditation; perform all system-level VV&A associated with Digital and Hardware-in-the-loop (HWIL) System Post Flight Reconstructions, in accordance with activities prioritized, funded and resourced per the current approved Integrated Master Test Plan (IMTP)</p> <p>-Planned/On-going: Work closely with Elements, Test Community, System Engineering, and Operational Test Agency (OTA) to ensure M&S for each event meets intended uses and objectives, and has proper VV&A documentation and evidence, to include benchmarking/anchoring pedigree</p> <p>-Planned/On-going: Conduct system-level verification and validation of threat trajectory and signature, of end-to-end environmental implementation (consistent and correct), of modeled communications and architecture (behave properly) and evaluate that M&S interoperability is adequately addressed</p> <p>-Planned/On-going: Update or develop M&S Directives, Policies, Standards and Methodology Guides to support advancements in VV&A process and methodology to maximize improvement to M&S Accreditation.</p> <p>-Planned/On-going: Conduct annual review of BMDS Element VV&A programs and provide recommendations for improvements in M&S capabilities and planned Verification and Validation (V&V) activities to accelerate and optimize M&S Accreditation</p> <p>-Planned/On-going: Lead BMDS VV&A working group (VVAWG) and Verification, Validation and Accreditation Control Board (VVICB) to improve VV&A operations and ultimately improve BMDS M&S performance and accreditation</p> <p>-Planned/On-going: Ensure that individual BMDS elements and components properly VV&A their own models</p> <p>-Planned/On-going: Develop and present M&S objectives, event requirements, Accreditation status and strategic VV&A plans as part of MDA BMDS Integrated Master Test Plan (IMTP) development.</p> <p>-Planned/On-going: Develop and/or update additional chapters/volumes of the Integrated Master VV&A Plan (IMVP) to align long-range VV&A planning with MDA long-range planned events, assessments and fielding decisions.</p>			
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Develop threat trajectories and integrated threat packages to support Modeling and Simulation (M&S) frameworks and execute MDA Integrated Master Test Plan (IMTP) events to include Performance Assessments (PAs), Ground Tests, Operational Tests, Flight Tests and Combatant Command (COCOM) Exercises -Complete integration of National Air and Space Intelligence Center (NASIC) missile model capability into Threat Modeling Simulation System (TMSS) to produce intelligence-credible threat products for IMTP events -Support accreditation for Kinetic Impact Debris Distribution (KIDD) as post-intercept debris modeling tool -Support accreditation for Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS) as engagement lethality modeling tool for Patriot PAC-3, THAAD, and GM -Plan and produce re-entry vehicle (RV) and kill vehicle (KV) model products using M&S lethality tools, KIDD and PEELS, for Flight Test, Ground Test, Performance Assessments/Technical Assessments (PA/TAs), wargames, and exercises -Event Integration/Support Operations -Product Level Verification, Validation & Accreditation (VV&A) -Conduct requirements management for product VV&A (e.g., OSC, OPTISIG, KIDD, PEELS, PEGEM) -Conduct Independent Verification & Validation (IV&V) on Core Lethality Models (PEELS, KIDD) product modifications -Develop missile model and integrated threat package Verification & Validation (V&V) reports to support Integrated Master Test Plan (IMTP) events			
Accomplishments/Planned Programs Subtotals	-	-	32.386

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	420.839	290.076	316.929		316.929	313.212	338.353	249.475	279.758	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,245.489	1,159.456	929.072		929.072	914.603	954.069	948.650	862.884	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	999.068	93.937	4.548		4.548	9.806	10.825	10.109	10.454	0.000	1,138.747
• 0603892C: <i>AEGIS BMD</i>	1,530.767	988.928	992.407		992.407	960.870	950.097	1,030.201	958.680	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603904C: <i>Missile Defense Integration & Operations Center (MDIOC)</i>	83.112	69.249	63.043		63.043	54.299	55.409	54.693	55.844	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	0.000	487.699	454.400		454.400	420.357	446.542	373.395	421.632	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	0.000	454.357	435.747		435.747	475.175	505.591	406.931	485.950	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I Industry	C/CPAF	Boeing:AL	-	-		12.521	Oct 2012	-		12.521	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I CSS	C/CPFF	CSC:various	-	-		3.258	Oct 2012	-		3.258	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I FFRDC/ UARC 1	FFRDC	JHU APL:VA	-	-		1.632		-		1.632	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I FFRDC/ UARC 2	MIPR	MITRE:VA	-	-		0.362	Oct 2012	-		0.362	Continuing	Continuing	Continuing
Integrated Master Test Plan (IMTP) Engineering, Integration, Verification and Assessment - SE&I FFRDC/ UARC 3	MIPR	SNL:CA	-	-		0.363	Oct 2012	-		0.363	Continuing	Continuing	Continuing
Modeling & Simulation (M&S) Verification, Validation and	C/CPAF	Northrop Grumman:CO	-	-		7.784	Oct 2012	-		7.784	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Accreditation (VV&A) and Test Operations Performance Assessment VV&A													
Modeling & Simulation (M&S) Verification, Validation and Accreditation (VV&A) and Test Operations Ground Test VV&A	C/CPAF	Northrop Grumman:CO	-	-		3.040	Oct 2012	-		3.040	Continuing	Continuing	Continuing
Modeling & Simulation (M&S) Verification, Validation and Accreditation (VV&A) and Test Operations M&S Accreditation	C/CPAF	Northrop Grumman:CO	-	-		3.426	Oct 2012	-		3.426	Continuing	Continuing	Continuing
Subtotal			-	-		32.386		-		32.386			

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks N/A													
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		32.386		-		32.386			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MT23: <i>Enabling - Test</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Master Integration Plan (MIP) - FY 2013	4	2013	4	2013
Master Integration Plan (MIP) - FY 2014	4	2014	4	2014
Master Integration Plan (MIP) - FY 2015	4	2015	4	2015
Master Integration Plan (MIP) - FY 2016	4	2016	4	2016
System Engineering Assessment Report (SEAR) - FY 2013	1	2013	1	2013
System Engineering Assessment Report (SEAR) - FY 2014	1	2014	1	2014
System Engineering Assessment Report (SEAR) - FY 2015	1	2015	1	2015
System Engineering Assessment Report (SEAR) - FY 2016	1	2016	1	2016
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2013	2	2013	2	2013
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2014	2	2014	2	2014
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2015	2	2015	2	2015
Update to Integrated Master Test Plan (IMTP) - 2Q - FY 2016	2	2016	2	2016
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2013	4	2013	4	2013
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2014	4	2014	4	2014
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2015	4	2015	4	2015
Update to Integrated Master Test Plan (IMTP) - 4Q - FY 2016	4	2016	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD28: <i>Intelligence & Security</i>	10.514	18.382	36.886	-	36.886	35.651	37.712	39.579	40.000	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In FY 2013, funding from Program Wide Support Projects is transferred to the MD28 Intelligence & Security Project in the amount of \$16.679M for Intelligence and Security salaries and the Research, Development and Security Program.

A. Mission Description and Budget Item Justification

Intelligence and Security Program Major Program Goals:

- Ensure the Intelligence Community understands and fulfills the Missile Defense Agency`s (MDA`s) current and future prioritized intelligence requirements in an accurate and timely manner; advocate Ballistic Missile Defense System (BMDS) test support collection requirements with the Intelligence Community; and ensure that MDA`s intelligence needs and finished intelligence requirements are understood while ensuring the Intelligence Community is involved in technical interchange meetings.
- Continue the federated approach to supporting MDA by leveraging available National and Department of Defense (DoD) Counterintelligence resources to ensure counterintelligence products and services are fully integrated into all Research, Development, Test & Evaluation (RDT&E) programs and activities to protect classified information and critical technologies and to support and protect MDA and BMDS personnel, facilities, information and activities from criminal, terrorist and Foreign Intelligence and Security Service targeting/threats.
- Consistently and comprehensively define information assurance requirements for Continental United States (CONUS) and non-CONUS based BMDS assets. Define Information Assurance/Computer Network Defense (IA/CND and cyber security infrastructure intelligence requirements to focus Intelligence Community collection, analysis and production to target MDA/BMDS cyber vulnerabilities, and incorporate cyber security engineering requirements into the systems engineering process.

The Security and Intelligence Project captures four specific areas:

- 1) Intelligence
- 2) Counterintelligence
- 3) Cyber Security Engineering Division
- 4) Research, Development Acquisition (RDA) Security

Collectively, these efforts provide critical information regarding threat ballistic missile system capabilities (via intelligence); protection of personnel, activities, and technology from espionage and terrorism through active and passive activities (via counterintelligence); and BMDS system vulnerabilities (via Cyber Security Engineering). Specifically, the Intelligence and Security program activities support the overarching MDA objectives of defending the homeland against a limited ballistic missile attack; defending U.S. forces, allies and partners against regional threats; and developing flexible capabilities that can be adapted as threats evolve.

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<p>1) Intelligence: The MDA Intelligence Requirements Division serves as a clearing house for MDA`s requirements for the Intelligence Community collection, analysis and production. The MDA Intelligence Requirements Division serves as the quality control and dissemination agent of Intelligence Community products for all properly cleared Government and contractor personnel and provides feedback to the Intelligence Community on subsequent questions, issues and other requirements resulting from Intelligence Community reporting. The intelligence process begins when the Intelligence Community collects and analyzes data on foreign threat missiles. Resulting threats and threat changes are provided to the BMDS System Engineer, who uses the threats to develop and change the BMDS. This information reduces risk and improves system performance. It enables MDA Program Managers to achieve a sufficiently accurate understanding of the threat environment to respond to relevant capabilities of immediate importance, make informed decisions, and invest limited resources on countering the most significant aspects of potential adversary capabilities. Other aspects of the Intelligence Division are designed to gain access to, and leverage unique Intelligence Community developed, owned and operated capabilities for the benefit and advocacy of the Missile Defense Community. Numerous Intelligence Community capabilities are highly classified and require both access and expertise to exploit.</p> <p>2) Counterintelligence: Pursuant to Executive Order 12333, (US Intelligence Activities), DoD Directive O-5240.2 (DoD Counterintelligence), and other DoD Counterintelligence policy issuances, the MDA Counterintelligence Division is charged with undertaking activities as part of an integrated DoD and national effort, to detect, identify, assess, exploit, degrade and counter or neutralize foreign intelligence collection efforts, sabotage, espionage, sedition, subversion, terrorist and other intelligence activities directed against MDA personnel, information, materials, facilities, and activities or against U.S. national security. As a member of the DoD Counterintelligence Community, the Counterintelligence Division`s portfolio includes the following missions and functions:</p> <p>-Counterintelligence Investigative Inquiries: Pursuant to DoD Instruction 5240.21, the Counterintelligence Division conducts counterintelligence investigative inquiries into reported or suspected clandestine relationships between MDA personnel and agents of a foreign power and/or individuals associated with international terrorist organizations; failure to report contact with a foreign intelligence service and/or failure to comply with DoD reporting requirements pursuant to DoD Instruction 5240.6. Counterintelligence inquiries establish or refute a reasonable belief that a particular person was acting for or on behalf of, or an event was related to, a foreign power engaged in spying or committing espionage, sabotage, treason, sedition, subversion, assassinations, or international terrorist activities. When such allegations are substantiated, the Counterintelligence Division refers them to the appropriate Title 10, U.S. Code jurisdiction (Army, Navy or United States Air Force Counterintelligence Organization, Defense Criminal Investigative Services or Federal Bureau of Investigation) for further investigative action.</p> <p>-Counterintelligence Collection and Reporting: Pursuant to DoD Instruction S-5240.17, the Counterintelligence Division systematically collects counterintelligence information from U.S. and foreign partner intelligence, counterintelligence, security and law enforcement entities through routine liaison and other activities associated with multi-national Ballistic Missile Defense (BMD) conferences overseas, RDT&E activities and BMDS deployments worldwide. The Counterintelligence Division also conducts briefings and debriefings of MDA personnel who travel overseas and passes on any relevant information to the U.S. Intelligence Community via Intelligence Information Reports, as appropriate, to answer validated DoD Counterintelligence collection requirements.</p> <p>-Counterintelligence Analysis and Production: Pursuant to DoD Instruction 5240.18, the Counterintelligence Division conducts unclassified and classified web-based research and prepares tailored, timely and relevant analytical products that address threats from espionage, international terrorism, subversion, sabotage, assassination, other clandestine or covert activities, and any other similar activities targeting MDA that are reasonably believed to have a foreign nexus. This includes threats to MDA personnel, property, flight tests, RDT&E activities, and worldwide conferences in addition to intelligence collection threats to MDA critical program information, Ballistic Missile Defense System (BMDS) technologies, administrative and mission networks or infrastructure.</p>		

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<p>-Counterintelligence Functional Services: Pursuant to DoD Instruction 5240.16, the Counterintelligence Division conducts specialized defensive counterintelligence activities to identify and counter terrorism, espionage, sabotage and other related activities of foreign intelligence services in support of MDA flight tests, Special Access Programs, continental U.S. (CONUS)/Outside CONUS (OCONUS) BMD conferences, BMDS field deployments and initiatives and other worldwide initiatives. Specialized defensive counterintelligence activities include the conduct of Technical Surveillance Countermeasures surveys/inspections pursuant to DoD Instruction 5240.5, and computer forensics examinations in support of investigations resulting from reported insider threats and/or foreign computer intrusions.</p> <p>-Counterintelligence Awareness, Briefing and Reporting Program: Pursuant to DoD Instruction 5240.6, the Counterintelligence Division provides initial (MDA Newcomer's briefing) and periodic Counterintelligence Awareness briefings to DoD military, civilian and contractor personnel assigned to MDA. These briefings focus on the threats posed by foreign intelligence services, international terrorists, computer intruders and unauthorized disclosures, in addition to individual reporting responsibilities. The Counterintelligence Division also provides mandatory foreign travel threat briefings to all MDA outside the continental U.S. (OCONUS) travelers to familiarize them with potential terrorism, criminal, health, political and foreign intelligence and security service threats they may encounter. Follow-up debriefings are conducted to capture pertinent counterintelligence information that is shared with other MDA travelers and the U.S. Intelligence Community, as appropriate.</p> <p>-Counterintelligence in Cyberspace: Pursuant to DoD Instruction 5240.LL and other DoD policy guidance, the Counterintelligence Division conducts defensive cyber activities and computer forensics using specialized gear and software toolsets to detect, identify, assess, deter, neutralize or exploit the activities of individuals, organizations, international terrorists and foreign intelligence and security services attempting to extricate information from MDA administrative or mission networks or using the MDA cyberspace domain to conduct espionage, other intelligence activities, sabotage, and assassinations against MDA personnel, facilities, programs and/or activities.</p> <p>3) Cyber Security Engineering Division: This division assists the Ballistic Missile Defense System (BMDS) to manage and deploy Cyber Security engineering requirements and solutions to fulfill DoD and Warfighter mandates, while enhancing the robustness and resilience of the cyber infrastructure. Develop and coordinate near-term and long-term engineering changes to the BMDS that advances the confidentiality, integrity, and availability and counter cyber threats posed by our adversaries. To fulfill this role, the BMDS Cyber Security Engineering Division works in concert with Information Assurance Engineers, Intelligence and Counter Intelligence to obtain a comprehensive picture of the overall threat and cyber security engineering at all levels of the BMDS, then influence the design by 1) identifying and developing Core Standards and Requirements to implement Defense-in-Depth within planned development cycles (Builds); 2) providing oversight, coordination and management of key technical requirements development, and policy-mandated responsibilities; 3) providing contract acquisition support to BMDS Elements ensuring cyber security is addressed throughout the procurement process and; 4) interfacing with the Intelligence Community to define cyber security threats relevant to the BMDS. To fulfill stated mission requirements, the division interfaces with relevant Cyber Security Engineering experts to assess requirements, documentation and cyber security system design.</p> <p>4) Research, Development Acquisition (RDA) Security manages the MDA Information, Industrial, Operations Security, and Defense Critical Infrastructure Protection programs to protect acquisition, test, development, and fielding of BMDS capabilities. The Information Safeguards office conducts security reviews for all Congressional, General Accountability Office (GAO), budget, Freedom of Information Act (FOIA), Public Release actions; develops and coordinates Security Classification Guides (SCGs) and resolves questions regarding security classification; manages MDA Industrial Security program to develop Contract Security Classification Specifications (DD-254s) for all MDA contracts and to resolve Foreign Ownership, Control, and Influence (FOCI) issues; and conducts Information Security (INFOSEC) program reviews for all MDA offices; and conducts security inquiries as required. The Acquisition Security office supports program offices in assessing acquisition programs to identify critical program information (CPI), recommend security measures to protect CPI; and develop Program Protection Plans.</p>		

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Systems Security provides planning support for BMDS deployments by coordinating site security infrastructure requirements for deploying BMDS assets with the Combatant Commanders (COCOMs) and Services and developing and coordinating site security designs to protect critical BMDS assets. The Declassification Program office manages the MDA Declassification Program in compliance with Executive Order 13526, requiring mandatory review of 25 year-old missile defense documents to ensure classified and sensitive but unclassified information is not inadvertently released into the public domain.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Title: Cyber Security Engineering Program</p> <p style="text-align: right;">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: FY 2011 Ballistic Missile Defense System (BMDS) Cyber Security Engineering Program:</p> <ul style="list-style-type: none"> -Fulfill Deputy Assistant Secretary of Defense (DASD) Cyber Identify and Information Assurance Strategy and DoD Instruction 8580.1 -Define Cyber Security Engineering requirements for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively and definitively -Continue to assess the Cyber Security Engineering architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` Cyber Security Architectural Concepts to support technical assessments and design solutions and implementation recommendations. -Develop and document technical requirements and interfaces to execute an integrated Cyber Security Engineering Net-centric Architectural Concept. -Continue to enhance the Cyber Security Engineering posture of the BMDS by delivering expert, responsive, relevant Cyber Security Engineering products and services supporting the Program Managers to meet BMDS and Information Assurance/ Computer Network Defense (IA/CND) needs and requirements. -Continue to assist in the sustainment of an acceptable Cyber Security posture for the MDA Director, through various initiatives at each stage of the program`s lifecycle. <p>FY 2012 Plans: FY 2012 Ballistic Missile Defense System (BMDS) Cyber Security Engineering Planned Program:</p> <ul style="list-style-type: none"> -Continue to fulfill DASD Cyber identify and Information Assurance Strategy and DoD Instruction 8580. -Develop and coordinate near-term and long-term engineering changes to the BMDS that advances the confidentiality, integrity, and availability and counter cyber threats posed by our adversaries. -Continue to define Cyber Security Engineering requirements for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively, and definitively. 	<p>1.777</p> <p>0</p>	<p>2.798</p> <p>0</p>	<p>4.201</p> <p>0</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011	FY 2012	FY 2013
<p>-Continue to assess the Cyber security architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` Cyber Security Engineering Concepts to support technical assessments and Cyber Security design solutions and implementation recommendations.</p> <p>-Develop and document technical requirements and interfaces to execute an Integrated Cyber Security Engineering Net-centric Architectural Concept.</p> <p>-Continue to enhance the Cyber Security posture of the BMDS by delivering expert, responsive, Cyber Security Engineering products and services supporting the Program Managers to meet BMDS and Cyber Security Engineering needs and requirements.</p> <p>-Continue to assist in the sustainment of an acceptable Cyber Engineering security posture for the MDA Director, through various initiatives at each stage of the program`s lifecycle.</p> <p>FY 2013 Plans: FY 2013 Ballistic Missile Defense System (BMDS) Cyber Security Engineering Planned Program:</p> <p>-Continue to fulfill DoD Instruction 8500.2 and 8510.01 policy-mandated roles of the Information Assurance Manager and Information Assurance Officer for the overarching Ballistic Missile Defense System (BMDS).</p> <p>-Continue to define Information Assurance/Computer Network Defense (IA/CND) requirements for continental U.S. (CONUS) and non-CONUS based BMDS assets consistently, comprehensively and definitively.</p> <p>-Continue to assess the IA/CND security architecture to address gaps/disconnects, to enhance interoperability, and realize efficiencies across all mission systems. Define the ``As Built`` and ``To Be`` IA/CND Architectural Concepts to support technical assessments and IA/CND design solutions and implementation recommendations.</p> <p>-Develop and document technical requirements and interfaces to execute an Integrated IA/CND Net-centric Architectural Concept.</p> <p>-Continue to enhance the information assurance posture of the BMDS by delivering expert, responsive, relevant IA/CND products and services supporting the Program Managers to meet BMDS and IA/CND needs and requirements.</p> <p>-Continue to assist in the sustainment of an acceptable IA/CND security posture for the MDA Director, through various initiatives at each stage of the program`s lifecycle.</p>						
Title: Counterintelligence				2.884	4.503	6.203
				Articles: 0	0	0
Description: See Description Below						
FY 2011 Accomplishments: FY 2011 Counterintelligence Program:						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Served as the single point of contact with Federal, State and Local Law Enforcement and Counterintelligence Organizations. To this end, the Counterintelligence Division fostered collaborative partnerships targeting foreign intelligence collection activities directed against MDA personnel, facilities and activities to prevent the loss or compromise of critical program information or critical BMDS technologies.</p> <p>-Counterintelligence Division deployed organic counterintelligence teams to conduct defensive counterintelligence activities in support of MDA fielding initiatives worldwide under the Phased Adaptive Approach and Foreign Military Sales Programs.</p> <p>-Counterintelligence Division procured and fielded updated secure video telecommunications systems for the Colorado Springs and Huntsville Regional Counterintelligence Offices in support of flight tests, conferences and overseas deployments.</p> <p>-Counterintelligence Division procured / fielded updated secure data communications systems for the Colorado Springs Regional Counterintelligence Office in support of flight tests, conferences and overseas deployments.</p> <p>-Supported all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA and Ballistic Missile Defense System (BMDS) technologies, personnel, facilities and activities.</p> <p>-Counterintelligence Division kept MDA leadership and supported Program Elements informed of counterintelligence threats targeting its Research, Development and Acquisition programs, technologies and critical program information through aggressive an Analysis and Production Program.</p> <p>-Counterintelligence Division continued to educate the entire MDA workforce on the criminal, terrorist and foreign intelligence threats targeting MDA personnel, information, facilities and activities through an aggressive Counterintelligence Awareness Briefing Program that includes foreign travel threat briefings.</p> <p>FY 2012 Plans: FY 2012 Counterintelligence Planned Program:</p> <p>-The Counterintelligence Division will serve as the single point of contact with Federal, State and Local Law Enforcement and Counterintelligence Organizations. To this end, the Counterintelligence Division will foster collaborative partnerships targeting foreign intelligence collection activities directed against MDA personnel, facilities and activities to prevent the loss or compromise of critical program information or critical Ballistic Missile Defense System (BMDS) technologies.</p> <p>-The Counterintelligence Division will deploy organic counterintelligence teams to conduct defensive counterintelligence activities in support of BMDS fielding initiatives under the Phased Adaptive Approach (PAA) and Foreign Military Sales (FMS) Programs.</p> <p>-The Counterintelligence Division will procure and field updated secure voice and data communications systems in support of MDA flight tests, conferences and BMDS deployment initiatives under the Phased Adaptive Approach and Foreign Military Sales Program.</p> <p>-The Counterintelligence Division will support all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA and BMDS technologies, personnel, facilities and activities.</p> <p>FY 2013 Plans:</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>FY 2013 Counterintelligence Planned Program:</p> <p>-The Counterintelligence Division will continue to serve as the single point of contact with Federal, State and Local Law Enforcement and Counterintelligence Organizations. To this end, the Counterintelligence Division will continue to foster collaborative partnerships targeting foreign intelligence collection activities directed against MDA personnel, facilities and activities to prevent the loss or compromise of critical program information or critical Ballistic Missile Defense System (BMDS) technologies.</p> <p>-The Counterintelligence Division will deploy organic counterintelligence teams to conduct defensive counterintelligence activities in support of BMDS fielding initiatives under the Phased Adaptive Approach and Foreign Military Sales Programs.</p> <p>-The Counterintelligence Division will continue to procure and field updated secure voice and data communications systems in support of MDA flight tests, conferences and BMDS deployment initiatives under the Phased Adaptive Approach and Foreign Military Sales Program.</p> <p>-The Counterintelligence Division will continue to support all MDA flight tests to detect, deter, or neutralize criminal, terrorist and foreign intelligence collection threats targeting MDA and BMDS technologies, personnel, facilities and activities.</p>				
<p>Title: Intelligence</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: FY 2011 Intelligence Program:</p> <p>The Intelligence Requirements Office:</p> <p>-Acted as single intelligence requirements integration office within MDA and its designated intermediary with the Intelligence Community and maintained a consistent dialog with the Intelligence Community to ensure they had a focused, prioritized, and complete understanding of the vast requirements for foreign intelligence necessary to build a comprehensive Ballistic Missile Defense System (BMDS).</p> <p>-Managed intelligence collection requirements and engaged the Intelligence Community to ensure MDA requirements were documented, validated, collected, and understood. Intelligence tasks included planning intelligence collections support for missile defense tests and documenting requirements in Intelligence Community management systems, and maintaining and updating Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events.</p>		<p>Articles:</p> <p>5.853 0</p>	<p>11.081 0</p>	<p>13.507 0</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>-Maintained ongoing, persistent, focused dialog with all members of the Intelligence Community that ensured MDA intelligence requirements were viewed in proper context, receive the proper priority level, and were explicitly understood by the Intelligence Community.</p> <p>-Provided all levels of builders of missile defense intelligence requirements with the most up to-date and accurate intelligence, which requires a detailed understanding of the BMDS developer's and senior leadership's particular requirements.</p> <p>-Provided an encyclopedic, all-source, and all encompassing knowledge base of the foreign ballistic missile threat including development, enhancement, and population of the Secret and Top Secret/Sensitive Compartmented Information Missile Threat Portals with Intelligence Community produced finished intelligence documents. These portals hosted the most up-to-date current intelligence to provide immediate situational awareness, technical intelligence data to be used by the BMDS Program Elements and System Engineers, and direct linkages to the Intelligence Community to support the MDA Warfighter Support Center.</p> <p>FY 2012 Plans: FY 2012 Intelligence Planned Program:</p> <p>The Intelligence Requirements Office will:</p> <p>-Continue to be the single intelligence requirements integration office within MDA and its designated intermediary with the Intelligence Community and maintain a consistent dialog with the Intelligence Community to ensure they have a focused, prioritized, and complete understanding of the vast requirements for foreign intelligence necessary to build a comprehensive BMDS.</p> <p>-Continue to manage the intelligence collection requirements and engage the Intelligence Community to ensure MDA requirements are documented, validated, collected, and understood. Intelligence tasks will include planning intelligence collections support for missile defense tests and documenting requirements in Intelligence Community management systems, and maintaining and updating Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events.</p> <p>-Continue to maintain an ongoing, persistent, focused dialog with all members of the Intelligence Community to ensure MDA intelligence requirements are viewed in proper context, receive the proper priority level, and are explicitly understood by the Intelligence Community.</p> <p>-Continue to provide all levels of builders of missile defense intelligence requirements with the most up to-date and accurate intelligence, which requires a detailed understanding of the BMDS developer's and senior leadership's particular requirements.</p> <p>-Continue to provide an encyclopedic, all-source, and all encompassing knowledge base of the foreign ballistic missile threat including development, enhancement, and population of the Secret and Top Secret/Sensitive Compartmented Information Missile Threat Portals with Intelligence Community produced finished intelligence documents. These portals have the most up-to-date current intelligence to provide immediate situational awareness, technical intelligence data to be used by the BMDS Program</p>			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Elements and System Engineers, and direct linkages to the Intelligence Community to support the MDA Warfighter Support Center.</p> <p>-Fully characterize all ballistic missile threat systems from high priority countries for use by the MDA Systems Engineer, Program Managers, and Director for Test to perform modeling, simulation, and testing of the BMDS. The MDA Director for Engineering uses this intelligence to build the Adversary Data Package used by all Program Elements and MDA Test as the ballistic missile threat document utilized to build and test the BMDS. The Director, MDA has offered and authorized this two year resource augmentation to National Air and Space Intelligence Center (NASIC) as bridge funding while USAF/NASIC realign resources within the MIP to accommodate these requirements.</p> <p>-Propose, develop, and execute a cyber study. The study will continue the demonstration of the effectiveness of using models and simulation to support all-source scientific and technical intelligence (S&TI) analysis of the impact of cyber threats to a U.S. tactical military network. The term model and simulation will be interchangeable and includes both hardware and software. The details of the aspects of the specific network to be addressed shall be provided by the Government.</p> <p>FY 2013 Plans: FY 2013 Intelligence Planned Program:</p> <p>The Intelligence Requirements Office will:</p> <p>-Continue to be the single intelligence requirements integration office within MDA and its designated intermediary with the Intelligence Community and maintain a consistent dialog with the Intelligence Community to ensure they have a focused, prioritized, and complete understanding of the vast requirements for foreign intelligence necessary to build a comprehensive BMDS.</p> <p>-Continue to manage the intelligence collection requirements and engage the Intelligence Community to ensure MDA requirements are documented, validated, collected, and understood. Intelligence tasks will include planning intelligence collections support for missile defense tests and documenting requirements in Intelligence Community management systems, and maintaining and updating Measurement and Signature Intelligence (MASINT), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) requirements on advances in foreign ballistic missile technology and for all MDA events.</p> <p>-Continue to maintain an ongoing, persistent, focused dialog with all members of the Intelligence Community to ensure MDA intelligence requirements are viewed in proper context, receive the proper priority level, and are explicitly understood by the Intelligence Community.</p> <p>-Continue to provide all levels of builders of missile defense intelligence requirements with the most up to-date and accurate intelligence, which requires a detailed understanding of the BMDS developer's and senior leadership's particular requirements.</p> <p>-Continue to provide an encyclopedic, all-source, and all encompassing knowledge base of the foreign ballistic missile threat including development, enhancement, and population of the Secret and Top Secret/Sensitive Compartmented Information Missile</p>			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Threat Portals with Intelligence Community produced finish intelligence documents. These portals have the most up-to-date current intelligence to provide immediate situational awareness, technical intelligence data to be used by the BMDS Program Elements and System Engineers, and direct linkages to the Intelligence Community to support the MDA Warfighter Support Center.</p> <p>-Fully characterize all ballistic missile threat systems from high priority countries for use by the MDA Systems Engineer, Program Managers, and Director for Test to perform modeling, simulation, and testing of the BMDS. The MDA Director for Engineering uses this intelligence to build the Adversary Data Package used by all Program Elements and MDA Test as the ballistic missile threat document utilized to build and test the BMDS. The Director, MDA has offered and authorized this two year resource augmentation to National Air and Space Intelligence Center (NASIC) as bridge funding while USAF/NASIC realign resources within the MIP to accommodate these requirements.</p>				
<p>Title: Research, Development Acquisition (RDA) Security</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Research, Development Acquisition (RDA) Security was previously reported under MDA Program Wide Support. In January 2011, pursuant to an Agency reorganization, the former MDA Security and Program Protection Division was reorganized into three separate components. One of those components is the Research, Development and Acquisition (RDA) Security division, which is subordinate to the Director for Engineering.</p> <p>The RDA Security Information Safeguards branch performed security reviews of over 1,035 requests for public release, security classification determinations, Freedom of Information Act (FOIA) and Mandatory Declassification Reviews (MDR) during this period. RDA Security conducted Information Security staff assistance reviews and assessments of 81 MDA offices and 44 security incident inquiries. During the year, the Information Security team directly support the Agency's Base Realignment and Closure (BRAC) by managing a reduction of classified material across the Agency, coordinating the secure transport of classified information between and within the National Capitol Region and Huntsville, and inspecting all vacated spaces to ensure no classified or controlled unclassified information was inadvertently left in buildings that will be decommissioned. The Industrial Security program maintained security oversight for the Agency's classified contracts, including support to the MiDAESS Program to ensure that valid DD254 ``Contract Security Classification Specification`` documents were available to support contracting efforts and coordinating with the Department of Energy, Director National Intelligence, and National Security Agency for approval of a major defense contractor under Foreign Ownership, Control, and Interest (FOCI) to access proscribed information, which resulted in the MDA issuance of a National Interest Determination (NID), authorizing the contractor to perform classified work for the Agency.</p>		<p>Articles:</p> <p>-</p> <p>0</p>	<p>-</p> <p>0</p>	<p>12.975</p> <p>0</p>

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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The RDA Security Systems Protection branch worked continuously with Combatant Commands (COCOMs) and the Services to ensure that MDA personnel, information, and equipment were protected during all phases of BMDS acquisition and deployment. Of particular note were continuing efforts to reconstitute full mission capability of the Integrated Electronic Security System (IESS) at the Fort Greely, Alaska (FGA) Missile Defense Complex; transition of European Capability (EC) concept for fixed-site missile defense interceptor and radar installations to a Phased Adaptive Approach (PAA) architecture (missile defense in Europe) that includes an AEGIS Ashore missile defense concept; and various security studies and planning efforts in support of the Pacific Tracker Test Asset, the Upgraded Early Warning Radar (UEWR), the Terminal High Altitude Area Defense (THAAD) Program, and Sea-Based X-Band Radar (SBX). RDA Security supported a United States Central Command (USCENTCOM) request for deployment of an Army Navy/Ground Transportable Radar Surveillance model 2 (AN/TPY-2) by providing security assistance on site surveys within the USCENTCOM area of operations, coordinating with the COCOM military security staff, providing legacy information on the AN/TPY-2 security, and coordinating DoD information on security requirements to comply with United States Strategic Command (USSTRATCOM) security standards. In support of the MDA's Foreign Military Sales (FMS), Research, Development Acquisition (RDA) Security provided program protection support to the THAAD Program Office to ensure information proposed for release under the FMS agreement with the United Arab Emirates was properly protected.

RDA Security implemented DoDI 5200.39, "Critical Program Information Within the Department of Defense," to protect MDA's critical program information (CPI) and to promote the horizontal protection of CPI across BMDS programs. During this period, the staff reconstituted program protection planning, coordinating an Agency Director policy memorandum, completing a Program Protection instruction that defines a framework for program protection planning and implementing DoD direction to manage the DoD-directed Acquisition Security Database (ASDB), which documents CPI across all Services and agencies within the DoD. RDA Security applied proven techniques and tools in support of the Precision Tracking Space System (PTSS) Program Manager and his senior staff in conducting an assessment of key program technologies, conducting in-depth analysis to identify for candidate critical program information (C-CPI).

Based on agency reorganizations, the Operations Security (OPSEC) team updated MDA OPSEC policy and procedures to support programs and personnel, as well as education programs to promote OPSEC within MDA. The OPSEC team initiated processes to develop the first-ever Master MDA Critical Information List.

RDA Security personnel provided dedicated on-site security and protection of BMDS resources and personnel at operational sites in Alaska, California and Colorado. The team worked closely with host service security counterparts to ensure 100% security protection coverage of the BMDS mission operations and test assets.

FY 2011	FY 2012	FY 2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD28: <i>Intelligence & Security</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011
<p>During FY 2011, the Test Support team worked closely with representatives from the Test Directorate, Service Operational Test Agencies, Operational Test and Evaluation, Warfighter Support, COCOMs, Intelligence and Counterintelligence to develop comprehensive security plans tailored to each test activity and exercise based on known threat information.</p> <p>The Declassification Program operations reviewed 1,707,027 pages of classified information 25 years or older, exceeding all requirements of Executive Order 13526, Classified National Security Information. The Declassification Program received a perfect score on the annual Information Security Oversight Office (ISOO) audit and was recognized for management ``best practices.`` The Agency`s Declassification Guide was selected by ISOO as the template for use by other Declassification Programs within the Executive Branch.</p> <p>FY 2012 Plans: The RDA Security Information Safeguards will continue to perform all reviews supporting Agency public release, security classification, as well as required Freedom of Information Act (FOIA) and Mandatory Declassification Reviews (MDR). Additionally, RDA Security will perform Information Security staff assistance reviews and assessments of 87 MDA offices and will coordinate security incident reviews to identify and fix security deficiencies impacting Agency operations. Based on tasking from the Information Security Oversight Office (ISOO) and the Office of the Under Secretary of Defense for Intelligence, RDA Security will complete the review and update of all 29 Agency security classification guides to ensure compliance with Executive Order 13526. The Industrial Security program will continue to provide security oversight for the Agency`s classified contracts, drafting and coordinating DD254 ``Contract Security Classification Specification`` documents to support contracting efforts.</p> <p>The RDA Security Systems Protection branch will continue to provide security support to Phased Adaptive Approach (PAA) and Agency planning for the deployment of an In-Flight Interceptor Communications system to Ft. Drum, NY. During this period, the security team will work to transition responsibility for Sea-Based X-Band Radar (SBX) security from MDA to the Navy.</p> <p>RDA Security will focus program protection planning on the assessment of candidate critical program information (CPI) for the Sensors and Command and Control, Battle Management, and Communications (C2BMC) programs and reassessments of CPI for the Ground-based Midcourse Defense, THAAD and Space Tracking and Surveillance Systems programs. During this period, the Acquisition Security team will work closely with the Quality, Safety and Mission Assurance Directorate and Counterintelligence on Supply Chain Risk Management (SCRM) issues.</p> <p>RDA Security personnel will continue to provide dedicated on-site security and protection of BMDS resources and personnel at operational sites in Alaska, California and Colorado and with the Test Directorate to ensure 100% security protection coverage of the BMDS mission operations and test assets.</p>				FY 2012
				FY 2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>The Declassification Program operations production target for Calendar Year 2012 declassification reviews is in excess 3.8 million page equivalents of missile defense historical records.</p> <p><i>FY 2013 Plans:</i></p> <p>The RDA Security Information Safeguards will continue to perform all reviews supporting Agency public release, security classification, as well as required Freedom of Information Act (FOIA) and Mandatory Declassification Reviews (MDR). Additionally, RDA Security will perform Information Security staff assistance reviews and assessments of 90 MDA programs and will coordinate required security incident reviews to identify and fix security deficiencies impacting Agency operations. The Industrial Security program will continue to provide security oversight for the Agency's classified contracts, drafting and coordinating DD254 ``Contract Security Classification Specification`` documents to support contracting efforts.</p> <p>The RDA Security Systems Protection branch will continue to provide security support to Phased Adaptive Approach (PAA), as well as other directed BMDS systems deployments.</p> <p>RDA Security will focus program protection planning on the continuing assessment of candidate critical program information (CPI) for Advanced Technology programs, notably including Standard Missile-3 (SM-3) Block IIB and High Power Directed Energy, as well as Small Business Innovative Research (SBIRS) projects to identify technologies that will transition into MDA programs. Work will also continue with Counterintelligence on Supply Chain Risk Management (SCRM) issues that could degrade the performance of BMDS systems.</p> <p>RDA Security personnel will continue to provide dedicated on-site security and protection of BMDS resources and personnel at operational sites in Alaska, California and Colorado and with the Test Directorate to ensure 100% security protection coverage of the BMDS mission operations and test assets. During this reporting period, funding for the maintenance and update of the Argus electronic security system for the Missile Defense Integrated Operations Center will be transferred from Program Wide Support into the Intelligence & Security budget.</p> <p>The Declassification Program requirements will continue to expand in FY 2013, as the Agency conducts declassification reviews of historical documents 25 years old and older in accordance with Executive Order 13526, Classified National Security Information. The MDA production target is projected to be in excess of 5.7 million page equivalent historical records. To support this increasing requirement, MDA will fund a project for high volume scanning of volumes of legacy hard copy documents into digital format that can then be processed, using intelligent software, to assist in identifying missile defense equities. The application of scanning and automated analytic tools will permit the Agency to meet annual declassification requirements.</p>			
Accomplishments/Planned Programs Subtotals	10.514	18.382	36.886

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>

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

N/A

D. Acquisition Strategy

In support of acquiring an effective BMDS capability, this project directs various executing agents and leverages expertise in the intelligence community, counterintelligence community, and information assurance community, including the military departments, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and industry. The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services will be acquired by competitive means to the extent that is possible and practical.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cyber Security Engineering Program Cyber Threat	SS/FFP	Booz Allen Hamilton:McLean, VA	7.116	2.798		-		-		-	0.000	9.914	0.000
Cyber Security Engineering Program Cyber Threat 1	SS/FFP	Mantech:Falls Church, VA	-	-		4.201	Jul 2013	-		4.201	Continuing	Continuing	Continuing
Counterintelligence CI Analysis and Support	C/CPFF	QinetiQ Inc:Fairfax, VA	16.905	4.503		-		-		-	0.000	21.408	0.000
Counterintelligence CI Analysis and Support 1	MIPR	Various:Various	0.600	-		-		-		-	0.000	0.600	0.000
Counterintelligence CI Analysis and Support 2	C/CPFF	Booz Allen Hamilton:McLean, VA	-	-		6.203	Apr 2013	-		6.203	Continuing	Continuing	Continuing
Intelligence Analysis and Support	C/FFP	Lockheed Martin:Gaithersburg, VA	20.923	4.994		7.599	May 2013	-		7.599	Continuing	Continuing	Continuing
Intelligence Intelligence Applications	MIPR	SMDC:Huntsville, AL	4.315	1.600		3.259	Oct 2012	-		3.259	Continuing	Continuing	Continuing
Intelligence Intelligence Collections	MIPR	NASIC:Wright-Patterson AFB, OH	-	1.300		2.649	Oct 2012	-		2.649	Continuing	Continuing	Continuing
Intelligence Intelligence Watch	SS/CPAF	MDIOC-Northrop Grumman:Colorado Springs CO	11.186	2.487		-		-		-	Continuing	Continuing	Continuing
Research, Development Acquisition (RDA) Security RDA Analysis & Support	MIPR	Mantech:Falls Church, VA	-	-		5.998	Oct 2012	-		5.998	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Research, Development Acquisition (RDA) Security RDA Support	MIPR	Booz-Allen Hamilton:McLean, VA	-	-		6.977	Oct 2012	-		6.977	Continuing	Continuing	Continuing
Subtotal			61.045	17.682		36.886		-		36.886			

Remarks
MDIOC - Missile Defense Integration & Operations Center; SMDC - Space & Missiles Development Center; NASIC - National Air and Space Intelligence Center

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Intelligence Intelligence Project Management MD28	SS/FFP	Various:Various	0.449	0.700		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.449	0.700		-		-		-			

Remarks
N/A

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	61.494	18.382	36.886	-	36.886			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD28: <i>Intelligence & Security</i>
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	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks NA								
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD29: <i>Producibility & Manufacturing Technology</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD29: <i>Producibility & Manufacturing Technology</i>	30.565	-	-	-	-	-	-	-	-	0.000	30.565
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In FY 2012, the funding in MD29 transfers to the Standard Missile-3 Block IIB, Program Element 0603902C, MD70.

A. Mission Description and Budget Item Justification

The Manufacturing and Producibility/Enabling Technology effort focuses on technology development for future generation interceptors. This project focuses on Standard Missile-3 Block IIB technology development in propulsion, seeker, divert and attitude control system, light weight structures and battery technology development.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: High Performance Interceptor Technology Development	30.565	-	-
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: FY 2011 accomplishments for the High Performance Interceptor Technology Development effort are captured in the Standard Missile-3 Block IIB, Program Element 0603902C, MD70.			
FY 2012 Plans: In FY 2012, the funding in MD29 transfers to the Standard Missile-3 Block IIB, Program Element 0603902C, MD70.			
FY 2013 Plans: NA			
Accomplishments/Planned Programs Subtotals	30.565	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD29: <i>Producibility & Manufacturing Technology</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603902C: <i>Next Generation Aegis Missile (Standard Missile-3 Block IIB (SM-3 IIB))</i>	0.000	13.443	224.077		224.077	295.248	455.373	508.356	430.239	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD29: <i>Producibility & Manufacturing Technology</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>			PROJECT MD29: <i>Producibility & Manufacturing Technology</i>					
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		-		-		-	0.000	0.000	0.000

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD29: <i>Producibility & Manufacturing Technology</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD29: <i>Producibility & Manufacturing Technology</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Controllable Solid Divert Attitude Control System Static Sub-system Test	3	2011	3	2011
H PLUS Static Hot Fire Test	3	2011	3	2011
Low Cost Liquid Divert Attitude Control System Static Subsystem Test 4QFY11	1	2012	1	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>				PROJECT MD30: <i>BMD Information Management Systems</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD30: <i>BMD Information Management Systems</i>	105.904	116.508	107.744	-	107.744	92.425	100.250	107.469	109.657	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In FY 2012 MD30 reported five (5) mission critical information technology (IT) functions to include: 1) General IT Services; 2) Knowledge and Information Management; 3) Unified Communications; 4) Cyber Security and Information Assurance and 5) Information Technology Sustainment Engineering.

The Ballistic Missile Defense Information Management Systems Project MD30 has been realigned for FY 2013 to seven IT service strategies that support the Missile Defense Agency to include: 1) End User Support; 2) Unified Communications; 3) Information Assurance/Computer Network Defense; 4) Business Automation Services; 5) Portal and Data Services; 6) Network and Infrastructure Services, and 7) IT Planning and Solutions.

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense (BMD) Information Management Systems Project funds the Information Technology (IT), Information Assurance (IA) and telecommunications infrastructure of the Agency. The information management, cyber security, information assurance and telecommunications infrastructure is critical to the day-to-day functions of the Missile Defense Agency (MDA) Director, MDA senior leaders and all MDA personnel to communicate (classified and unclassified) with each other, Congress, senior DoD and other U.S. government agency personnel, Combatant Commanders, North Atlantic Treaty Organization (NATO) partners, and other industry partners. Communication among these organizations facilitates the MDA mission of developing and fielding an integrated Ballistic Missile Defense System (BMDS) to defend the United States, our deployed forces, allies and friends against all ranges of enemy ballistic missiles in all phases of flight. The MDA information technology, cyber security, information assurance and telecommunication capabilities support rigorous missile defense testing and facilitates the development of technologies to guard against future missile threat growth. Communications are vital for missile defense to continue a viable homeland defense against rogue threats and to provide the integration required to defend deployed forces, allies, and friends against theater threats. The information technology, cyber security, information assurance and telecommunications infrastructure consists of MDA secure information technology systems, data centers, operations and monitoring centers which are vital to support the strategic mission of the Agency and necessary to meet disaster recovery and continuity of operations requirements. This infrastructure is required to sustain access to the Secret Internet Protocol Router Network (SIPRNET), Non secure Internet Protocol Router Network (NIPRNET), MDA classified and unclassified networks, classified and unclassified video conferencing services, test and business knowledge data centers, the Defense Research Engineering Network (DREN). These mission critical functions provide for the efficient operation and safeguarding of all agency information in locations supporting MDA around the world including Alabama, Alaska, California, Colorado, Hawaii, New Mexico, Virginia, Europe, Israel, and Japan. This project funds information management/information technology operations for multiple systems in MDA facilities.

To support the Director's intent to significantly improve all layers of our BMDS, this project funds several Information Technology (IT) mission critical functions. These functions provide for the efficient operation and safeguarding of Agency information in compliance with Department of Defense (DoD) policies and in keeping with the

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
<p>President's declaration that "cyber threat is one of the most serious economic and national security challenges we face as a nation". The mission critical functions of this project include:</p> <ul style="list-style-type: none"> -Provide critical day-to-day IT support to the Agency mission at all locations -Information Technology enterprise architecture that is compliant with DoD and Federally mandated standards for the business and mission support activities of the MDA -Interaction with the U.S. Cyber Command for instructions and regulatory guidance and reporting requirements -Provide DoD approved solutions for information sharing, electronic records management, financial management, and efficient and secure business and mission support activities throughout MDA -Knowledge center integration and universal access for information sharing capabilities -Consolidated information technology infrastructure in support of information technology line of business goals/objectives -Information assurance controls and computer network defense of MDA networks infrastructure for disaster recovery and continuity of operations capabilities -Information Assurance certification and accreditation processes that support the Ballistic Missile Defense System (BMDS), test assets, and administrative support networks -Cyber Security implementation of information technology policies, guidance, planning, oversight, and monitoring to ensure continued compliance with DoD mandated initiatives, statutes, regulations, directives, and policies <p>The BMD Information Management Systems Project MD30 for FY 2011 and FY 2012 consists of the five mission critical Information Technology (IT) functions and the associated FY 2011 Accomplishments and FY 2012 Plans.</p> <ul style="list-style-type: none"> -General Information Technology (IT) Services (FY 2011 and FY 2012) <p>The General IT Services mission critical function consists of IT support services required to operate and maintain the classified and unclassified IT infrastructure in the National Capital Region including the MDA Headquarters Command Center at Fort Belvoir, Virginia, Aegis Program Office at Dahlgren, Virginia; several MDA locations in Huntsville, Alabama region; the Colorado Springs, Colorado region; Edwards and Los Angeles Air Force Bases, California; Kirtland Air Force Base, New Mexico; MDA's enclave at Fort Greely and Elmendorf AFB, Alaska. This includes IT operations and maintenance, help desk services and hardware maintenance and software licensing in support of BMDS mission, research and test efforts as well as MDA business processes. Funding also supports coordination with the MDA Enterprise Network Operations Security Center (ENOSC) to implement Information Assurance Vulnerability Assessments (IAVAs) issued by the U.S. Cyber Command. This mission critical function also funds planning, programming, budget and execution support and Federal and DoD IT compliance reporting. The funding supports operations and maintenance of new facilities in Huntsville, Alabama; and Fort Belvoir and Dahlgren, Virginia. This function provides the infrastructure necessary for planning and coordination of the Director's Research, Development, Test & Evaluation (RDT&E), operation and maintenance, and upgrade initiatives for the Ballistic Missile Defense System (BMDS).</p> <ul style="list-style-type: none"> -Knowledge and Information Management (FY 2011 and FY 2012) 		

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603890C: <i>BMD Enabling Programs</i>	MD30: <i>BMD Information Management Systems</i>

In accordance with the Clinger Cohen Act and DoD directives, this mission critical function provides for the licensing and sustainment of DoD approved enterprise information applications. This function also provides management and storage of both the unclassified and classified MDA data to share information and knowledge throughout the Missile Defense community. Examples of DoD mandated and mission essential applications include Ballistic Missile Defense (BMD) Asset Management System, BMDS Integrated Master Schedule, Electronic Records Management System, Electronic Tasking (E-Tasker), Integrated Acquisition Environment, data management tool, financial management tools, personnel tracking system, MDA Identify and Management Infrastructure application, Computer-Aided Facilities Management, the MDA Employee Development Center, the Program Resource Internet Database Environment (PRIDE), and the MDA Standard Procurement System (SPS). This function supports the operations and maintenance of the Visual Information Production Centers, state-of-the-art, high capacity graphic and video production services for senior leadership and agency employees. This function provides the infrastructure necessary for planning and coordination of the Director’s RDT&E, operations and maintenance, and upgrade initiatives for the Ballistic Missile Defense System (BMDS).

-Unified Communications (FY 2011 and FY 2012)

The Unified Communications mission critical function supports leased communications (classified and unclassified wide area networks, metropolitan area networks, and local area networks), telecommunications (local and long distance telephone services and secure and non secure mobile and desktop telephony devices), management, engineering, systems integration, operations, and maintenance and technical support services. These services are provided at MDA locations including the National Capital Region; Huntsville, Alabama; Colorado Springs, Colorado and interceptor sites at Fort Greely and Elmendorf Air Force Base, Alaska; Kirtland Air Force Base, New Mexico and Vandenberg Air Force Base, California. This includes classified and unclassified voice and data circuits, video teleconferencing and sustainment of Video Over Internet Protocol (VoIP) capability to enhance resolution and control costs. Circuits and associated services are provided by the Defense Information Systems Agency (DISA) as well as the Defense Research and Engineering Network (DREN). These circuits provide access to over 80 government and industry partner locations to enable information sharing of BMD-related data throughout the global MDA Enterprise. Also included are planning efforts to ensure that the policies and budget are in place to support BMDS mission and to comply with statutory and DoD policies including: Clinger-Cohen Act, the Federal Information Security Management Act (FISMA), and Office of Management and Budget (OMB) Information Technology (IT) budget reporting policies. This function provides the infrastructure necessary for planning and coordination of the Director’s Research, Development, Test & Evaluation (RDT&E), operations and maintenance, and upgrade initiatives for the BMDS.

-Cyber Security and Information Assurance (IA) (FY 2011 and FY 2012)

The Cyber Security and Information Assurance mission critical function supports the Federal Information Security Management Act (FISMA) and is a key priority of the MDA Director. This vital program of the BMDS and MDA Enterprise consists of cyber security, information assurance, computer network defense, network situational awareness, and certification and accreditation activities to comply with the Global Information Grid Information Assurance Strategic Plan and Goals, DoD information assurance directives, instructions and guidelines. Additionally, the cyber security and information assurance program integrates human capital management initiatives to sustain and improve the continuity of workforce operations by providing information assurance workforce training and certification. The information assurance program provides system security engineering, development, and testing to ensure that command, control, communications, and computing systems are protected against malicious or accidental attacks and supports the transfer of missile defense capabilities between MDA and the Services. The MDA cyber security and information assurance program provides the network security operations center and supporting processes to protect and defend MDA knowledge stores and

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603890C: <i>BMD Enabling Programs</i>	MD30: <i>BMD Information Management Systems</i>

information systems against cyber warfare. The MDA Enterprise Network Operations Security Center manages network situational awareness and status reporting. The MDA Computer Emergency Response Team (CERT) coordinates with the U.S. Cyber Command to identify and implement network vulnerability updates. This ensures the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. This function ensures the Information Technology (IT) support structure is sustained at an appropriate level to meet the Director's operational availability across multiple environments and locations.

-Information Technology (IT) Sustainment Engineering (FY 2011 and FY 2012)

This mission critical function provides project planning, sustainment engineering efforts, and Information Technology (IT) equipment and consumables for MDA general IT services and business systems to ensure compliance with Federal and DoD enterprise standards. Engineering efforts are essential to ensure the continuity of IT services necessary for the design, development, modeling, and testing of the Ballistic Missile Defense System (BMDS). Information Technology consumables consist of critical equipment sparing and test equipment necessary to sustain the general IT services to facilitate critical repairs within a 24 hour period. IT consumables also consist of items that require periodic replacement such as toner, keyboards, monitors, cabling, etc. This function provides the infrastructure necessary for planning and coordination of the Director's RDT&E, operations and maintenance, and upgrade initiatives for the BMDS.

The BMD Information Management Systems Project MD30 for FY 2013 consists of seven (IT) service strategies and the associated FY 2013 Base Plans.

-End User Support (FY 2013)

The End User Support service strategy includes IT operations and maintenance, help desk services, hardware maintenance and software licensing in support of BMDS mission, research and test efforts as well as MDA business processes. These services are provided at MDA locations including Huntsville, Alabama; Fort Greely and Elmendorf Air Force Base, Alaska; Vandenberg Air Force Base, California; Colorado Springs, Colorado; Kirtland Air Force Base, New Mexico; and Fort Belvoir and Dahlgren, Virginia. Information Technology consumables consist of critical equipment sparing and test equipment necessary to facilitate critical repairs within a 24 hour period that ensures compliance with Federal and DoD enterprise standards. IT consumables also consist of items that require periodic replacement such as toner, keyboards, monitors, cabling, etc. End User Support services also includes the sustainment of desktops, laptops, thin clients, and associated hardware, office productivity software licensing, email services, printing and copy services, file services, directory services, authentication services, helpdesk and tracking services, client support administration, employee moves, mission/test/engineer unique software applications and licenses, offsite contractor end user support, offsite events, conferences, summits, and mission/test events.

-Unified Communications (FY 2013)

The Unified Communications service strategy supports leased communications (classified and unclassified wide area networks, metropolitan area networks, and local area networks), telecommunications (local and long distance telephone services and secure and non secure mobile and desktop telephony devices), management, engineering, systems integration, operations, maintenance, and technical support services. These services are provided at MDA locations including Huntsville, Alabama; Fort Greely, Alaska; Elmendorf Air Force Base, Alaska; Vandenberg Air Force Base, California; Colorado Springs, Colorado; Kirtland Air Force Base, New Mexico; Dahlgren, Virginia; and Fort Belvoir, Virginia. This includes classified and unclassified voice and data circuits, video teleconferencing and sustainment of

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<p>Voice/Video Over Internet Protocol (VoIP) capability to enhance resolution and control costs. Circuits and associated services are provided by the Defense Information Systems Agency (DISA) as well as the Defense Research and Engineering Network (DREN). These circuits provide access to over 80 government and industry partner locations to enable information sharing of BMD-related data throughout the global MDA Enterprise. Unified Communications includes sustainment of Video Teleconferencing (VTC) hardware/software, VTC and conference room scheduler application, BlackBerrys and wireless services, instant messaging and collaboration, secure and non-secure telephone equipment, private branch exchange switches maintenance, unclassified desktop/laptop integrated audio/video collaboration services, secure Telepresence suites and secure mobile cell phones.</p> <p>-Information Assurance/Computer Network Defense (IA/CND) (FY 2013)</p> <p>This Information Assurance/Computer Network Defense (IA/CND) service strategy provides protection of classified and unclassified infrastructure necessary for planning and coordination of the Director’s RDT&E, operations and maintenance, and upgrade initiatives for the BMDS. This service strategy provides compliance with Federal Information Security Management Act (FISMA) and includes implementation of the DoD Information Assurance Certification and Accreditation Process (DIACAP) to manage risk, conduct security assessments, and monitor compliance with applicable security controls. This vital program of the BMDS and MDA Enterprise consists of cyber security, information assurance, computer network defense, network situational awareness, and certification and accreditation activities to comply with the Global Information Grid Information Assurance Strategic Plan and Goals, DoD information assurance directives, instructions and guidelines. This strategy also supports coordination with the MDA Enterprise Network Operations Security Center (ENOSC) to implement Information Assurance Vulnerability Assessments (IAVAs) issued by the U.S. Cyber Command. Additionally, the IA/CND program integrates human capital management initiatives to sustain and improve the continuity of workforce operations by providing information assurance workforce training and certification in accordance with DoD Manual 8570.1. The information assurance program provides system security engineering, development, and testing to ensure that command, control, communications, and computing systems are protected against malicious or accidental attacks and supports the transfer of missile defense capabilities between MDA and the Services. The MDA information assurance program provides the network security operations center and supporting processes to protect and defend MDA knowledge stores and information systems against cyber warfare. The MDA ENOSC manages network situational awareness and status reporting. The MDA Computer Emergency Response Team (CERT) coordinates with the U.S. Cyber Command to identify and implement network vulnerability updates. This ensures the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Information Assurance/Computer Network Defense (IA/CND) includes the sustainment of MDA CERT network oversight and coordination, MDA CERT hardware and software, general services IA monitoring and analysis, Information Assurance Vulnerability Assessment (IAVA) and Communication Tasking Order (CTO) remediation and patching, computer forensics and sanitizing, data-at-rest encryption, Incident Response system and Information Assurance Vulnerability Assessment (IAVA) compliance reporting, general service network certification testing and accreditation support, annual workforce training and reporting, BMDS/Test certification testing and accreditation support, BMDS/Test protection, detection, reaction and recovery, BMDS/Test monitoring and Analysis, classified message spills recovery, and Cross Domain Solutions.</p> <p>-Business Automation Services (FY 2013)</p> <p>In accordance with the Clinger Cohen Act and DoD directives, the Business Automation Services strategy provides for the licensing and sustainment of DoD approved enterprise information applications and business applications. Examples of DoD mandated and mission essential applications include Ballistic Missile Defense (BMD) Asset Management System, BMDS Integrated Master Schedule, Electronic Records Management System, Electronic Tasking (E-Tasker), Integrated Acquisition</p>		

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<p>Environment, data management tool, financial management tools, personnel tracking system, MDA Identify and Management Infrastructure application, Computer-Aided Facilities Management, the MDA Employee Development Center, the Program Resource Internet Database Environment (PRIDE), and the MDA Standard Procurement System (SPS), HR database DCPDS dashboard reporting upgrade, learning management system, Staff Action Control & Coordination Portal (SACCP) and e-tasker suspense and action tracking system hardware and software, server administration hosting licensing and management, integrated access and diamond II badge system, DoD Eligibility Enrollment Reporting System (DEERS), Real-time Automated Personnel Identification System (RAPIDS) stations and Common Access Card (CAC) card stock)</p> <p>-Portal and Data Services (FY 2013)</p> <p>The Portal and Data Services strategy provides operations and maintenance of the Unclassified and Classified MDA Knowledge Online and storage of both the unclassified and classified MDA data to share information and knowledge throughout the Missile Defense community. This function is also responsible for executive dashboards, records management implementation and solutions, privacy and civil liberties compliance and reporting. Portal and Data Services includes classified and unclassified MDA Portal applications and SharePoint licenses, Portal infrastructure, Electronic Record Management System, MDA privacy and civil liberties compliance and reporting, publications, periodicals, and digitization services, data storage, data mining, and data management services. The MDA Portal provides the conduit to MDA business applications and is a knowledge sharing tool used throughout the BMDS community.</p> <p>-Network and Infrastructure Services (FY 2013)</p> <p>Network and Infrastructure Services enables user-friendly operations to client computers by providing for the operation and maintenance of the classified and unclassified IT network and shared resources in the MDA Enterprise. These services are provided at MDA locations including Huntsville, Alabama; Fort Greely and Elmendorf Air Force Base, Alaska; Vandenberg Air Force Base, California; Colorado Springs, Colorado; Kirtland Air Force Base, New Mexico; and Fort Belvoir and Dahlgren, Virginia. Network and Infrastructure Services provide operations and maintenance of data centers in Huntsville, Alabama and Colorado Springs, Colorado to include classified and unclassified servers, storage, switches, routers, and communication closets. Network and Infrastructure Services includes sustainment of Enterprise network operations and performance monitoring (hardware appliances), boundary management (routers, switches), internet access management and web filtering, global address and active directory management, communications distribution maintenance, communications security (COMSEC) operations and equipment, computing and data center management, Disaster Recovery and Continuity of Operations (DR/COOP) rehearsals, network hardware end-of-life replacement, cross domain solutions, circuits delivery services, agency-wide Defense Red Switch Network (DRSN), end user device support, and BMDS deployable COMSEC support.</p> <p>-Information Technology (IT) Planning and Solutions (FY 2013)</p> <p>The Information Technology (IT) Planning and Solutions service strategy provides IT project planning, IT life-cycle asset management, enterprise architecture planning and documentation, architecture change and configuration management licensing, Office of Management and Budget (OMB) and DoD IT compliance tracking and reporting, customer requirements and project management. This function also supports the MDA Command Group IT project planning and documentation such as Executive digital dashboard, Human Resource Tasking System, and Electronic Tasker to Staff Act Control & Coordination Portal (SACCP) Integration. Also included</p>		

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are planning efforts to ensure that the policies and budget are in place to support BMDS mission and to comply with Federal Laws and DoD policies, directives, regulations, including: Clinger-Cohen Act, the Federal Information Security Management Act, and OMB IT budget reporting policies.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Title: End User Support (FY 2013)</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: See ``General Information Technology (IT) Services (FY 2011 - FY 2012)``</p> <p>FY 2012 Plans: See ``General Information Technology (IT) Services (FY 2011 - FY 2012)``</p> <p>FY 2013 Plans: -Sustain End User core service support 18 hours a day, 6 days a week for administrative and business information systems for approximately 8,000 MDA unclassified users and approximately 3,500 classified users -Monitor networks for user compliance and DoD policies, and report incidents -Maintain Printing and Copy Services (386 multi-functional device printers and 12 print servers) -Sustain email services (24 Exchange servers, 4 BlackBerry Enterprise Services servers and 2 archiving storage area networks) -Sustain file services (8 file servers and 4 storage area networks) -Maintain Directory Services (24 Active Directory and domain controller servers) -Maintain Authentication services (Public Key Infrastructure/Common Area Card) -Maintain current hardware and software licenses for IT operational systems -Maintain an Integrated Service Desk supporting 8,000 MDA users across all locations, resolving over 45,000 help desk tickets per quarter - Maintain IT life-cycle asset management of over 15,000 end user devices (desktops, laptops, monitors, printers, thin clients, and BlackBerrys) -Fund MDA Chief Information Office (CIO) civilian salaries</p>	-	-	32.958
	0	0	0
<p>Title: Unified Communications (FY 2013)</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p>	-	-	16.573
	0	0	0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
See ``Unified Communications (FY 2011 - FY 2012)`` FY 2012 Plans: See ``Unified Communications (FY 2011 - FY 2012)`` FY 2013 Plans: -Fund recurring leased circuits (wide area, local area and metropolitan area networks), maintenance agreements and licenses for MDA Enterprise network and telecommunications equipment (classified and unclassified mobile and telephony devices) -Operate, monitor, and sustain recurring classified and unclassified telecommunications equipment to comply with DoD policies and Global Information Grid architecture plan -Operate, monitor, and sustain recurring classified and unclassified wireless services -Operate, monitor, and sustain recurring operations for agency wide video teleconference rooms and equipment -Provide and implement engineering solutions for all unified communication services -Sustain unclassified desktop instant messaging and collaboration capabilities to MDA users -Fund Chief Information Office (CIO) civilian salaries				
Title: Information Assurance/Computer Network Defense (FY 2013)		-	-	11.314
		Articles: 0	0	0
Description: See Description Below FY 2011 Accomplishments: See ``Cyber Security and Information Assurance (FY 2011 - FY 2012)`` FY 2012 Plans: See ``Cyber Security and Information Assurance (FY 2011 - FY 2012)`` FY 2013 Plans: -Monitor and defend MDA mission, test, and administrative information systems 24 hours a day, 7 days a week, 365 days a year -Collect, analyze, and report vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command -Ensure MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies -Implement Information Assurance Vulnerability Assessments and Communication Tasking Orders remediation and patches -Prepare and maintain current certification and accreditation documentation for general service networks reported to DoD and Office of Management and Budget				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Manage data-at-rest encryption to ensure compliance with Global Information Grid mandated policies -Revise and updated Information Assurance certification and accreditation packages for system level Ballistic Missile Defense Systems reported to DoD and Office of Management and Budget -Fund recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems -Manage the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and DoD Manual 8570.1, achieving the DoD certification goal -Complete DoD mandated annual Information Assurance user training for the MDA workforce -Provide Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs -Fund MDA Chief Information Office (CIO) civilian salaries 				
<p>Title: Business Automation Services (FY 2013)</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: See ``Knowledge and Information Management (FY 2011 - FY 2012)``</p> <p>FY 2012 Plans: See ``Knowledge and Information Management (FY 2011 - FY 2012)``</p> <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Sustain an MDA community cloud to host and sustain business applications, storage administration, hosting and operations and maintenance of the virtual environment -Sustain portal-based Learning Management System -Host and provide business applications support for Program Resource Internet Database Environment (PRIDE), Information Management Program Activity control Tool (IMPACT), Standard Procurement System (SPS), Personnel Tracking System (PTS), Human Resource Tracking System (HRTS), Computer-aided Facilities Management CAFM -Provide server administration hosting licensing and management -Maintain Integrated Access Control System and Diamond II badge system -Maintain hardware and licenses for Defense Enrollment Eligibility Reporting System (DEERS)/Real-time Automated Personnel Identification System (RAPIDS) stations for issuing DoD identification smart cards to MDA employees -Fund MDA Chief Information Office (CIO) civilian salaries 		Articles:	-	-
		0	0	7.072
Title: Portal and Data Services (FY 2013)		-	-	9.781

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<i>Articles:</i>		0	0	0
Description: See Description Below				
FY 2011 Accomplishments: See ``Knowledge and Information Management (FY 2011 - FY 2012)``				
FY 2012 Plans: See ``Knowledge and Information Management (FY 2011 - FY 2012)``				
FY 2013 Plans: -Sustain the classified and unclassified MDA Knowledge On-line portal environment including data management, data storage, and data mining services providing access to over four hundred terabytes of Ballistic Missile Defense data available to 8,000 users -Maintain a MDA Privacy Office, conducted privacy impact surveys and completed Civil Liberties compliance reporting -Maintain compliance with Section 508of the Rehabilitation Act to ensure electronic information technology is accessible to persons with disabilities -Sustain the Ballistic Missile Defense System (BMDS) Integrated Master Schedule and the Ballistic Missile Defense (BMD) Asset Management Tool -Manage a software assessment program and conducted reviews of proposed software applications for DoD compliance -Sustain a DoD mandated Electronics Records Management system -Provide MDA web-based training programs for information assurance, business applications, workforce certification, security, and ethics -Fund MDA Chief Information Office (CIO) civilian salaries				
Title: Network and Infrastructure Services (FY 2013)		-	-	20.338
<i>Articles:</i>		0	0	0
Description: See Description Below				
FY 2011 Accomplishments: See ``General Information Technology (IT) Services (FY 2011 - FY 2012)``				
FY 2012 Plans: See ``General Information Technology (IT) Services (FY 2011 - FY 2012)``				
FY 2013 Plans:				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Sustain core communications distribution services across the MDA Enterprise consisting of two wide area networks, three metropolitan area networks, fourteen local area networks, one hundred eighty sub-networks and over five thousand network devices -Sustain two computing and data centers (Huntsville, Alabama and Colorado Springs, Colorado) across the MDA Enterprise including network operations and performance monitoring; Disaster Recovery and Continuity of Operations rehearsals; internet access management; and web filtering -Architect and develop plans to repair general IT service and business systems -Perform network tracking and analysis and reported metrics on equipment lifecycle and average time to repair -Plan, engineer and implement sustainment projects for general IT service and business systems -Procure, receive, inventory, and manage IT equipment to include network devices and desktop and laptop computers -Provide Communications Security (COMSEC) operations and maintenance services for over 4,000 COMSEC items -Fund MDA Chief Information Office (CIO) civilian salaries 				
<p>Title: Information Technology (IT) Planning and Solutions (FY 2013)</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: See ``Information Technology Sustainment Engineering (FY 2011 - FY 2012)``</p> <p>FY 2012 Plans: See ``Information Technology Sustainment Engineering (FY 2011 - FY 2012)``</p> <p>FY 2013 Plans: -Support the MDA CIO Enterprise Architecture Board, Program Management Integration Board, and Change Control Board -Update and maintain current Enterprise architecture documentation -Provide engineering support for change management, configuration management, validation testing and quality assurance -Manage MDA customer IT requirements planning, engineering and project management -Support MDA Command Group IT project planning and documentation -Maintain asset management of IT equipment in accordance with DoD policies -Provide planning, budgeting, and management oversight of IT projects -Ensure compliance with Federal Laws and DoD policies, directives and regulations, including: Clinger-Cohen Act, the Federal Information Security Management Act, and Office of Management and Budget (OMB) IT budget reporting policies -Fund MDA Chief Information Office (CIO) civilian and matrix civilian salaries</p>		Articles:	-	-
		0	0	9.708
Title: General Information Technology (IT) Services (FY 2011 - FY 2012)		60.559	57.377	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p style="text-align: right;"><i>Articles:</i></p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> -Sustained end user core service support 18 hours a day, 6 days a week for administrative and business information systems for approximately 8,000 MDA unclassified users and approximately 3,500 classified users -Transitioned 50% of MDA workforce from WindowsXP to Windows7 -Monitored networks for user compliance and DoD policies, and report incidents -Maintained Printing and Copy Services (386 multi-functional device printers and 12 print servers) -Sustained email services (24 Exchange servers, 4 BlackBerry Enterprise Services servers and 2 archiving storage area networks) -Sustained file services (8 file servers and 4 storage area networks) -Maintained Directory Services (24 Active Directory and domain controller servers) -Maintained Authentication services (Public Key Infrastructure/Common Access Card) -Maintained current hardware and software licenses for IT operational systems -Maintained an Integrated Service Desk supporting 8,000 MDA users across all locations, resolving over 180,000 help desk tickets -Sustained core communications distribution services across the MDA Enterprise consisting of 2 wide area networks, 3 metropolitan area networks, 14 local area networks, 180 sub-networks and over 5,000 network devices -Sustained two computing and data centers (Huntsville, Alabama and Colorado Springs, Colorado) across the MDA Enterprise including network operations and performance monitoring; Disaster Recovery and Continuity of Operations rehearsals; internet access management; and web filtering -Managed MDA customer IT requirements planning, engineering and project management -Provided planning, budgeting, and management oversight of all Chief Information Office (CIO) activities -Ensured compliance with Federal Laws and DoD policies, directives and regulations including: Clinger-Cohen Act, the Federal Information Security Management Act, and Office of Management and Budget (OMB) Information Technology (IT) budget reporting -Architected and developed plans to repair general IT service and business systems -Performed network tracking and analysis and reported metrics on equipment lifecycle and average time to repair -Planned, engineered and implemented sustainment projects for general IT service and business systems -Procured, received, inventoried, and managed IT equipment to include network devices and desktop and laptop computers -Provided Communications Security (COMSEC) operations and maintenance services for over 4,000 COMSEC items <p>FY 2012 Plans:</p>	0	0	0
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Sustain Enterprise Network Operations Security Center (ENOSC) 24 hours a day, 7 days a week (this effort was previously reported in Cyber Security and Information Assurance) -Sustain 8 hours a day, 5 days a week Information Technology (IT) operations of Federal Office Building II in the National Capital Region and Wynn Drive facility in Huntsville, Alabama until decommissioned -Sustain IT operational services 8 hours a day, 5 days a week for administrative and business information systems -Implement information assurance vulnerability assessment control improvements in accordance with established Plan of Action and Milestones -Monitor networks for user compliance and DoD policies, and report incidents -Fund hardware and software licenses for Information Technology (IT) operational systems (previously report in Knowledge and Information Management) -Test and implement software application upgrades -Maintain the network and help desk services -Provide planning, budgeting, and management oversight of IT projects -Provide web-based training to MDA users on new applications and upgrade -Monitor networks for user compliance with DoD policies and reported incidents -Maintain MDA IT system interface configuration control and asset management -Support in/out processing operations and relocation of MDA personnel -Maintain asset accountability of IT equipment in accordance with DoD policy -Fund MDA Chief Information Office (CIO) civilian salaries 				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Defense Efficiency - As part of the Department of Defense reform agenda, reductions reported for General IT Services in FY 2012 are \$2.639 million. FY 2013 Plans: See ``End User Support (FY 2013)`` and ``Network and Infrastructure Services (FY 2013)``				
Title: Knowledge and Information Management (FY 2011 - FY 2012) Description: See Description Below FY 2011 Accomplishments: -Sustained an MDA community cloud to host and sustain business applications, storage administration, hosting and operations and maintenance of the virtual environment -Began implementation of a portal-based Learning Management System -Integrated the Staff Action Control & Coordination Portal (SACCP) with the MDA E-tasker suspense and action tracking system -Hosted and provided business applications support for Program Resource Internet Database Environment (PRIDE), Information Management Program Activity control Tool (IMPACT), Comprehensive Cost and Requirement System (CCaRs), Standard Procurement System (SPS), Personnel Tracking System (PTS), Human Resource Tracking System (HRTS), Computer-aided Facilities Management CAFM -Provided server administration hosting licensing and management -Maintained Integrated Access Control System and Diamond II badge system -Maintained hardware and licenses for Defense Enrollment Eligibility Reporting System (DEERS)/Real-time Automated Personnel Identification System (RAPIDS) stations for issuing DoD identification smart cards to MDA employees -Sustained the classified and unclassified MDA Knowledge On-line portal environment including data management, data storage, and data mining services providing access to over four hundred terabytes of Ballistic Missile Defense data available to 8,000 users -Maintained a MDA Privacy Office, conducted privacy impact surveys and completed Civil Liberties compliance reporting -Maintained compliance with Section 508 of the Rehabilitation Act to ensure electronic information technology is accessible to persons with disabilities -Sustained the Ballistic Missile Defense System (BMDS) Integrated Master Schedule and the Ballistic Missile Defense (BMD) Asset Management Tool -Managed a software assessment program and conducted reviews of proposed software applications for DoD compliance -Sustained a DoD mandated Electronics Records Management system		11.463 0	13.433 0	- 0
		Articles:		

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Provided MDA web-based training programs for information assurance, business applications, workforce certification, security, and ethics</p> <p>FY 2012 Plans:</p> <p>-Manage MDA business applications and sustain financial and contractual support systems</p> <p>-Manage software assessment program and conduct reviews of proposed software applications for DoD compliance</p> <p>-Sustain the BMDS Integrated Master Schedule and the BMD Asset Management Tool</p> <p>-Conduct privacy impact surveys and support compliance reporting</p> <p>-Manage MDA web-based training programs for information assurance, business applications, workforce certification, security, and ethics</p> <p>-Sustain MDA Knowledge Online services</p> <p>-Fund MDA Chief Information Office (CIO) civilian salaries</p> <p>FY 2013 Plans:</p> <p>See ``Business Automation Services (FY 2013)`` and ``Portal and Data Services (FY 2013)``</p>				
<p>Title: Unified Communications (FY 2011 - FY 2012)</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <p>-Supported unified communications during the transition to new facilities in Huntsville, AL and Alexandria, VA</p> <p>-Implemented voice-over-internet protocol in MDA facilities at Fort Belvoir, VA and Huntsville, AL</p> <p>-Implemented an emergency-alert system across MDA locations to provide the capability to notify MDA employees by text, voice and email in cases of emergencies</p>		<p>16.118</p> <p>0</p>	<p>20.101</p> <p>0</p>	<p>-</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Implemented an electronic scheduling capability to reserve MDA Video Teleconference Center (VTC) conference rooms across all MDA locations -Provided over 21,000 classified and unclassified bridged video teleconference sessions across all MDA locations -Supported over 22,800 classified and over 30,000 unclassified video teleconference sessions -Funded recurring leased circuits (wide area, local area and metropolitan area networks), maintenance agreements and licenses for MDA Enterprise network and telecommunications equipment (classified and unclassified mobile and telephony devices) -Operated, monitored, and sustained recurring classified and unclassified telecommunications equipment to comply with DoD policies and Global Information Grid architecture plan -Operated and sustained recurring classified and unclassified wireless services for over 2,000 users -Operated and sustained recurring operations for agency- wide video teleconference rooms and equipment -Implemented engineering solutions for all unified communication services -Began transitioning Agency to voice over internet protocol -Began implementation of unclassified desktop instant messaging and collaboration capabilities to MDA users <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Fund recurring leased circuits (wide area, local area and metropolitan area networks), maintenance agreements and licenses for MDA Enterprise network and telecommunications equipment (classified and unclassified mobile and telephony devices) -Operate, monitor, and sustain recurring classified and unclassified telecommunications equipment to comply with DoD policies and Global Information Grid architecture plan -Operate, monitor, and sustain recurring classified and unclassified wireless services -Operate, monitor, and sustain recurring operations for agency wide video teleconference rooms and equipment -Provide and implement engineering solutions for all unified communication services -Fund MDA Chief Information Office (CIO) civilian salaries <p>Defense Efficiency - As part of the Department of Defense reform agenda, reductions reported for Unified Communications in FY 2012 are \$2.181 million.</p> <p>FY 2013 Plans: See ``Unified Communications (FY 2013)``</p>				
Title: Cyber Security and Information Assurance (FY 2011 - FY 2012)		9.102	13.779	-
		Articles: 0	0	0
Description: See Description Below				
FY 2011 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Monitored and defended MDA mission, test, and administrative information systems 24 hours a day, 7 days a week basis, 365 days a year</p> <p>-Achieved a ``commendable`` rating for the MDA Computer Emergency Response Team (CERT) Tier II Computer Network Defense Service Provider from an inspection by the Defense Information Systems Agency (DISA).</p> <p>-Collected, analyzed, and reported vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command</p> <p>-Ensured MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies</p> <p>-Implemented over 206 Information Assurance Vulnerability Assessments and Communication Tasking Orders</p> <p>-Investigated and remediated over 329 computer network defense cyber incidents</p> <p>-Prepared and maintained current certification and accreditation documentation for general service networks reported to DoD and Office of Management and Budget</p> <p>-Managed data-at-rest encryption to ensure compliance with Global Information Grid mandated policies</p> <p>-Revised and updated Information Assurance certification and accreditation packages for system level Ballistic Missile Defense Systems reported to DoD and Office of Management and Budget</p> <p>-Funded recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems</p> <p>-Managed the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and DoD Manual 8570.1, achieving the DoD certification goal</p> <p>-Completed DoD mandated annual Information Assurance user training for the MDA workforce</p> <p>-Provided Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs</p> <p>FY 2012 Plans:</p> <p>-Fund recurring hardware maintenance and software licenses for Information Assurance (IA) monitoring systems</p> <p>-Monitor and defend MDA mission, test, and administrative information systems 24 hours a day, 7 days a week, 365 days a year</p> <p>-Collect, analyze, and report vulnerability and cyber warfare attack metrics to the MDA Chief Information Officer (CIO), MDA leadership, and U.S. Cyber Command</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Revise and update Information Assurance certification packages for administrative and business information technology systems reported to DoD and Office of Management and Budget -Ensure MDA mission, test, and administrative systems are operated securely in accordance with DoD Information Assurance Certification and Accreditation policies -Manage the Information Assurance Workforce Improvement Program to certify Information Assurance professionals and report compliance in accordance with Federal Information Security Management Act (FISMA) and DoD Manual 8570.1, achieving the DoD certification goal -Complete annual Information Assurance user training for the MDA workforce -Provide Information Assurance engineering and planning guidance and vulnerability assessment for all MDA Information Technology acquisition programs <p>FY 2013 Plans: See ``Information Assurance/Computer Network Defense (FY 2013)``</p>				
<p>Title: Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012)</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p> <ul style="list-style-type: none"> -Supported the MDA Chief Information Officer (CIO) Enterprise Architecture Board, Program Management Integration Board, and Change Control Board -Updated and maintained current Enterprise architecture documentation -Provided engineering support for change management, configuration management, validation testing and quality assurance -Performed analyses of the Federal Data Center Consolidation Initiative and Federal and DoD Mandated Cloud Analysis -Supported MDA Command Group IT project planning and documentation (Executive digital dashboard, Human Resource Tasking System, and Electronic Tasker to Staff Action Control & Coordination Portal (SACCP) Integration) - Maintained IT life-cycle asset management of over 57,000 devices and associated software to comply with Federal and DoD policies (desktops, laptops, monitors, printers, thin clients, servers, routers, switches, video telecommunications, BlackBerrys, and COMSEC) <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Sustain Information Technology (IT) services across the MDA Enterprise and maintain critical spares inventory -Architect and develop plans to repair general IT service and business systems 		8.662	11.818	-
		Articles: 0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Perform analysis, track, and report metrics on equipment lifecycle and average time to repair			
-Plan, engineer and implement sustainment projects for general IT service and business systems			
-Revise and test contingency plans for IT systems across the MDA enterprise			
-Procure, receive, inventory, and manage IT equipment to include network devices, desktop and laptop computers			
-Fund MDA Chief Information Officer (CIO) civilian and matrix civilian salaries			
Defense Efficiency - As part of the Department of Defense reform agenda, reductions report for IT Sustainment Engineering for FY 2012 are \$.406 million.			
FY 2013 Plans: See ``IT Planning and Solutions (FY 2013)``			
Accomplishments/Planned Programs Subtotals	105.904	116.508	107.744

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	92.617	74.920	79.975		79.975	81.388	115.427	133.742	136.654	Continuing	Continuing
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	420.839	290.076	316.929		316.929	313.212	338.353	249.475	279.758	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,245.489	1,159.456	903.172		903.172	914.603	954.069	948.650	862.884	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	389.259	222.075	347.012		347.012	327.342	362.520	341.780	326.095	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	999.068	85.569	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,084.637
• 0603890C: <i>BMD Enabling Programs</i>	401.113	415.048	362.711		362.711	339.197	373.346	395.350	394.085	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603892C: <i>AEGIS BMD</i>	1,530.767	988.928	992.407		992.407	960.870	950.097	1,030.201	958.680	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	454.440	363.640	366.552		366.552	376.116	383.055	358.431	364.725	Continuing	Continuing
• 0603898C: <i>Ballistic Missile Defense Joint Warfighter Support</i>	55.351	41.174	55.550		55.550	53.139	53.718	59.291	60.540	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration & Operations Center (MDIOC)</i>	83.112	69.249	63.043		63.043	54.299	55.409	54.693	55.844	Continuing	Continuing
• 0604880C: <i>Land Based SM-3 (LBSM3)</i>	286.142	306.185	276.338		276.338	127.235	113.677	47.718	56.193	Continuing	Continuing
• 0604884C: <i>Airborne Infrared (ABIR)</i>	71.550	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	71.550
• 0901598C: <i>Management HQ - MDA</i>	28.472	28.908	34.855		34.855	25.473	30.838	31.482	32.798	Continuing	Continuing

D. Acquisition Strategy

In FY 2012, the MDA will award a competitive contract for MDA Information Collaboration Services to be performed at all MDA locations.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
End User Support (FY 2013) End User Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:Various MDA Locations	-	-		3.140		-		3.140	Continuing	Continuing	Continuing
End User Support (FY 2013) End User IT Licenses	C/CPAF	Northrop Grumman:Various MDA Locations	-	-		5.064	Oct 2012	-		5.064	Continuing	Continuing	Continuing
End User Support (FY 2013) End User Assistance and Advisory Services	C/CPFF	Colsa:Various MDA Locations	-	-		3.659	Oct 2012	-		3.659	Continuing	Continuing	Continuing
End User Support (FY 2013) End User Operational Support	C/CPAF	Northrop Grumman:Various MDA Locations	-	-		11.732	Oct 2012	-		11.732	Continuing	Continuing	Continuing
End User Support (FY 2013) End User IT Hardware/ Software Support	C/CPAF	Northrop Grumman:Various MDA Locations	-	-		8.589	Nov 2012	-		8.589	Continuing	Continuing	Continuing
End User Support (FY 2013) End User Civilian Travel	Allot	MDA Civilian Travel:Various MDA Locations	-	-		0.774		-		0.774	Continuing	Continuing	Continuing
Unified Communications (FY 2013) Leased Communications/Licenses	MIPR	DISA/DREN:IL	-	-		9.016		-		9.016	Continuing	Continuing	Continuing
Unified Communications (FY 2013) Unified	Allot	MDA Civilian Pay:Various MDA Locations	-	-		0.628		-		0.628	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Communications Civilian Pay/Travel/PCS													
Unified Communications (FY 2013) Unified Communications Advisory and Assistance Services	C/CPFF	Colsa:Various MDA Locations	-	-		0.629	Oct 2012	-		0.629	Continuing	Continuing	Continuing
Unified Communications (FY 2013) VTC Operations Support	C/CPFF	TBD:Various MDA Locations	-	-		5.405		-		5.405	Continuing	Continuing	Continuing
Unified Communications (FY 2013) Unified Communications Operational Support	Allot	Northrop Grumman:Various MDA Locations	-	-		0.895	Oct 2012	-		0.895	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (FY 2013) CND/IA Civilian Pay/Travel/PCS	C/FFP	MDA Civilian Pay:Various MDA Locations	-	-		1.727		-		1.727	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (FY 2013) CND/IA Operational Support	C/FFP	Northrop Grumman:Various MDA Locations	-	-		6.297	Oct 2012	-		6.297	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (FY 2013) CND/IA Licenses	C/CPAF	Northrop Grumman:Various MDA Locations	-	-		0.147	Oct 2012	-		0.147	Continuing	Continuing	Continuing
Information Assurance/Computer Network Defense (FY 2013) CND/IA Advisory and Assistance Services - 20117113608945	C/CPFF	Torch Technologies:Various MDA Locations	-	-		3.143	Oct 2012	-		3.143	Continuing	Continuing	Continuing
Business Automation Services (FY 2013) Business Automation Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay:Various MDA Locations	-	-		0.471		-		0.471	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Business Automation Services (FY 2013) Business Automation Licenses	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		1.608	Oct 2012	-		1.608	Continuing	Continuing	Continuing
Business Automation Services (FY 2013) Business Automation Advisory and Assistance Services	C/CPFF	Colsa: Various MDA Locations	-	-		0.210	Oct 2012	-		0.210	Continuing	Continuing	Continuing
Business Automation Services (FY 2013) Business Automation Operational Support	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		3.759	Oct 2012	-		3.759	Continuing	Continuing	Continuing
Business Automation Services (FY 2013) Business Automation PRIDE Support	C/CPAF	CAMBER: Various MDA Locations	-	-		1.024	Oct 2012	-		1.024	Continuing	Continuing	Continuing
Portal and Data Services (FY 2013) Portal and Data Services Advisory and Assistance Services	C/CPFF	Colsa: Various MDA Locations	-	-		0.419		-		0.419	Continuing	Continuing	Continuing
Portal and Data Services (FY 2013) Portal and Data Services Civilian Pay/Travel/PCS	Allot	MDS Civilian Pay: Various MDA Locations	-	-		0.628		-		0.628	Continuing	Continuing	Continuing
Portal and Data Services (FY 2013) Portal and Data Services Operational Support	C/FFP	PHACIL: Various MDA Locations	-	-		6.324	Nov 2012	-		6.324	Continuing	Continuing	Continuing
Portal and Data Services (FY 2013) Portal and Data Services Licenses and Maintenance	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		2.410	Oct 2012	-		2.410	Continuing	Continuing	Continuing
Portal and Data Services (FY 2013) Portal and Data Services Operational	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		-	Oct 2012	-		-	Continuing	Continuing	Continuing
Network and Infrastructure Services (FY 2013) Network	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		8.413	Feb 2013	-		8.413	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
and Infrastructure Services Operational Support													
Network and Infrastructure Services (FY 2013) Network and Infrastructure Services Licenses	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		8.732	Feb 2013	-		8.732	Continuing	Continuing	Continuing
Network and Infrastructure Services (FY 2013) Network and Infrastructure Services Advisory and Assistance Services	C/CPFF	Colsa: Various MDA Locations	-	-		0.838	Sep 2013	-		0.838	Continuing	Continuing	Continuing
Network and Infrastructure Services (FY 2013) Network and Infrastructure Service Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay: Various MDA Locations	-	-		2.355		-		2.355	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions (FY 2013) IT Planning and Solutions Civilian Pay/Travel/PCS	Allot	MDA Civilian Pay: Various MDA Locations	-	-		1.329		-		1.329	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions (FY 2013) IT Planning and Solutions Advisory and Assistance Services	C/CPFF	Colsa: Various MDA Locations	-	-		0.419	Sep 2013	-		0.419	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions (FY 2013) IT Planning and Solutions Operational Support	C/CPAF	Northrop Grumman: Various MDA Locations	-	-		4.117	Feb 2013	-		4.117	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions (FY 2013) IT Planning and Solutions OMB, OSD, and DoD Compliance Monitoring	C/CPFF	Colsa: Various MDA Locations	-	-		0.133	Sep 2013	-		0.133	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
and Reporting/Contract Deliverable													
Information Technology (IT) Planning and Solutions (FY 2013) MDA Agency Business Operations	Allot	MDA Business Operations:Various MDA Locations	-	-		0.510		-		0.510	Continuing	Continuing	Continuing
Information Technology (IT) Planning and Solutions (FY 2013) IT Planning and Solutions IT Asset Management	C/CPAF	Northrop Grumman:Various MDA Locations	-	-		3.200	Feb 2013	-		3.200	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) IT Operations	C/CPAF	Northrop Grumman:Various MDA Locations	32.031	32.025	Oct 2011	-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) IT Management Support/ Portfolio/CRMs	C/CPAF	Northrop Grumman:Various MDA Locations	-	2.101	Oct 2011	-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) General IT Advisory and Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	1.574	-		-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) Civilian Travel/PCS	Allot	MDA Civilian Travel:Civilian	0.890	0.817		-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) IT Hardware/Software Licenses and Maintenance	C/FP	Various:Various	13.278	14.563	Dec 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
General Information Technology (IT) Services (FY 2011 - FY 2012) MDA CIO General IT Services Civilian Pay	Allot	MDA Civilian Pay:Various MDA Locations	2.830	6.054		-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) General IT Advisory and Assistance Services	C/CPFF	Colsa:Various MDA Locations	-	1.817	Oct 2011	-		-		-	Continuing	Continuing	Continuing
General Information Technology (IT) Services (FY 2011 - FY 2012) Contract Management Oversight	TBD	Various:Various MDA Locations	9.956	-		-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) Unclassified MDA Knowledge Online O&M Support	C/CPAF	PHACIL:VA	5.697	6.893	Sep 2012	-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) Knowledge Mgt Advisory and Assistance Services	C/CPAF	General Dynamics IT:Various MDA Locations	0.520	-		-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) Standard Procurement System Support	MIPR	SPS JPMO:VA	0.019	0.424		-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) PRIDE Application Support	C/CPFF	CAMBER:AL	1.360	1.128	Jun 2012	-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) Classified MDA	C/CPAF	Northrop Grumman:Various MDA Locations	0.338	1.968	Feb 2012	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Knowledge Online O&M Support													
Knowledge and Information Management (FY 2011 - FY 2012) Knowledge and Information Software Licenses	C/CPAF	Northrop Grumman:Various MDA Locations	3.104	1.920	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) MDA CIO Knowledge and Information Management Civilian Pay	Allot	MDA Civilian Pay:Various MDA Locations	-	1.100		-		-		-	Continuing	Continuing	Continuing
Knowledge and Information Management (FY 2011 - FY 2012) Decision Support System	C/CPAF	IBM:MDA Huntsville	0.425	-		-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) Leased Communications - LAN/WAN	MIPR	DISA/DREN:Various Locations	4.154	4.110		-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) WAN Engineering Sustainment Support	C/CPAF	Northrop Grumman:Various MDA Locations	0.845	0.990	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) Leased Telecom/Wireless/Local/Long Distance	C/FP	Various:Various	4.906	5.971		-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) Unified Communications Advisory and Assistance Services	C/CPFF	Colsa:Various MDA Locations	-	0.552	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) VTC Operations	C/CPFF	Microtech:Various MDA Locations	5.604	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Unified Communications (FY 2011 - FY 2012) MDA CIO Unified Communications Civilian Pay	Alot	MDA Civilian Pay:Various MDA Locations	-	1.284		-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) Unified Communications Advisory and Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	0.609	-		-		-		-	Continuing	Continuing	Continuing
Unified Communications (FY 2011 - FY 2012) VTC Operations	C/CPIF	TBD:TBD	-	7.194	Sep 2012	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) MDA Information Assurance Certification	C/CPAF	Northrop Grumman:Various MDA Locations	1.669	2.771	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) Information Assurance Advisory and Assistance Services	C/CPFF	Torch:Various MDA Locations	0.388	3.343	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) DIACAP Certification/Accreditation Support	C/CPFF	Torch:Various MDA Locations	0.388	1.385	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) DEERS/RAPIDS/Active Client/Card Support	MIPR	Various:Various	0.080	0.090		-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) Identify Protection Support	C/CPAF	WHS:VA	0.170	0.179	Jan 2012	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cyber Security and Information Assurance (FY 2011 - FY 2012) COMSEC	C/CPAF	Northrop Grumman: Various MDA Locations	0.647	0.319	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) IAVA Operations and Support	C/CPAF	Northrop Grumman: Various MDA Locations	2.247	2.573	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) Information Assurance ENOSC (Moved to General IT Services for FY 2012)	C/CPAF	Northrop Grumman: Various MDA Locations	2.272	-		-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) MDA CIO Information Assurance Civilian Pay	Allot	MDA Civilian Pay: Various MDA Locations	-	3.119		-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) Information Assurance Advisory and Assistance Services	C/CPFF	General Dynamics IT: Various MDA Locations	0.609	-		-		-		-	Continuing	Continuing	Continuing
Cyber Security and Information Assurance (FY 2011 - FY 2012) DIACAP Certification and Accreditation Support	C/CPFF	General Dynamics IT: Various MDA Locations	0.632	-		-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) Implementation/Architectural Engineering Support	C/CPAF	Northrop Grumman: Various MDA Locations	1.958	2.178	Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) IT Recapitalization/Consumables	C/CPAF	Northrop Grumman:Various MDA Locations	4.317	3.736	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) Contract Deliverables/OMB, OSD, DoD Compliance Monitoring Reporting	C/CPFF	Colsa:Various MDA Locations	0.246	3.637	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) IT Sustainment Engineering Advisory and Assistance Services	C/CPFF	General Dynamics IT:Various MDA Locations	0.342	0.249		-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) MDA CIO IT Sustainment Engineering Civilian Pay	Allot	MDA Civilian Pay:Various MDA Locations	-	2.018		-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) Contract Deliverables/OMB, OSD, DoD Compliance Monitoring Reporting	C/CPFF	General Dynamics IT:Various MDA Locations	1.539	-		-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) CIO Admin Support	C/CPFF	Alatec:MDA Huntsville	0.136	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Information Technology (IT) Sustainment Engineering (FY 2011 - FY 2012) CIO HR Support	C/CPFF	Peopletec:MDA Colorado Springs	0.124	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			105.904	116.508		107.744		-		107.744			

Remarks
 The overall increase from FY 2011 to FY 2012 reflects the funding this Project requires to operate and maintain the MDA IT infrastructure to meet the demands of the Agency, to ensure it operates in a secure environment, and to ensure technology enhancements promote the maximum efficiency of operations.

 The decrease from FY 2012 to FY 2013 reflects adjustments required to meet Agency priorities.

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			105.904	116.508		107.744		-		107.744			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2011 1st-4th Qtr	1	2011	4	2011
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - 1st Qtr FY2012	1	2012	1	2012
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - 2nd-4th Qtr FY 2012	2	2012	4	2012
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2013	1	2013	4	2013
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2014	1	2014	4	2014
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2015	1	2015	4	2015
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2016	1	2016	4	2016
Sustain the BMDS Integrated Master Schedule and the Ballistic Missile Defense Asset Management Tool - FY 2017	1	2017	4	2017
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2011 1st-4th Qtr	1	2011	4	2011
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - 1st Qtr FY 2012	1	2012	1	2012
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2013	1	2013	4	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2014	1	2014	4	2014
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2015	1	2015	4	2015
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2016	1	2016	4	2016
Conduct Information Assurance Certification Evaluation of Mission, Test, and Administrative Systems - FY 2017	1	2017	4	2017
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2011 1st-4t Qtr	1	2011	4	2011
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - 1st Qtr FY 2012	1	2012	1	2012
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - 2nd-4th Qtr FY 2012	2	2012	4	2012
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2013	1	2013	4	2013
Monitor Network and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2014	1	2014	4	2014
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2015	1	2015	4	2015
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2016	1	2016	4	2016

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Monitor Networks and Systems to Defend Mission, Test, and Administrative Systems on a 24 hours per day, 7 days per week, 365 days per year basis for Information Assurance - FY 2017	1	2017	4	2017
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - 1st - 4th Qtr FY 2011	1	2011	4	2011
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - 2st Qtr FY 2012	1	2012	1	2012
Implement Information Surface Vulnerability Alert Control Improvements for General Information Technology Services - 1st Qtr FY12	1	2012	1	2012
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY 2013	1	2013	4	2013
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY 2014	1	2014	4	2014
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY 2015	1	2015	4	2015
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY 2016	1	2016	4	2016
Implement Information Assurance Vulnerability Alert Control Improvements for General Information Technology Services - FY 2017	1	2017	4	2017
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2011 1st-4th Qtr	1	2011	4	2011
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - 1st Qtr FY 2012	1	2012	1	2012
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2013	1	2013	4	2013

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Events	Start		End	
	Quarter	Year	Quarter	Year
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2014	1	2014	4	2014
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2015	1	2015	4	2015
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2016	1	2016	4	2016
Report Vulnerability and Cyber Warfare Attack Metrics to the MDA Chief Information Officer, MDA Leadership, and Cyber Command - FY 2017	1	2017	4	2017
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2011 1st-4th Qtr	1	2011	4	2011
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - 1st Qtr FY 2012	1	2012	1	2012
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - 2nd - 4th FY 2012	2	2012	4	2012
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2013	1	2013	4	2013
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2014	1	2014	4	2014
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2015	1	2015	4	2015
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2016	1	2016	4	2016
Provide Information Assurance Engineering and Planning Guidance and Vulnerability Assessment for Information Technology Acquisition Programs - FY 2017	1	2017	4	2017
Revise and Test Contingency Plans for Information Technology Systems - FY 2011 1st-4th Qtr	1	2011	4	2011
Revise and Test Contingency Plans for Information Technology Systems - FY 2012 1st Qtr	1	2012	1	2012

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Events	Start		End	
	Quarter	Year	Quarter	Year
Revise and Test Contingency Plans for Information Technology Systems - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Revise and Test Contingency Plans for Information Technology Systems - FY 2013	1	2013	4	2013
Revise and Test Contingency Plans for Information Technology Systems - FY 2014	1	2014	4	2014
Revise and Test Contingency Plans for Information Technology Systems - FY 2015	1	2015	4	2015
Revise and Test Contingency Plans for Information Technology Systems - FY 2016	1	2016	4	2016
Revise and Test Contingency Plans for Information Technology Systems - FY 2017	1	2017	4	2017
Complete Annual Information Assurance User Training for MDA Workforce - FY 2011 1st-4rd Qtr	1	2011	4	2011
Complete Annual Information Assurance User Training for MDA Workforce - FY 2012	1	2012	3	2012
Complete Annual Information Assurance User Training for MDA Workforce - FY 2013	1	2013	4	2013
Complete Annual Information Assurance User Training for MDA Workforce - FY 2014	1	2014	4	2014
Complete Annual Information Assurance User Training for MDA Workforce - FY 2015	1	2015	4	2015
Complete Annual Information Assurance User Training for MDA Workforce - FY 2016	1	2016	4	2016
Complete Annual Information Assurance User Training for MDA Workforce - FY 2017	1	2017	4	2017
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2011 1st-4th Qtr	1	2011	4	2011
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - 1st Qtr FY 2012	1	2012	1	2012
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - 2nd - 4th FY 2012	2	2012	4	2012
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2013	1	2013	4	2013
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2014	1	2014	4	2014
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2015	1	2015	4	2015

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD30: <i>BMD Information Management Systems</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2016	1	2016	4	2016
Fund Recurring Leased Circuits, Maintenance Agreements and Licenses for MDA Enterprise - FY 2017	1	2017	4	2017
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2011 1st-4th Qtr	1	2011	4	2011
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - 1st Qtr FY 2012	1	2012	1	2012
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - 2nd - 4th QTR FY 2012	2	2012	4	2012
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2013	1	2013	4	2013
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2014	1	2014	4	2014
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY 2015	1	2015	4	2015
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY2016	1	2016	4	2016
Operate and Maintain General Information Technology Services 18 hours per day, 6 days per week - FY2017	1	2017	4	2017
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2011 1st-4th Qtr	1	2011	4	2011
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - 1st Qtr FY 2012	1	2012	1	2012
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2013	1	2013	4	2013

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Events	Start		End	
	Quarter	Year	Quarter	Year
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2014	1	2014	4	2014
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2015	1	2015	4	2015
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2016	1	2016	4	2016
Operate, Monitor and Sustain Recurring Classified and Unclassified Telecommunication Requirements for Unified Communications - FY 2017	1	2017	4	2017
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2011 1st-4th Qtr	1	2011	4	2011
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - 1st Qtr FY 2012	1	2012	1	2012
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2013	1	2013	4	2013
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2014	1	2014	4	2014
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2015	1	2015	4	2015
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2016	1	2016	4	2016
Operate, Monitor and Sustain Recurring Operations for Video Teleconferencing for Unified Communications - FY 2017	1	2017	4	2017
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2011 1st-4th Qtr	1	2011	4	2011
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - 1st Qtr FY 2012	1	2012	1	2012

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Events	Start		End	
	Quarter	Year	Quarter	Year
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2013	1	2013	4	2013
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2014	1	2014	4	2014
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2015	1	2015	4	2015
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2016	1	2016	4	2016
Operate and Maintain Classified and Unclassified MDA Knowledge Online Services - FY 2017	1	2017	4	2017
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2011 1st-4rd Qtr	1	2011	4	2011
Sustain the Information Technology Infrastructure Across the MDA Enterprise - 1st Qtr FY 2012	1	2012	1	2012
Sustain the Information Technology Infrastructure Across the MDA Enterprise - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2013	1	2013	4	2013
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2014	1	2014	4	2014
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2015	1	2015	4	2015
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2016	1	2016	4	2016
Sustain the Information Technology Infrastructure Across the MDA Enterprise - FY 2017	1	2017	4	2017
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2011 1st-4th Qtr	1	2011	4	2011
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - 1st Qtr FY 2012	1	2012	1	2012

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Events	Start		End	
	Quarter	Year	Quarter	Year
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2013	1	2013	4	2013
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2014	1	2014	4	2014
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2015	1	2015	4	2015
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2016	1	2016	4	2016
Provide 18 hours per day, 6 days per week Network and Helpdesk Services for General Information Technology Services for MDA Workforce - FY 2017	1	2017	4	2017
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2011 1st-4th Qtr	1	2011	4	2011
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - 1st Qtr FY 2012	1	2012	1	2012
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2013	1	2013	4	2013
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2014	1	2014	4	2014
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2015	1	2015	4	2015
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2016	1	2016	4	2016
Manage DoD Mandated Business Applications and Sustain MDA Financial and Contractual Support Systems - FY 2017	1	2017	4	2017

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Events	Start		End	
	Quarter	Year	Quarter	Year
Procure, Implement and Asset Control for Information Technology Operational Systems - 1st - 4th Qtr FY 2011	1	2011	4	2011
Procure, Implement, and Asset Control for Information Technology Operational Systems - 1st Qtr FY 2012	1	2012	1	2012
Procure, Implement, and Asset Control for Information Technology Operational Systems - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2013	1	2013	4	2013
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2014	1	2014	4	2014
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2015	1	2015	4	2015
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2016	1	2016	4	2016
Procure, Implement, and Asset Control for Information Technology Operational Systems - FY 2017	1	2017	4	2017
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2011 1st-4th Qtr	1	2011	4	2011
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - 1st Qtr FY 2012	1	2012	1	2012
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - 2nd - 4th Qtr FY 2012	2	2012	4	2012
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2013	1	2013	4	2013
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2014	1	2014	4	2014
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2015	1	2015	4	2015

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Events	Start		End	
	Quarter	Year	Quarter	Year
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2016	1	2016	4	2016
Procure, Implement, and Asset Control of Hardware Maintenance and Software Licenses for Monitoring Systems of Information Assurance - FY 2017	1	2017	4	2017
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2011 1st-4th Qtr	1	2011	4	2011
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - 1st Qtr FY 2012	1	2012	1	2012
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2012	2	2012	4	2012
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2013	1	2013	4	2013
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2014	1	2014	4	2014
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2015	1	2015	4	2015
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2016	1	2016	4	2016
Perform Analysis, Track, and Report Metrics on Equipment Lifecycle - FY 2017	1	2017	4	2017

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD31: <i>Modeling & Simulation</i>	61.456	56.617	46.608	-	46.608	45.402	38.740	51.280	52.393	Continuing	Continuing
Quantity of RDT&E Articles	5	0	0		0	0	0	0	0		

Note

In FY 2012 the Modeling and Simulation (M&S) Hardware-in-the-Loop (HWIL) Framework, Simulations, Models, M&S Digital Framework, Simulations, Models; and the M&S Education, Validation and Accreditation (VV&A) and Test Operations are realigned from the BMD Aegis PE 0603892C, Budget Project MD09.

A. Mission Description and Budget Item Justification

As missile defense technologies continually advance and the threat changes, Modeling and Simulation develops system-level models, simulations, and environments, and then evaluates performance of the Elements, Components, and the overall Ballistic Missile Defense System (BMDS). Consequently, MDA's Directorate for Modeling and Simulation is responsible for the Modeling & Simulation (M&S) system and product planning, development, integration, operation, threat model verification and analysis, as well as the integration and deployment of the Agency's Distributed Ballistic Missile Defense System (BMDS) Real-Time Hardware-in-the-Loop truth framework Hardware/Software (HW/SW) and digital M&S simulation capabilities into a single, integrated, and synchronized program to assist the M&S development and acquisition of the BMDS.

Interdependencies: MDA's Modeling and Simulation (M&S) program is essential to ensuring missile defense capabilities are affordable and effective. Through the use of verified and validated models and accredited simulation systems, the MDA's M&S program provides the cost effective means to prove and explore the performance space of the BMDS beyond what can be physically tested under current range conditions. This program enables the concept exploration and functional analyses used to assess BMDS capabilities with the M&S systems and products [e.g., MDA element M&S as well as MDA's Hardware-in-the-Loop (HWIL) and digital frameworks as well as consistent truth and common threat engineering] providing the efficient capability to prove the missile defense capability through rigorous testing processes to include pre-test, ground test, flight test and post-test activities. Through conceptual simulation activities, M&S provides the capability to design and develop technologies to guard against future missile threats. Throughout the budget justification material, interdependencies are highlighted in order to explain fully the relationship between different parts of the proposed program and how the M&S program enables the required capabilities to meet the threat today and develop the capabilities to defeat those future threats. M&S interdependencies are key in BMDS performance evaluation strategy with models and simulations of the BMDS. These efforts require close coordination with the Operational Test Agencies (OTAs), Elements, Combatant Commands (COCOMs), Army, Air Force, and numerous MDA organizations.

The mission of the MDA's Directorate for Modeling and Simulation is 1) to execute a single, integrated, and synchronized program to manage M&S development in support of MDS's BMDS acquisition, 2) to establish, maintain, and refine system M&S data elements and parameters to validate the BMDS M&S domain, and 3) to drive MDA test activities to collect data for use in anchoring M&S to support MDA's goals.

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<p>The FY 2011 M&S Program focused on further correction of the deficiencies stated in the 2008 Director of Operational Test and Evaluation (DOT&E) BMDS Assessment Report to include:</p> <ul style="list-style-type: none"> - Executed BMDS scenarios that flight testing cannot assess because of geographic and safety constraints with models and simulations - Predicted system performance with the use of verified and validated models and simulations - Executed System Post-Flight Reconstructions (SPFRs) to provide empirical and prediction data to confirm system performance and to further refine and validate models and simulations. Executed System Pre-Mission Testing (SPMTs) to provide pre-test system prediction data. - Jointly developed accreditation criteria between MDA and Operational Test Agency (OTA) - Addressed the Verification and Validation (V&V) of threat models, radar models, interceptor and lethality models - Released a solicitation (Full and Open Competition) for an integrated, composable and open M&S Framework (Objective Simulation Framework, or OSF) to resolve integration challenges across the breadth of the BMDS M&S enterprise <p>With the Director`s Priorities for FY 2013 of: 1. Enhancing Homeland Defense, 2. Enhancing Regional Defense, 3. Testing, and 4. Developing New Capabilities, the M&S objective is to evolve the various systems and products to match, as appropriate, the real world performance of the BMDS and meet Warfighter needs. In particular, MDA`s M&S systems and products provide analysis, decision-making and planning capabilities for Real-World Operations in support of the White House, Joint Staff, Services, NATO, COCOMs (EUCOM, PACOM, CENTCOM, STRATCOM [Military Utility Assessment]), Operational Test Agency (OTA), Director of Operational Test & Evaluation (DOT&E), and Allies. Targeted M&S activities support all aspects of BMDS development including BMDS design, Element modifications (including reliability enhancements), flight test missions, ground tests, wargames, exercises, Performance Assessments (PAs), and Technical Assessments (TAs). Models and simulations are tailored to the specific need of a component in its current stage of development, ranging from low-to-medium fidelity analyses supporting concept definitions studies, to high-fidelity models used to support engineering development.</p> <p>M&S Frameworks: To execute the M&S mission requires reliance on and operation of two simulation frameworks which, when combined to meet specific M&S use case and user requirements with the appropriate fidelity, forming a single Objective Simulation Architecture (OSA) to enable BMDS performance in a simulated environment. The BMDS M&S System is evolving into a fully integrated End-to-End system for all M&S uses and venues, providing a common source for truth and event control with an Initial Operational Capability. The final integrated system will merge the Single Stimulation Framework (SSF) and Digital Simulation Architecture (DSA) into one seamless M&S system that will meet both real-time and non-real time simulation needs. This combined framework, called the Objective Simulation Framework (OSF), will host all simulated activities, events, scenarios, and Element and Threat models. MDA will use the end-to-end M&S System to conduct BMDS ground tests, Performance Assessments (PAs), Technical Assessments (TAs), component training, wargames, flight tests, threat analysis, international events, and COCOM exercises.</p> <p>Core Truth and Common Threat Engineering (formerly PLET-C): The Core Truth Model program within MDA Directorate for Modeling and Simulation provides consistent and common Phenomenology, Lethality, Environment, Communications, and Threat capabilities for Agency M&S venues. In particular, Phenomenology models address the electro-optics and infrared of the missile hard body as well as the plume produced by the missile engines. Lethality models represent the impact</p>		

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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of the BMDS missile kill vehicle (KV) (i.e. Ground-Based Interceptor, THAAD) on reentry vehicles (RV) with results including the percentage of destruction, and the direction and speed of the intercept debris fragments, amongst others. The Environment modeling capability provides the natural and man-made endo- and exo-atmospheric phenomena (e.g., rain, wind, sea state) to the various M&S simulations while Communication modeling addresses the representations of communications within and outside the BMDS. Finally, the common threat engineering produces common and consistent adversary trajectory and signature data to enable BMDS and sub-system concept and requirements, design, verification and assessment. Here, common threat data is used in various BMDS simulation events (e.g., flight, ground, performance assessment, warfighter training/exercises) to prove the performance of the BMDS. These threat representations are derived from the Adversary Capability Document (ACD) and Adversary Data Packages (ADP). The Threat Modeling Center (TMC) uses derivative ADP-based threat specifications to develop various missile models which are used to produce threat trajectory products in support of MDA events. After missile models are developed, the results are tested using Threat Modeling Center trajectory generation tools to ensure output trajectories match the derivative ADP reference trajectories. All TMC models receive rigorous quality control reviews in addition to Verification & Validation reviews. After these models are completed, the ADP is updated to include any additional threat specifications or changes.

Testing: The distinct capabilities of the MDA’s M&S systems and products are ingrained throughout the MDA Elements and provide the Warfighter and Operational Test Agency (OTA) with an evaluation capability for individual components as well as overall M&S system-of-systems. MDA works to validate and accredits system-level models and simulations by anchoring them to real-world events to support accurate and comprehensive assessments of the BMDS. Future M&S development activities will focus on the model and simulation frameworks, BMDS Element models, as well as threat, phenomenology, lethality, communications, and environmental modeling. The success of the missile defense program is enabled by quality M&S systems and products that help prove BMDS technologies work. In particular, MDA M&S System and Product testing is based on an integrated, comprehensive, and phased test program as outlined in MDA’s Integrated Master Test Plan (IMTP). Within the construct of the IMTP, MDA Element unique M&S systems, subsystems, and components are tested as part of their respective development and integration, a necessary precursor to conducting BMD System-level M&S testing (e.g., integrated ground test, performance/technical assessment venues). Resources for the planning, design, execution and management of this testing are provided in accordance with the BMDS Test Policy, as listed in the most current version of the IMTP.

The MDA M&S program also supports various Allied/Coalition Partner cooperative activities, and various real-world pre- and post-flight launch analyses, and the enhanced Israeli Interceptor program.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Title: Modeling and Simulation (M&S) Capability Development</p> <p style="text-align: right;">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: -Supported the system engineering capability trades for the Phased Adaptive Approach (PAA) Phase II and the Robust BMDS Capability Delivery (formerly Capability Delivery 06)</p>	8.509 0	7.690 0	8.612 0

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Released solicitation via FedBizOpps for the Objective Simulation Framework (OSF), with Contract Award expected in 4Q/FY 2011. This contract will be a five-year Indefinite Delivery/Indefinite Quantity (IDIQ) with a life-cycle value of \$500 Million</p> <p>-Verified and adjudicated stakeholder Modeling and Simulation (M&S) need statements, capability statements, and capability packages for Epoch testing and assessment in Performance Assessment (PA) venues, Ground Test Campaigns, and Assured Response and Terminal Fury Warfighter exercises</p> <p>-Implemented updates to over 170 model capability descriptions in the Missile Defense Agency`s M&S catalog with a record of current capabilities and limitations, history, and development plans.</p> <p>-Implemented a visualization tool package with specific focus on analysis of comparisons between real world data (Flights and Ground Tests) and digital predictions of same.</p> <p>-Performed traceability study between the Modeling and Simulation requirements database and Modeling and Simulation product development capabilities</p> <p>-Developed and published M&S Program Office Guidance Memorandum #1 detailing the M&S Development Process</p> <p>-Developed draft M&S System Engineering Plan</p> <p>-Gathered system-level M&S requirements from multiple stakeholders and began development of BMDS M&S Conceptual Model to be used in future development of the High Run Count Simulation for system sensitivity analysis.</p> <p>-Began development of BMDS M&S Capstone Document and related mission area appendices</p> <p>-Supported revisions to the MDA Integrated Master Test Plan (IMTP)</p> <p>-Executed Technical Assistance (TAA) and International Traffic in Arms Regulation (ITAR) requests to deploy M&S software to allied nations or international organizations for joint missile defense conferences, Warfighter symposia, international wargaming, and diplomatic outreach</p> <p>-Supported Technical Interchange Meetings and the Bilateral Activities via Secure Interactive Link (BASIL) Project Arrangement with the United Kingdom (UK)</p> <p>-Provided System Level Verification, Validation and Accreditation (VV&A) assessment of MDA Models and Simulations for the following events: Technical Assessment 10, Technical Assessment 04, Ground Test, Integrated 04b (GTI-04b), Ground Test, Distributed 04b (GTD-04b), Ground Test, Integrated 04d (GTI-04d) , Ground Test, Focused 04e (GTX-04e) and Assured Response 04d</p> <p>FY 2012 Plans:</p> <p>-Develop and publish the Modeling and Simulations (M&S) Capability Planning Specification (CPS), System Performance Specification (SPS), and System Interface Control Documents (ICD) for the Digital Simulation Architecture (DSA) Framework build 4.0; Phenomenology, Lethality, Environments, Threat, and Communications; and Single Stimulation Framework (SSF) build 2.0</p> <p>-Verify and adjudicate stakeholder Modeling and Simulation need statements, capability statements, and capability packages for Epoch testing and assessment in Performance Assessments (PAs), Ground Test Campaigns, and Assured Response, and Terminal Fury exercises</p>				

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Provide updates and expand the over 170 model capability descriptions in the Missile Defense Agency's Modeling and Simulation catalog -Execute traceability between the Modeling and Simulation requirements database and Modeling and Simulation product development -Leverage MDA's system engineering processes to produce mature capability documents and specifications in support of Modeling and Simulation product development to enable Missile Defense Agency ground tests, training events, BMDS exercises, BMDS wargames, BMDS Performance Assessments (PAs), and Missile Defense Agency element integration -Develop and publish Capability Planning Specification (CPS) for element integration, concept analysis, and wargames use cases -Update and publish Capability Planning Specification (CPS) for Performance Assessment (PA), Ground Test, and exercise/training use cases -Develop and publish System Requirements Document (SRD) describing the functional requirements for the capabilities described in the Capability Planning Specification (CPS) documents -Develop and publish Modeling & Simulation (M&S) System Performance Specification (SPS) describing the performance/sufficiency requirements based on the information in the System Requirements Document (SRD) and Capability Planning Specifications -Support the update and publishing of the Integrated Master Test Plan (IMTP) -Support requests to export M&S software to nations or international organizations -Support Technical Interchange Meetings (TIMs) and the Bilateral Activities via Secure Interactive Link (BASIL) Project Arrangement with the United Kingdom (UK) -Support the system engineering capability trades for the Phased Adaptive Approach (PAA) Phase II <p>FY 2013 Plans: Development:</p> <ul style="list-style-type: none"> -Continue implementation of the final Transition Plan for retirement of the Digital Simulation Architecture (DSA) and Single Stimulation Framework (SSF) frameworks, and assess readiness for a phased Objective Simulation Framework (OSF) introduction into M&S venues -Deploy Build 1 of the Objective Simulation Framework (OSF) to support all M&S Use Cases -Provide integrated Verification, Validation & Accreditation (VV&A) of MDA M&S at the system level for specific events, to include Technical Assessment, Performance Assessment, Ground Tests that support BMDS fielding decisions, and tier one Combatant Command (COCOM) exercises in accordance with events planned per the current approved Integrated Master Test Plan (IMTP) 				
Title: M&S Digital Framework, Simulation, Models		34.683	14.360	16.083
Articles:		5	0	0

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p>Description: See Description Below</p> <p>FY 2011 Accomplishments: A portion of this program content is reported under project MD07 PE 0603881C (\$12.305 million) and MD09 PE 0603892C (\$4.365 million).</p> <p>-Development:</p> <p>-Developed and delivered major releases of M&S digital products in support of MDA`s Phased Adaptive Approach (PAA) Phase I Performance Assessment associated events:</p> <p>-Released Digital Simulation Architecture (DSA) framework v3.0 for use in Technical Assessment 04 (TA04), and future System Post-Flight Reconstructions (SPFRs)</p> <p>-System engineered the next Digital Simulation Architecture (DSA) framework v4.0 release for use in Performance Assessment 04 (PA04)</p> <p>-Released Missile Defense Space warning Tool (MDST) for use in Technical Assessment 04 (TA04) and Warfighter exercises</p> <p>-Provided software support for PATRIOT System Effectiveness Model (PSEM) for use in Technical Assessment 04 (TA04)</p> <p>-Sustainment:</p> <p>-Sustained the Ballistic Missile Defense (BMD) International Simulation (ISIM) and released v7.0 in support of Combatant Command (COCOM) and International Wargames, conceptual planning, BMD visualizations, BMD training/orientation, and M&S demonstrations</p> <p>-Maintained the BMDS Discrete Event Simulation (DE SIM) supporting real-time venues including Warfighter exercises, Warfighter Training, Command & Control, Battle Management, and Communications (C2BMC) software Spiral Testing for MDA`s release of C2BMC software v8.x development.</p> <p>-Provided software operations/maintenance support to the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises, training venues and COCOM planning tools</p> <p>-Event Integration/Support Operations:</p> <p>-Completed phase 1 construction of a Digital Event Center to support M&S Events and data evaluation.</p> <p>-Planned, prepared and executed BMDS Model & Simulation Events; a System Level High Fidelity digital Event Technical Assessment 04 (TA04), System Level Post Flight Reconstructions events for Flight Test, Terminal High Altitude Area Defense</p>			
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>14 (FTT-14) and planning and preparation for Flight Test, Standard Missile 3 - 15 (FTM-15), and a proof of concept System Pre-Mission Event Flight Test, Standard Missile 3 - 15 (FTM-15)</p> <p>-Procured, installed and maintained Performance Assessment (PA) Simulation ensemble for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>-Conducted Incremental System Requirements Reviews (ISRR) for the digital simulation systems, e.g. Digital Simulation Architecture - Performance (DSA-P), in support of Performance Assessment (PA04)</p> <p>-Integrated, tested, functionally qualified, and delivered end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool, and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessments (PAs):</p> <p>-Digital Simulation Architecture - Performance (DSA-P) v1.5 in support of Technical Assessment 04 (TA 04) BMDS Phased Adaptive Approach (PAA) Phase 1 Assessment, DSA-P v1.6 in support of Flight Test, Terminal High Altitude Area Defense 14 (FTT-14) System Post Flight Reconstruction, and Digital Simulation Architecture - Performance (DSA-P) v1.4 in support of Flight Test, Standard Missile 3 - 15 (FTM-15)</p> <p>-Initiated integration, testing end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool, and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessments (PAs):</p> <p>-DSA-P in support of Performance Assessment 04 (PA 04) BMDS PAA Phase 1 Assessment</p> <p>-Developed and deployed additional Performance Assessment (PA) Simulation ensembles in support of M&S development, Integration, and events in the Digital Test and Integration Center (DTIC) and Simulation Execution Center (SEC) in Colorado Springs, CO</p> <p>-Developed and deployed additional Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>-Provided early warning M&S support for a Joint Integrated Air and Missile Defense Organization sponsored Joint Distributed Engineering Plant Events 10 and 11</p> <p>-Provided early warning M&S support for Warfighter events Assured Response 04x and Global Defender Exercise 04</p> <p>FY 2012 Plans:</p> <p>-Develop and deliver major releases of Modeling & Simulation (M&S) digital products:</p> <p>-Digital Simulation Architecture (DSA) framework for use in Performance Assessments (PAs) Operational Test, real-time venues including Warfighter exercises, Warfighter Training, Command and Control, Battle Management, and Communications (C2BMC) software Spiral Testing for MDA's release of C2BMC v8.x development, and Ground Test campaign</p> <p>-Missile Defense Space warning Tool (models validated space-borne assets of the BMDS) for use in Performance Assessments (PAs) and Warfighter exercises</p> <p>-BMD International Simulation for use in International virtual BMD demonstrations, BMD education, and Warfighter wargames</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Integrate, test, functionally qualify, and deliver end-to-end BMDS simulations supporting various uses: -Performance Assessment (PA) Simulation (utilizing Digital Simulation Architecture (DSA), Missile Defense Space Tool (MDST), and Element-provided high-resolution models) to support full-envelope BMDS Performance Assessments (PAs) -Real-time Digital Simulation (utilizing Digital Simulation Architecture (DSA), Missile Defense Space Tool (MDST), and Element-provided medium-resolution models) to support Warfighter exercises, Warfighter Training, Element spiral development, and Ground Test campaign -Operate and maintain software of the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises -Provide software support for Patriot System Effectiveness Model (PSEM) for use in Performance Assessments (PAs) -Control and maintain Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>FY 2013 Plans: -Development:</p> <p>-Begin migration of Digital Simulation Architecture (DSA) into Objective Simulation Framework (OSF) -Continue requirements management for product development activities (e.g., Element Model integration into OSF's standards-based open architecture) -Sustainment:</p> <p>-Sustain the BMD International Simulation (ISIM) and release v9.0 in support of Combatant Command (COCOM) and International Wargames, conceptual planning, BMD visualizations, BMD training/orientation, and M&S demonstrations -Sustain and delivered major releases of M&S digital products in support of MDA's Phased Adaptive Approach -Approach Phase I/II Performance Assessment associated events:</p> <p>-Release DSA framework v4.1 for use in System Post-Flight Reconstruction (SPFR) and special studies -Release Missile Defense Space warning Tool (MDST) for use in Warfighter exercises and in anticipation of Performance Assessment 06 (PA06) -Provide software support for Patriot System Effectiveness Model (PSEM) for use in Performance Assessment 06 (PA06) -Maintain the BMDS Discrete Event Simulation (DE SIM) supporting real-time venues including Warfighter exercises, Warfighter Training, Command and Control, Battle Management, and Communications (C2BMC) software Spiral Testing for MDA's release of C2BMC v8.x development. -Provide software operations/maintenance support to the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises, training venues and COCOM planning tools -Event Integration/Support Operations:</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011	FY 2012	FY 2013
<p>-Integrate, test, functionally qualify, and deliver end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool, and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessment (PAs):</p> <p>-Digital Simulation Architecture-Performance (DSA-P) in support of Performance Assessment 04 (PA 04) BMDS PAA Phase 1 Assessment</p> <p>-DSA-P in support of Flight Test, Ground-based Midcourse 06B (FTG-06B) System Post Flight Reconstruction (SPFR)</p> <p>-DSA-P in support of Flight Test, Operational 1 (FTO-01) System Post Flight Reconstruction (SPFR)</p> <p>-Initiate and continue integration, testing end to end BMDS simulations supporting various events (utilizing Digital Simulation Architecture, Missile Defense Space Tool (MDST), and Element-provided medium/high-resolution models) to support full-envelope BMDS Performance Assessments (PAs):</p> <p>-DSA-P in support of Flight Test, Standard Missile 3-20 Event 2 (FTM-20E2) System Post Flight Reconstruction (SPFR)</p> <p>-Control and maintain Performance Assessment (PA) Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>-Control and maintain Performance Assessment (PA) Simulation ensembles in support of M&S development, Integration, and events in the Digital Test and Integration Center (DTIC) and Simulation Execution Center (SEC) in Colorado Springs, CO</p> <p>-Plan , prepare and execute BMDS Model & Simulation Events to include a System Level High fidelity digital event , Two System Post Flight Reconstruction events to support Model Validation of the Hardware-in-the-Loop (HWIL) and digital venues and a System Pre-Mission Event to support a flight test.</p> <p>-Provide early warning support for a Joint Integrated Air and Missile Defense Organization sponsored Joint Distributed Engineering Plant Event and Warfighter event.</p>						
Title: M&S HWIL Framework, Simulations, Models				-	9.520	10.663
Articles:				0	0	0
Description: See Description Below						
FY 2011 Accomplishments: The program content in this project is reported under project MD09 PE 0603892C (\$69.937 million).						
FY 2012 Plans: A portion of the FY 2012 program content is reported under project MD09 PE 0603892C.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Develop and integrate the Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) at COCOM, training, and exercise Host Nation locations -Integrate the BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) with the ARROW Hardware-in-the-Loop (HWIL) facility -Continue integration of the Single Stimulation Framework (SSF) with additional Allied/Coalition elements -Complete Cobra Dane closure interface development -Begin integration of Single Stimulation Framework (SSF) with Upgraded Early Warning Radar (UEWR) Clear Air Force Station (AFS) -Provide for Single Stimulation Framework (SSF) sustainment, maintenance and product support -Deploy and integrate BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) to support Ground Base Mid-Course and BMDS Sensors directorates stand-alone training and the Distributed Multi-Echelon Training System (DMETS) capability -Begin deployment and integration of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) Objective Hardware for MDA Elements and a Releasable configuration for Allied and Coalition partners -Begin installation of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) software capability and necessary hardware/ maintenance to support a 2nd parallel test string (Ground Test assets only) -Demonstrate initial Open Architecture (OA) redesign capabilities -Deploy and install Single Stimulation Framework (SSF) node in fielded AN/TPY-02 shelter -Combatant Command (COCOM) Exercise (Global Lightning 13) <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Development: -Migrate Hardware-in-the-Loop (HWIL) functionality into the Objective Simulation Framework (OSF) -Continue requirements management for product development activities (e.g., OSF) -Sustainment: -Provide sustainment, maintenance and product support of BMDS Hardware-in-the-Loop (HWIL) stimulation framework--Single Stimulation Framework (SSF) for Elements integration, BMDS ground, flight tests and training and support MDA CONUS and host nation exercises -Provide sustainment, maintenance and product support of BDMS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) to support Ground Base Mid-Course (GM) and BMDS Sensors (SN) directorates stand-alone training and the Distributed Multi-Echelon Training System (DMETS) capability 				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Sustain Single Stimulation Framework (SSF) framework capabilities for GM and SN element framework for Pre-Mission Test (PMT) test support, Countdown training and post flight reconstruction (PFR) -Sustain Single Stimulation Framework (SSF) support to BMDS System Pre-Mission Test (PMT) and Post Flight Reconstruction (PFR) activities -Concept initial Single Stimulation Framework/Objective Simulation Framework (SSF/OSF) Open Architecture redesign capabilities -Event Integration/Support Operations: -Continue incremental deployment and integration of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) Objective Hardware for MDA Elements and a Releasable configuration for Allies to modernize SSF Interface Unit (SIU) fleet and minimize obsolescence -Begin integration of Optimistic Sensor Model (OSM) integration into Single Stimulation Framework (SSF) -Integrate the BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) with additional MDA and non-MDA Elements, as they are integrated into the BMDS architecture -Initiate execution of the Event Execution Control System (EECS) capability development for the BMDS Concurrent Test, Training and Operations (CTTO) implementation -Provide for Single Stimulation Framework (SSF) - Begin development of Real Time, scaled Real Time, non Real Time operational model. -Implement improved Instantaneous Object Processing capabilities in BMDS Ground test -Remove all support for the Missile Defense System Exerciser (MDSE) framework and integrate all Missile Defense System Exerciser (MDSE) mission requirements into Single Stimulation Framework (SSF) contracts and plan for future Objective Simulation Framework (OSF) integration -Define transition plan from Single Stimulation Framework (SSF) contracts to Objective Simulation Framework (OSF) contracts for BMDS ground test and Warfighter use cases -Complete installation of BMDS Hardware-in-the-Loop (HWIL) Single Stimulation Framework (SSF) software capability and necessary hardware maintenance (MDA/DTR funded) to support a 2nd parallel test string capability. -Begin execution of Cobra Dane air gap closure interface development -Plan the integration of Single Stimulation Framework (SSF) with Upgraded Early Warning Radar (UEWR) Clear Air Force Station (AFS) 				
Title: M&S VV&A and Test Operations		-	15.002	-
Description: See Description Below		Articles: 0	0	0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p><i>FY 2011 Accomplishments:</i> The program content in this project is reported under project MD09 PE 0603892C (\$38.119 million).</p> <p><i>FY 2012 Plans:</i> -Provide integrated Verification, Validation and Accreditation (VV&A) of MDA Modeling & Simulation (M&S) at the system level for specific events, to include Technical Assessments (TAs), Performance Assessment (PA), Ground Tests that support Ballistic Missile Defense System (BMDS) fielding decisions, and tier one Combatant Command (COCOM) exercises -Develop integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for Focused Ground Tests, Integrated Ground Tests, Performance Assessments (PAs), and Assured Response exercise -Work closely with Elements, Test Community, System Engineering, and Operational Test Agencies (OTAs) to ensure M&S for each event meet intended uses and objectives, and have proper Verification, Validation and Accreditation (VV&A) documentation and evidence, to include benchmarking/anchoring pedigree -Conduct system-level Verification and Validation (V&V) of threat trajectory and signature; ensure end-to-end environmental implementation is consistent and correct communications and architecture behave properly and interoperability is adequately addressed -Develop and implement Modeling and Simulation (M&S) standards consistent with industry best practices -Develop, implement and configure control of web-based problem reporting system to capture M&S anomalies and incorporate corrections into requirements process in order to guarantee and measure M&S improvement -Lead BMDS Verification, Validation and Accreditation (VV&A) working group to improve Verification, Validation and Accreditation (VV&A) operations and ultimately improve BMDS performance -Develop and implement metrics for system-level M&S to increase efficiencies and effectiveness -Develop model and simulation target requirements to support Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) test conditions</p> <p><i>FY 2013 Plans:</i> FY 2013 Plans have moved to Budget Project MT23 PE 0603890C in accomplishment `M&S VV&A and Test Operations`</p>				
<p><i>Title:</i> M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology, Lethality, Environment, <i>Articles:</i></p> <p><i>Description:</i> See Description Below</p> <p><i>FY 2011 Accomplishments:</i> -Development:</p>		18.264 0	10.045 0	11.250 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Developed capabilities-based and intelligence-credible missile models based on the MDA Threat Systems Engineer specifications -Developed threat trajectories and integrated threat packages to support Modeling & Simulation (M&S) frameworks and execute MDA Integrated Master Test Plan (IMTP) events to include Performance Assessments (PAs), Ground Tests, Operational Tests, Flight Tests and COCOM Exercises -Supported National Air and Space Intelligence Center (NASIC) missile model development initiative to prove concept that intelligence community produced missile models can be integrated in MDA M&S threat production capabilities Threat Modeling Simulation System (TMSS) to support Integrated Master Test Plan (IMTP) events -Initiated several Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) Phase I Efforts to address Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) identified deficiencies related to Solid Rocket Motor Thrust Termination Modeling, Advanced Reentry Vehicle and Wake Models, High Speed Rendering of Complex Scenes, and Algorithms for Generating Hardbody Thermal Histories -Initiated several SBIR Phase II Efforts to address Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) identified deficiencies related to Integrated Ultraviolet/Visible/Infrared (UV/VIS/IR) background phenomenology models for radiation transport system trades (Clouds and Terrain), Propulsion Kinetics for Alternate Wavelength Signatures and Enhancements to Continuum Plume Flowfield Models for Transitional Flow Simulations -Sustainment: -Provided M&S software development, sustainment and technical support for phenomenology and lethality model, development (e.g., Optical Signature Code (OSC), Optical Signatures In-Line Generator (OPTISIG), Kinetic Impact Debris Distribution (KIDD), Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), Post Engagement Ground Effects Model (PEGEM), Rocket Plume Flowfield Mode (RPFM), Plume Simulation (PLUS), Standard Plume Ultraviolet Radiation Code (SPURC), and Fast Line-of-Sight Imagery for Target and Exhaust Plume Signatures (FLITES)) -Supported validation for Optical Signatures Code (OSC) and the plume modeling software tool suite -Provided M&S software maintenance and sustainment for the Threat Modeling Simulation System (TMSS) threat production architecture (e.g. integration of new/updated missile models and threat system capabilities) to support Integrated Master Test Plan (IMTP) threat production -Provided M&S software maintenance and sustainment for the TGx trajectory generator analyst/planner tool (e.g. integration of new/updated missile models and threat system capabilities) to support Integrated Master Test Plan (IMTP) events -Conducted requirements management for product development activities (e.g., OSC, OPTISIG, KIDD, PEELS, PEGEM) -Continued to support accreditation for PEELS as engagement lethality modeling tool for Patriot PAC-3, THAAD, and GM -Completed Core Lethality Models (KIDD, PEELS) enhancements to capabilities to model post intercept debris and engagement lethality to ensure BMDS performance may be accurately modeled to Operational Test Agency (OTA) requirements 			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<ul style="list-style-type: none"> -Continued Systems Engineering efforts to support integration of all applicable Core Truth Model functions into digital and Hardware-in-the-Loop (HWIL) frameworks -Developed and integrated MDA Threat Systems Engineer specified capabilities-based and intelligence-credible threat models into M&S threat tools such as Threat Modeling Simulation System (TMSS), and TGx -Planned and produced threat trajectory products using M&S threat tool, Threat Modeling Simulation System (TMSS), for Integrated Threat Products (ITPs) -Planned, integrated, produced, and delivered ITPs (threat trajectories and signatures) for the execution of Ground Tests and Performance Assessments/Technical Assessments (PA/TAs) -Planned, integrated, produced, and delivered Integrated Threat Products (ITPs) for the execution of wargames, exercises, Distributed Multi-Echelon Training System (DMETS), and MDA engineering studies -Integrated, produced, and delivered Integrated Threat Products (ITPs) for Flight Tests -Conduct requirements management for product development activities (e.g., OSC, OPTISIG, KIDD, PEELS, PEGEM) -Event Integration/Support Operations: -Planned and produced re-entry vehicle (RV) and kill vehicle (KV) model products for use in M&S lethality tools, Kinetic Impact Debris Distribution (KIDD) and Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), for Flight Test, Ground Test, Performance Assessments/Technical Assessments (PA/TAs), wargames, and exercises -Product Level Verification, Validation and Accreditation (VV&A): -Conducted requirements management for product VV&A needs (e.g., OSC, OPTISIG, KIDD, PEELS, PEGEM) -Conducted IV&V on Core Lethality Models (PEELS, KIDD) product modifications -Developed missile model and integrated threat package Verification & Validation (V&V) reports to support IMTP events <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Plan and produce threat trajectory products using M&S threat tool, Threat Modeling Simulation System (TMSS), for Integrated Threat Plans (ITPs) -Plan, integrate, produce, and deliver Integrated Threat Products (ITPs) (threat trajectories and signatures) for the execution of Ground Tests and Performance Assessments/Technical Assessments (PA/TAs) -Plan, integrate, produce, and deliver Integrated Threat Products (ITPs) for the execution of wargames, exercises, Distributed Multi-Echelon Training System (DMETS), and MDA engineering studies -Integrate, produce, and deliver Integrated Threat Products (ITPs) for Flight Tests -Complete integration of Environment modeling capabilities to provide common and consistent environmental data to digital system-level M&S events 			
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p>-Complete integration of remaining Phenomenology Lethality Environment Threat - Communication (PLET-C) functions (e.g., phenomenology, lethality, and threat) to provide common and consistent data to digital system-level M&S events</p> <p>-Complete Systems Engineering efforts to support integration of all PLET-C functions into Hardware-in-the-Loop (HWIL) frameworks</p> <p>-Begin integration efforts to provide Phenomenology Lethality Environment Threat - Communication (PLET-C) functionality to Hardware-in-the-Loop (HWIL) networks</p> <p>-Develop model and simulation target requirements to support Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) test conditions</p> <p>FY 2013 Plans:</p> <p>-Development:</p> <p>-Conduct requirements management for product development activities (e.g., Objective Simulation Framework (OSF))</p> <p>-Develop capabilities-based and intelligence-credible missile models based on the MDA Threat Systems Engineer specifications</p> <p>-Initiate several Small Business Innovative Research (SBIR) Phase II Efforts to address Critical Engagement Conditions (CEC) and Empirical Measurement Events (EMEs) identified deficiencies related to Characterization and Incorporation of Vernier Engines within the Plume Modeling Process, Advanced Particle Treatment in Modeling Rocket Exhaust Plumes and Star Background Modeling</p> <p>-Initiate New phase I Small Business Innovative Research (SBIR) topics to address Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs).</p> <p>-Sustainment:</p> <p>-Conduct requirements management for product development activities (e.g., Optical Signatures Code (OSC), Optical Signatures In-Line Generator (OPTISIG), Kinetic Impact Debris Distribution (KIDD), Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), Post Engagement Ground Effects Model (PEGEM))</p> <p>-Provided M&S software development, sustainment and technical support for phenomenology and lethality model, development (e.g., Optical Signature Code (OSC), Optical Signatures In-Line Generator (OPTISIG), Kinetic Impact Debris Distribution (KIDD), Parametric Endo/Exo-atmospheric Lethality Simulation (PEELS), Post Engagement Ground Effects Model (PEGEM), Rocket Plume Flowfield Model (RPFM), Plume Simulation (PLUS), Standard Plume Ultraviolet Radiation Code (SPURC), and Fast Line-of Sight Imagery for Target and Exhaust Plume Signatures (FLITES))</p> <p>-Assist in the integration and support of endgame lethality utilizing PEELS tool into the modeling frameworks</p> <p>-Enhance Core Lethality Models (KIDD, PEELS) capabilities to model post intercept debris and engagement lethality to ensure BMDS performance may be accurately modeled to Operational Test Agency (OTA) requirements.</p>			
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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Provide M&S software maintenance and sustainment for the Threat Modeling Simulation System (TMSS) threat production architecture (e.g. integration of new/updated missile models and threat system capabilities) to support Integrated Master Test Plan (IMTP) threat production -Provide M&S software maintenance and sustainment for the TGx trajectory generator analyst/planner tool (e.g. integration of new/updated missile models and threat system capabilities) to support IMTP events -Initiate Systems Engineering efforts to support integration of all applicable Core Truth Model functions into Objective Simulation Framework (OSF) framework			
Accomplishments/Planned Programs Subtotals	61.456	56.617	46.608

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	420.839	290.076	316.929		316.929	313.212	338.353	249.475	279.758	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,245.489	1,159.456	903.172		903.172	914.603	954.069	948.650	862.884	Continuing	Continuing
• 0603888C: <i>Ballistic Missile Defense Test & Targets</i>	999.068	85.569	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,084.637
• 0603892C: <i>AEGIS BMD</i>	1,530.767	988.928	992.407		992.407	960.870	950.097	1,030.201	958.680	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration & Operations Center (MDIOC)</i>	83.112	69.249	63.043		63.043	54.299	55.409	54.693	55.844	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	0.000	487.699	454.400		454.400	420.357	446.542	373.395	421.632	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	0.000	454.357	435.747		435.747	475.175	505.591	406.931	485.950	Continuing	Continuing

D. Acquisition Strategy

The Modeling & Simulation (M&S) acquisition strategy utilizes full and open competition to develop, acquire and deliver the integrated architectures/frameworks while the Elements, using the same open competition methods, develop and deliver models of their systems. The Digital and Hardware-in-the-Loop (HWIL) product centers integrate the suite of M&S into a composite simulation capability, all based on an open architecture. M&S achieves this end-state via close collaboration between its

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603890C: <i>BMD Enabling Programs</i>	MD31: <i>Modeling & Simulation</i>

integrating contractor teams (Digital and HWIL) and those of the Element prime contractors, with additional technical standards and engineering oversight provided by Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UARCs). In addition, in FY 2012 the Objective Simulation Framework (OSF) contract will be awarded. This full-and-open competition will unify M&S framework development efforts to allow seamless end-to-end representation of the BMDS, across HWIL and Digital domains, to support all Use Cases at substantial savings to the Agency.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Modeling and Simulation (M&S) Capability Development M&S Integrated Master Plan	C/FFP	ManTech:CO	2.155	1.945	Nov 2011	2.178	Oct 2012	-		2.178	Continuing	Continuing	Continuing
Modeling and Simulation (M&S) Capability Development M&S Configuration & Risk Management	C/FFP	ManTech:CO	4.280	1.951	Nov 2011	2.185	Oct 2012	-		2.185	Continuing	Continuing	Continuing
Modeling and Simulation (M&S) Capability Development M&S Product Capability Documents	C/FFP	Boeing:AL	11.640	3.794	Nov 2011	4.249	Oct 2012	-		4.249	Continuing	Continuing	Continuing
M&S Digital Framework, Simulation, Models Integrated M&S Capability for Performance Assessment	C/CPAF	Northrop Grumman:CO	33.067	10.429	Nov 2011	11.680	Oct 2012	-		11.680	Continuing	Continuing	Continuing
M&S Digital Framework, Simulation, Models Integrated M&S Capability for International Programs	C/CPAF	Northrop Grumman:CO	33.998	3.931	Dec 2011	4.403	Oct 2012	-		4.403	Continuing	Continuing	Continuing
M&S HWIL Framework, Simulations, Models Single Stimulation Framework & Objective Simulation Framework Product Development & Deployment	C/CPAF	Boeing:AL	44.981	9.520	Nov 2011	10.663	Oct 2012	-		10.663	Continuing	Continuing	Continuing
M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology, Lethality, Environment, Trajectory Generator eXternal)	C/CPAF	Northrop Grumman:CO	4.719	2.601	Nov 2011	2.913	Oct 2012	-		2.913	Continuing	Continuing	Continuing
M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology,	C/CPAF	Northrop Grumman:CO	2.149	0.300	Nov 2011	0.336	Oct 2012	-		0.336	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract	
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost		
Lethality, Environment, Communication Network Model Development														
M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology, Lethality, Environment, PLET-C Integration, Assembly, Test & Checkout)	C/CPAF	Northrop Grumman:CO	2.955	0.475	Nov 2011	0.532	Oct 2012	-		0.532	Continuing	Continuing	Continuing	
M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology, Lethality, Environment, Threat Modeling Simulation System)	C/CPAF	Northrop Grumman:CO	10.274	2.627	Nov 2011	2.942	Oct 2012	-		2.942	Continuing	Continuing	Continuing	
M&S Core Truth Modeling & Common Threat Engineering (formerly Phenomenology, Lethality, Environment, Lethality/Phenomenology Modeling)	MIPR	AMRDEC:AL	17.889	4.042	Dec 2011	4.527	Oct 2012	-		4.527	Continuing	Continuing	Continuing	
Subtotal			168.107	41.615		46.608		-		46.608				

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
M&S VV&A and Test Operations Performance Assessment VV&A	C/CPAF	Northrop Grumman:CO	3.395	8.195	Dec 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing	
M&S VV&A and Test Operations Ground Test VV&A	C/CPAF	Northrop Grumman:CO	1.221	3.200	Dec 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing	
M&S VV&A and Test Operations M&S Accreditation	C/CPAF	Northrop Grumman:CO	3.683	3.607	Dec 2011	-	Oct 2012	-		-	Continuing	Continuing	Continuing	
Subtotal			8.299	15.002		-		-		-				

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal			-	-		-		-		-	0.000	0.000	0.000	

Remarks
N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	176.406	56.617		46.608		-		46.608			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Assured Response (AR-04D) 2Q2011	2	2011	2	2011
Assured Response (AR-04E) 3Q2013	3	2013	3	2013
Assured Response (AR-04X) 1Q2011	1	2011	1	2011
Assured Response (AR-06) 3Q2015	3	2015	3	2015
Combatant Command Exercise (Global Lightning 11) 3Q2011	3	2011	3	2011
Combatant Command Exercise (Global Lightning 12) 3Q2012	3	2012	3	2012
Combatant Command Exercise (Global Lightning 13) 3Q2013	3	2013	3	2013
Combatant Command Exercise (Global Lightning 14) 3Q2014	3	2014	3	2014
Combatant Command Exercise (Global Lightning 15) 3Q2015	3	2015	3	2015
Combatant Command Exercise (Global Thunder 11) 1Q2011	1	2011	1	2011
Combatant Command Exercise (Global Thunder 12) 1Q2012	1	2012	1	2012
Combatant Command Exercise (Global Thunder 13) 2Q2013	2	2013	2	2013
Combatant Command Exercise (Global Thunder 14) 2Q2014	2	2014	2	2014
Combatant Command Exercise (Global Thunder 15) 2Q2015	2	2015	2	2015
Combatant Command Exercise (Terminal Fury 11) 3Q2011	3	2011	3	2011
Combatant Command Exercise (Terminal Fury 12) 3Q2012	3	2012	3	2012
Combatant Command Exercise (Terminal Fury 13) 3Q2013	3	2013	3	2013
Combatant Command Exercise (Terminal Fury 14) 3Q2014	3	2014	3	2014
Combatant Command Exercise (Terminal Fury 15) 3Q2015	3	2015	3	2015
Combatant Command Exercise (Vigilant Shield 11) 1Q2011	1	2011	1	2011
Combatant Command Exercise (Vigilant Shield 12) 1Q2012	1	2012	1	2012
Combatant Command Exercise (Vigilant Shield 13) 1Q2013	1	2013	1	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Combatant Command Exercise (Vigilant Shield 14) 1Q2014	1	2014	1	2014
Combatant Command Exercise (Vigilant Shield 15) 1Q2015	1	2015	1	2015
Congressional Wargame 2Q2011	2	2011	2	2011
Congressional Wargame 2Q2012	2	2012	2	2012
Congressional Wargame 2Q2013	2	2013	2	2013
Congressional Wargame 2Q2014	2	2014	2	2014
Congressional Wargame 2Q2015	2	2015	2	2015
Digital Simulation Architecture (DSA) Performance v1.5 4Q2011	4	2011	4	2011
Digital Simulation Architecture (DSA) Performance v2.0 1Q2013	1	2013	1	2013
Digital Simulation Architecture (DSA) Performance v3.0 1Q2015	1	2015	1	2015
Digital Simulation Architecture (DSA) Performance v4.0 3Q2016	3	2016	3	2016
Digital Simulation Architecture (DSA) v2.1.1 1Q2011	1	2011	1	2011
Digital Simulation Architecture (DSA) v3.1 3Q2011	3	2011	3	2011
Digital Simulation Architecture (DSA) v3.2 1Q2012	1	2012	1	2012
Digital Simulation Architecture (DSA) v4.0 3Q2012	3	2012	3	2012
Digital Simulation Architecture (DSA) v5.0 3Q2013	3	2013	3	2013
Global Defender (GDEx04d) 4Q2011	4	2011	4	2011
Global Defender (GDEx04e(IT)) 4Q2012	4	2012	4	2012
Global Defender (GDEx04e) 1Q2014	1	2014	1	2014
Global Defender (GDEx06) 4Q2015	4	2015	4	2015
Ground Test, Distributed 04 (GTD-04) Developmental Test 4Q2013	4	2013	4	2013
Ground Test, Distributed 04 (GTD-04) Operational Test 4Q2013	4	2013	4	2013
Ground Test, Distributed 04 (GTD-04) Warfighter Trial Period 1Q2014	1	2014	1	2014
Ground Test, Distributed 04 (GTD-04b) 2Q2011	2	2011	2	2011
Ground Test, Distributed 04 (GTD-04d) (Part 1) 4Q2011	4	2011	4	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Test, Distributed 04 (GTD-04d) (Part 2) 1Q2012	1	2012	1	2012
Ground Test, Distributed 06 (GTD-06) Developmental Test 3Q2015	3	2015	3	2015
Ground Test, Distributed 06 (GTD-06) Operational Test 4Q2015	4	2015	4	2015
Ground Test, Focused 04e (GTX-04e) 2Q2012	2	2012	2	2012
Ground Test, Focused 06 (GTX-06) 2Q2014	2	2014	2	2014
Ground Test, Focused 06 (GTX-06) System Post-Ground Test Reconstruction 3Q2014	3	2014	3	2014
Ground Test, Focused 07a (GTX-07a) 3Q2016	3	2016	3	2016
Ground Test, Focused 07b (GTX-07b) 4Q2016	4	2016	4	2016
Ground Test, Focused 07b (GTX-07b) System Post-Ground Test Reconstruction 1Q2017	1	2017	1	2017
Ground Test, Integrated 04 (GTI-04) (ISR) FY 2012	1	2012	4	2012
Ground Test, Integrated 04 (GTI-04) Operational Test 3Q2013	3	2013	3	2013
Ground Test, Integrated 04d (GTI-04d) 3Q2011	3	2011	3	2011
Ground Test, Integrated 04e (GTI-04e) Developmental Test 3Q2013	3	2013	3	2013
Ground Test, Integrated 04e (GTI-04e) Verification, Validation and Accreditation 1Q2013	1	2013	1	2013
Ground Test, Integrated 06 (GTI-06) Developmental Test 3Q2015	3	2015	3	2015
Ground Test, Integrated 06 (GTI-06) Operational Test 3Q2015	3	2015	3	2015
Ground Test, Integrated 06 (GTI-06) Verification, Validation and Accreditation 4Q2014	4	2014	4	2014
International Simulation v10.0 2Q2014	2	2014	2	2014
International Simulation v11.0 2Q2015	2	2015	2	2015
International Simulation v7.0 2Q2011	2	2011	2	2011
International Simulation v8.0 2Q2012	2	2012	2	2012
International Simulation v9.0 2Q2013	2	2013	2	2013
Missile Defense Space warning Tool (MDST) v14.0 2Q2011	2	2011	2	2011
Missile Defense Space warning Tool (MDST) v15.0 2Q2012	2	2012	2	2012
Missile Defense Space warning Tool (MDST) v16.0 2Q2013	2	2013	2	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Missile Defense Space warning Tool (MDST) v17.0 2Q2014	2	2014	2	2014
Missile Defense Space warning Tool (MDST) v18.0 2Q2015	2	2015	2	2015
Multi-National Missile Defense Conference Wargame 4Q2011	4	2011	4	2011
Multi-National Missile Defense Conference Wargame 4Q2012	4	2012	4	2012
Multi-National Missile Defense Conference Wargame 4Q2013	4	2013	4	2013
Multi-National Missile Defense Conference Wargame 4Q2014	4	2014	4	2014
Multi-National Missile Defense Conference Wargame 4Q2015	4	2015	4	2015
National Missile Defense Conference Wargame 2Q2011	2	2011	2	2011
National Missile Defense Conference Wargame 2Q2012	2	2012	2	2012
National Missile Defense Conference Wargame 2Q2013	2	2013	2	2013
National Missile Defense Conference Wargame 2Q2014	2	2014	2	2014
National Missile Defense Conference Wargame 2Q2015	2	2015	2	2015
Objective Simulation Framework (OSF) v1.0 3Q2013	3	2013	3	2013
Objective Simulation Framework (OSF) v2.0 4Q2014	4	2014	4	2014
Objective Simulation Framework (OSF) v3.0 4Q2015	4	2015	4	2015
Objective Simulation Framework (OSF) v4.0 4Q2016	4	2016	4	2016
Performance Assessment (PA04) 4Q2013	4	2013	4	2013
Performance Assessment (PA06) 4Q2015	4	2015	4	2015
Single Stimulation Framework (SSF 1.1.2) 2Q2011	2	2011	2	2011
Single Stimulation Framework (SSF 1.1.3) 3Q2011	3	2011	3	2011
Single Stimulation Framework (SSF 1.1.5) 4Q2011	4	2011	4	2011
Single Stimulation Framework (SSF) v1.1.5 (2nd HWIL string) 2Q2012	2	2012	2	2012
Single Stimulation Framework (SSF) v1.1.6 2Q2012	2	2012	2	2012
Single Stimulation Framework (SSF) v1.1.7 4Q2012	4	2012	4	2012
Technical Assessment (TA04) 4Q2011	4	2011	4	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD31: <i>Modeling & Simulation</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Technical Assessment (TA07) 4Q2016	4	2016	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD32: <i>Quality, Safety, and Mission Assurance</i>	27.476	33.045	34.388	-	34.388	31.454	32.477	35.097	35.254	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

Mission Assurance:

Provides in-plant MDA Assurance Representatives (MARs) for the Missile Defense Agency (MDA) at government and contractor facilities. MARs are Government Mission Assurance and Quality experts who provide quality and technical oversight of contractor manufacturing. Mission Assurance Audits are conducted which focus on design margin, the effectiveness of acceptance testing and the sufficiency of manufacturing processes. Audits are performed for contractual requirements, internal requirements, and industry best practices. These audits are one of MDA's most effective methods of enabling change among the MDA contractors and suppliers. Quality, Safety, and Assurance provides Subject Matter Experts (SMEs) who attend all technical reviews (i.e. Design, Test, Mission Readiness Reviews, and Failure Review Boards) to ensure mission assurance principles are consistently implemented across the Ballistic Missile Defense System (BMDS). Quality, Safety, and Assurance develops overarching design and quality standards such as the MDA Assurance Provisions (MAP) for MDA which enhances BMDS reliability. Hardware acceptance reviews and pedigree documentation reviews are performed to ensure all manufacturing rework and repair is performed within approved processes.

Quality:

Provide on-site Quality Assurance (QA) inspection for all ground and flight tests to ensure that all processes and procedures are adhered to and no short cuts or deviations occur. Quality management system audits are performed of the sub tier supply chain to determine adequacy of contractor requirement flow down and sub tier supplier compliance to industry standards. Quality Subject Matter Experts (SMEs) attend BMDS configuration control boards to ensure quality is implemented across all Programs. Provide quality on-site formal inspection and resolution when troubled suppliers are identified. Initiate and lead on-site Joint Government and Industry Team field support and expertise to assist when critical sole source suppliers are failing. Team conducts initiatives to revamp sole source suppliers by assisting them to get healthy and perform at world class levels. Establishes consistent acquisition and award fee contractual requirements to ensure that a strategic approach is applied to all mission critical systems.

Safety:

Responsible for system safety of the Ballistic Missile Defense System (BMDS) and for the Safety and Occupational Health of personnel located in the National Capital Region (NCR); Huntsville, Alabama; Fort Greely, Alaska; Vandenberg Air Force Base (VAFB), California; and, Dahlgren, VA. Also responsible for ensuring the overall

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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safety of the civilian, contractor and military workforce. Quality, Safety, and Assurance provides on-site support 24 hours a day, 7 days a week, 365 days a year to ensure operational safety of systems. Quality, Safety, and Assurance verifies that all systems are functioning and tracking against actual verified targets and that all associated processes and procedures are strictly followed.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Title: Quality, Safety & Mission Assurance</p> <p style="text-align: right;">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Quality:</p> <p>Provided non-advocate independent quality oversight/support to Missile Defense Agency via key engineering and configuration management forums Performed configuration management verification and reconciliation for all major flight and ground test assets Ensured strict process control over integration for all major flight and ground tests Identified and resolved system and/or assembly incompatibilities, non-conformances, inadequate requirement definition, insufficient requirement traceability, process adherences, and design, manufacturing, test, and quality practices</p> <p>Performed sub tier supplier quality checklist assessments to promote first time quality and continued reliability growth</p> <p>Safety:</p> <p>Maintained on-site safety oversight at key suppliers and Government facilities Conducted safety risk assessments and audits per Department of Defense standards practice for system safety, of all test and operational systems to ensure catastrophic risks remain improbable Conducted system analysis/assessments such as reliability prediction analysis, failure modes and effects criticality analysis, safety hazards analysis Performed hazard risk assessments and managed the BMDS safety hazard tracking system Provided technical leadership and support for Program insensitive munitions and hazard classification activities</p> <p>Mission Assurance:</p>	<p>27.476</p> <p>0</p>	<p>33.045</p> <p>0</p>	<p>34.388</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Provided on site technical (mission assurance) experts at contractor facilities to ensure root cause and corrective action for anomalies and to continually promote industry best practices for design, manufacturing and test</p> <p>Placed acquisition requirements for design, manufacturing and test on all contracts</p> <p>Placed acquisition requirements for Parts, Materials and Processes on all contracts ensuring the greatest reliability for electronic piece parts</p> <p>Performed non-conformance reporting, tracking, and mitigation for all major flight and ground tests Provided technical expertise in internal top level decision technical meetings and identified and determined if a mission assurance/safety/quality subject was properly represented and/or needed to be elevated to the Director Conducted mission assurance audits as necessary at mission critical supplier sites</p> <p>Performed in-depth pedigree reviews to support failure investigations, investigating verification of critical characteristics</p> <p>BMDS Safety Officers (BSOs):</p> <p>Performed 24 hours a day, 7 days a week, 365 days a year safety monitoring of operational and test systems to ensure safe transition between test and operations Performed monitoring and tracking of non-conformance behavior of the operational system. Coordinated with Warfighter and Quality, Safety, and Mission Assurance on proper root cause and resolution of all anomalies.</p> <p>MDA Parts and Materials Program:</p> <p>Enhanced BMDS reliability through the following activities:</p> <p>Enforced Program compliance to the Missile Defense Agency Part, Material and Processes Assurance Provisions (PMAP) Provided a Parts and Material knowledge center to address Program and Supplier part and material issues arising from development or fielded systems Updated the Agency's preferred parts and materials list database to facilitate new system design and identified part obsolescence issues</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012
<p>Acquisition Support:</p> <p>Ensured all new acquisitions were in compliance with the MDA Assurance Provisions (MAP), the MDA Parts, Materials and Processes Assurance Provisions (PMAP) and all applicable Defense Federal Acquisition Regulation (DFAR), Federal Acquisition Regulation (FAR), and clauses regarding quality, safety and mission assurance Updated the Missile Defense Agency Assurance Provisions (MAP) document to incorporate design, test, manufacturing, quality, safety, and mission assurance lessons learned to further improve acquisition requirements Improved MDA's acquisition strategy through participation in the definition and determination of all Award Fee Boards</p> <p>Technical Assistance to MDA Elements:</p> <p>Performed independent/non-advocated reviews, such as design certification, pedigree, failure, preliminary design, critical design and technical interchange reviews and ensured compliance with industry best practices Provided mission assurance support to major failure review boards and ensured comprehensive mitigation strategies for operational assets were employed Provided Ground-Based Midcourse Defense (GMD) with Navy quality expertise for Sea-Based X-Band radar (SBX) operations. This included an MDA Assurance Representative (MAR) on board the SBX vessel at all times Verified robust Program controls were in place for general housekeeping and quality assurance practices including, but not limited to, foreign object debris, electrostatic discharge and contamination control. These measures addressed areas known to impact BMDS reliability.</p> <p>Intra-Agency & Industry Activities:</p> <p>Participated in the Defense Standardization Board and ensured that MDA had an equal voice in the specification and standard requirements used across the Department of Defense (DoD) Initiated and lead quality, safety and mission assurance forums which obtained lessons learned and understanding/promoting new requirements or methods</p> <p>Provided to the DoD's anti-counterfeit working group expertise to promote the elimination of counterfeit parts throughout the DoD supply chain</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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Safety and Occupational Health:

Ensured compliance with DoD Safety and Occupational Health regulations and requirements
 Performed all required Occupational Safety and Health Inspections of MDA facilities which included those in the National Capital Region, Huntsville, Al, Colorado, Vandenberg Air Force Base and Dahlgren, VA.
 Responded to all reports of incidents effecting the health and safety of MDA employees.

FY 2012 Plans:
 Quality:

Provide non-advocate independent quality oversight/support to Missile Defense Agency key engineering and configuration management forums
 Perform configuration management verification and reconciliation for all major flight and ground test assets
 Maintain process control over integration delivery and conduct of all major flight and ground tests
 Work with Defense Contract Management Agency (DCMA) to create a DoD supplier database for assessing supplier performance
 Develop Quality, Safety, and Mission Assurance (QSMA) acquisition & award fee language for consistent application across MDA

Safety:

Maintain on-site safety oversight at key suppliers and Government facilities
 Conduct safety risk assessments per The Department of Defense Standards Practice for System Safety, of all test and operational systems to ensure catastrophic risks remain improbable
 Conduct system analysis/assessments such as reliability prediction analysis, failure modes and effects criticality analysis, safety hazards analysis etc., to lower flight and operational system risks

Mission Assurance:

Perform non-conformance reporting, tracking, and migration for all major flight and ground tests
 Provide technical expertise in internal Top Level Decision technical meetings to identify and determine if a mission assurance/safety/quality subject is properly represented and/or needs to be elevated to the Director

FY 2011	FY 2012	FY 2013

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>Perform mission assurance audits, production readiness assessments, pedigree reviews and facility assessments at mission critical suppliers, including sub-tier suppliers.</p> <p>BMDS Safety Officers (BSOs):</p> <p>Provide 24 hours a day, 7 days a week, 365 days a year safety monitoring of operational and test systems to ensure safe transition between test and operations Monitor and track non-conformance behavior of the operational system. Coordinate with Warfighter and Quality, Safety, and Mission Assurance on proper root cause and resolution of all anomalies</p> <p>MDA Parts and Materials Program:</p> <p>Enhance BMDS reliability through the following activities: Enforce Program compliance to the Missile Defense Agency Part, Material and Processes Assurance Provisions (PMAP) Provide a Part and Material knowledge center to address Program and Supplier part and material issues arising from development or fielded systems Update the Agency's preferred parts and materials list database to facilitate new system design and to identify part obsolescence issues</p> <p>Acquisition Support:</p> <p>Ensure all new acquisitions are in compliance with the MDA Assurance Provisions (MAP), the MDA Parts, Materials and Processes Assurance Provisions (PMAP) and all applicable Defense Federal Acquisition Regulation (DFAR), Federal Acquisition Regulation (FAR), and clauses regarding quality, safety and mission assurance Update the MAP/PMAP to incorporate the latest design, test manufacturing, quality, safety and mission assurance methods to improve future product reliability. Improve MDA's acquisition strategy through participation in the definition and determination of all award fees</p> <p>Technical Assistance to MDA Elements:</p> <p>Perform independent/non-advocate reviews, such as design certification, pedigree, failure, preliminary design, critical design and technical interchange reviews to ensure compliance with industry best practices</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Provide mission assurance support to major failure review boards to ensure comprehensive mitigation strategies for operational assets are employed Provide propulsion, solid rocket motor, avionics, mechanical structures, guidance, navigation and control, and parts, materials and processes expertise to programs to enhance reliability.</p> <p>Intra-Agency & Industry Activities:</p> <p>Perform major stakeholder quality initiatives to improve quality of products, improve onsite processes, and internal requirements at critical sole source suppliers Participate in the Defense Standardization Board to ensure that MDA has an equal voice in the specification and standard requirements used across the DoD Initiate & Lead quality, safety and mission assurance forums to obtain lessons learned and understand/promote new requirements or methods</p> <p>Safety and Occupational Health:</p> <p>Ensure compliance with DoD Safety and Occupational Health regulations and requirements Perform all required Occupational Safety and Health Inspections of MDA facilities including those in the National Capital Region, Huntsville, AL, Colorado, Vandenberg Air Force Base and Dahlgren, VA Monitor / respond to reports of incidents affecting the health and safety of MDA employees</p> <p>FY 2013 Plans: Quality:</p> <p>Provide Government inspection and process control for flight test operations Perform non-conformance reporting, tracking, and mitigation for all major flight and ground tests Provide non-advocate independent quality oversight/support to Agency operations such as configuration control boards, engineering forums, and material release activities Perform configuration management verification and reconciliation for all major flight and ground test assets</p> <p>Safety:</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
<p>Maintain on-site safety oversight at key suppliers and Government facilities Conduct safety risk assessments per Department of Defense Standards on all test and operational systems to ensure catastrophic risks remain improbable Conduct system analysis/assessments such as reliability prediction analysis, failure modes and effects criticality analysis, safety hazards analysis etc., to lower flight and operational system risks</p> <p>Mission Assurance:</p> <p>Provide the Missile Defense Agency Director non-advocate, independent technical assessments on system, subsystem and component design, manufacturing and test activities in support of operational deployment and flight test activities Provide non-advocate technical support to Missile Defense Agency and Program risk boards, configuration control boards, technical interchange meetings and failure review boards Conduct Mission Assurance audits throughout the Missile Defense Agency's supply chain Provide in-plant Mission Assurance and Quality Representatives at 23 Mission Critical Suppliers</p> <p>BMDS Safety Officers (BSOs):</p> <p>Provide 24 hours a day, 7 days a week, 365 days a year safety monitoring of operational and test systems to ensure safe transition between test and operations Monitor and track non-conformance behavior of the operational and flight test systems Perform software and hardware configuration verification along with supporting the Warfighter to asset management Provide safety support for Eastern, Western and Pacific Range activities such as safety training and certification</p> <p>MDA Parts and Materials Program:</p> <p>Enhance BMDS reliability through the following activities:</p> <p>Enforce Program compliance to the Missile Defense Agency Part, Material and Processes Assurance Provisions (PMAP) Provide a Part and Material knowledge center to address Program and Supplier part and material issues arising from development or fielded systems</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>		PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011	FY 2012	FY 2013
<p>Update the Agency's preferred parts and materials list database to facilitate new system design and to identify part obsolescence issues Pursue remedies against counterfeit parts</p> <p>Acquisition Support:</p> <p>Ensure all new acquisitions are in compliance with the MDA Assurance Provisions (MAP), the MDA Parts, Materials and Processes Assurance Provisions and all applicable Defense Federal Acquisition Regulation (DFAR), Federal Acquisition Regulation (FAR), and clauses regarding quality, safety and mission assurance Update the Missile Defense Agency Assurance Provisions (MAP) and the MDA Parts Materials and Processes Mission Assurance Plan (PMAP) to incorporate design, test, manufacturing, quality, safety, and mission assurance methods to further improve future product reliability. Improve MDA's acquisition strategy through participation in the definition and determination of all award fees</p> <p>Technical Assistance to MDA Elements:</p> <p>Perform independent/non-advocate reviews, such as design certification, pedigree, failure, preliminary design, critical design and technical interchange reviews to ensure compliance with industry best practices Provide mission assurance support to major failure review boards to ensure comprehensive mitigation strategies for operational assets are employed Provide propulsion, solid rocket motor, avionics, mechanical structures, guidance, navigation and control, and parts, materials, and processes expertise to enhance reliability.</p> <p>Intra-Agency & Industry Activities:</p> <p>Perform major stakeholder quality initiatives to improve quality of products, improve onsite processes, and internal requirements at critical sole source suppliers Participate in the Defense Standardization Board to ensure that MDA has an equal voice in the specification and standard requirements used across the DoD Initiate and lead quality, safety, and mission assurance forums to obtain lessons learned and understand/promote new requirements or methods</p>						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Safety and Occupational Health: Ensure compliance with DoD Safety and Occupational Health regulations and requirements Perform all required Occupational Safety and Health inspections of MDA facilities including those in the National Capital Region, Huntsville, AL, Colorado, Vandenberg Air Force Base and Dahlgren, VA. Monitor/respond to reports of incidents affecting the health and safety of MDA employees.			
Accomplishments/Planned Programs Subtotals	27.476	33.045	34.388

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603890C: <i>BMD Enabling Programs</i>	401.113	415.048	362.711		362.711	339.197	373.346	395.350	394.085	Continuing	Continuing

D. Acquisition Strategy

The execution of an effective Quality, Safety and Mission Assurance program is carried out in collaboration with subject matter expertise found in the Government, Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC), Contract Support Services (CSS), Advisory and Assistance Services (A&AS), and Industry.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Quality, Safety & Mission Assurance Agency Safety & Occupational Health 1	MIPR	MDA QS:AL, CO, AK, DC	0.879	-	Oct 2011	0.361	Oct 2012	-		0.361	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS System Safety (Safety Hazard Analysis & Tracking) - MIPR	MIPR	MDA QS:AL, AK, DC	2.824	0.100	Oct 2011	0.361	Oct 2012	-		0.361	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance MDIOC Quality, Safety & Mission Assurance (QSMA)	C/IDIQ	APT, INC.:AL	2.870	0.968	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Mission Assurance Agency Operations (Supplier Mission Assurance/ Tech Experts)	C/IDIQ	APT, INC.:AL	8.409	5.478	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Quality support, requirements, MAP, Metrics	C/IDIQ	AI SOLUTIONS, INC.:AL; FL; MD	3.004	2.319	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Supplier Quality Support - MDA Assurance Reqs (MARS)	MIPR	MDA QS:CO,CA,MD,UT,FL,MO,AK,AL,NJ,AZ,HI,MA,AR	4.824		Oct 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Quality, Safety & Mission Assurance Quality, Safety & Mission Assurance Agency Parts and Materials Program	MIPR	MDA QS; Crane:AL, IN	3.140	1.370	Oct 2011	1.564	Oct 2012	-		1.564	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDs Quality Assurance support, Auditing, non-conformance reporting, MAP, metrics	MIPR	MDA QS; Corona:AL, CA	6.496	0.858	Oct 2011	3.184	Oct 2012	-		3.184	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDs Mission Assurance Agency Operations (Supplier Mission Assurance/ Tech Experts)	MIPR	MDA QS; Aerospace:AL, CA	5.395	2.609	Oct 2011	2.858	Oct 2012	-		2.858	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDs System Safety (Safety Hazard Analysis & Tracking) - IDIQ	C/IDIQ	APT, INC.:AL	1.716	1.731	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Mission Assurance Tech Experts	C/IDIQ	APT, INC.:AL	1.818	1.459	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance HQ & Core Management	C/CPFF	SRS:AL	1.924	0.138	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance HQ & Core Management 1	MIPR	MDA QS:AL	0.225	0.230	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Agency Safety & Occupational Health 2	C/CPFF	APT, INC.:AL	-	-		0.559	Oct 2012	-		0.559	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDs System Safety (Safety Hazard Analysis & Tracking)	C/CPFF	APT, INC.:AL	-	-		1.584	Oct 2012	-		1.584	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Quality, Safety & Mission Assurance BMDS Quality Assurance support, Auditing, non-conformance reporting, MAP, metrics	C/CPFF	AIS:MD	-	-		1.662	Oct 2012	-		1.662	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Quality Assurance support, Auditing, non-conformance reporting, MAP, metrics 1	MIPR	AMRDEC:AL	-	-		0.322	Oct 2012	-		0.322	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Supplier on-site support	C/CPFF	APT, INC.:AL	-	-		1.769	Oct 2012	-		1.769	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Supplier on-site support 1	MIPR	AMRDEC:AL	-	-		0.464	Oct 2012	-		0.464	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Mission Assurance Agency Operations (Supplier Mission Assurance/ Tech Experts)	C/CPFF	SRS:AL	-	-		1.316	Oct 2012	-		1.316	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Mission Assurance Agency Operations (Supplier Mission Assurance/ Tech Experts) 1	C/CPFF	APT, INC.:AL	-	-		4.130	Oct 2012	-		4.130	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Mission Assurance Agency Operations (Supplier Mission Assurance/ Tech Experts) 2	C/CPFF	AIS:MD	-	-		0.630	Oct 2012	-		0.630	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance BMDS Mission Assurance Agency Operations	MIPR	AMRDEC:AL	-	-		0.209	Oct 2012	-		0.209	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
(Supplier Mission Assurance/ Tech Experts) 3													
Quality, Safety & Mission Assurance Parts, Materials and Processes (PMP) Program	MIPR	AMRDEC:AL	-	-		0.545	Oct 2012	-		0.545	Continuing	Continuing	Continuing
Quality, Safety & Mission Assurance Parts, Materials and Processes (PMP) Program 1	C/CPFF	APT, INC:AL	-	-		0.730	Oct 2012	-		0.730	Continuing	Continuing	Continuing
Subtotal			43.524	17.260		22.248		-		22.248			

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Quality, Safety & Mission Assurance Quality, Safety & Mission Assurance HQ & Core Management (MDA CIV)	Allot	MDA QS:AL, VA, MD, CA, AZ, HI, AK, MA, NJ, FL, AR, UT	12.879	12.841	Oct 2011	9.756	Oct 2012	-		9.756	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD32: <i>Quality, Safety, and Mission Assurance</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Quality, Safety & Mission Assurance Quality, Safety & Mission Assurance Operations Support (Travel/PCS/BB)	MIPR	MDA QS:AL, CO, AK, DC, VA	5.662	2.944	Oct 2011	2.384	Oct 2012	-		2.384	Continuing	Continuing	Continuing
Subtotal			18.541	15.785		12.140		-		12.140			

Remarks
N/A

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	62.065	33.045	34.388	-	34.388			

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603890C: <i>BMD Enabling Programs</i>	PROJECT MD40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	25.495	56.606	16.384	-	16.384	15.454	16.109	17.419	18.019	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

FY 2012 increase of \$41.968 million as directed by the Consolidated Appropriation Act of FY 2012 (Public Law 112-74), to transfer Program Wide Support from BMDS Test and Targets PE 0603888C (Budget Project MD40).

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of Missile Defense Agency (MDA) functions and activities across the entire Ballistic Missile Defense System (BMDS). Includes Government Civilians, Advisory and Assistance Services, and Federally Funded Research and Development contracts (FFRDC) providing integrity and oversight of the BMDS as well as, supporting MDA in enabling the development and evaluation of technologies that will respond to the changing threat. In addition, includes Global Deployment personnel and support performing deployment site preparation and activation. Other costs included provide facility capabilities for MDA Executing Agent (EA) locations (with the exception of Federal Office Building 2 after FY 2011), such as physical and technical security, legal services, travel and agency training, office and equipment leases, rents and utilities, data and unified communications support, supplies and maintenance, logistics and central property management of equipment, and similar operating expenses. Also includes legal settlements, and foreign currency fluctuations on a limited number of foreign contracts. In keeping with congressional intent, PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the total MDA budget.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Civilian Salaries and Support	25.495	56.606	16.384
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: See paragraph A, Mission Description and Budget Item Justification			
FY 2012 Plans: See paragraph A, Mission Description and Budget Item Justification			
FY 2013 Plans: See paragraph A, Mission Description and budget item justification.			
Accomplishments/Planned Programs Subtotals	25.495	56.606	16.384

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603890C: <i>BMD Enabling Programs</i>	MD40: <i>Program-Wide Support</i>

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

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A