Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	690.054	436.482	290.452	-	290.452	318.745	309.894	340.969	320.638	Continuing	Continuing
BX07: *Terminal High Altitude Area Defense (THAAD) Block 2.0*	576.337	-	-	-	-	-	-	-	-	0.000	576.337
EX07: *Terminal High Altitude Area Defense (THAAD) Block 5.0*	17.129	-	-	-	-	-	-	-	-	0.000	17.129
XX07: *Terminal High Altitude Area Defense (THAAD) Sustainment*	36.937	-	-	-	-	-	-	-	-	0.000	36.937
MD07: *THAAD*	-	420.463	276.667	-	276.667	302.951	293.312	323.739	304.668	Continuing	Continuing
WX06: *Patriot Advanced Capability-3 (PAC-3)*	20.961	-	-	-	-	-	-	-	-	0.000	20.961
MD06: *Patriot Advanced Capability-3 (PAC-3)*	-	1.200	1.230	-	1.230	1.182	1.138	1.153	1.239	Continuing	Continuing
ZX40: *Program-Wide Support*	38.690	-	-	-	-	-	-	-	-	0.000	38.690
MD40: *Program-Wide Support*	-	14.819	12.555	-	12.555	14.612	15.444	16.077	14.731	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Missile Defense Agency is developing and fielding a range of land based terminal capabilities to counter Short Range Ballistic Missiles (SRBMs) to protect forces deployed abroad and allies. The land based SRBM defense capabilities of BMDS consist of the PATRIOT Advanced Capability-3 (PAC-3) and Terminal High Altitude Area Defense (THAAD). THAAD is also capable of countering Medium-Range Ballistic Missiles (MRBM) to protect deployed forces, critical assets on allied territory, and population centers. THAAD is a rapidly transportable capability that will enhance the ability of Combatant Commanders in intercepting SRBM and MRBM threats using hit-to-kill technologies. The THAAD missile is uniquely designed to intercept targets both inside and outside the Earth`s atmosphere.

The Terminal Defense Segment (TDS) Program Element (PE) funds the land based terminal-related element portions of Regional Defense Capabilities, Sustainment, and other Terminal-related mission area investment activities. The Ballistic Missile Defense System (BMDS) elements in terminal defense pursue development and selective upgrades of interceptor defense capabilities that engage short to medium-range ballistic missiles in the late mid-course and terminal phase of their trajectory. The elements have the capability to engage and negate ballistic missiles and asymmetric threats in both the late mid-course (outside the atmosphere) and terminal phases (inside the atmosphere) of their trajectory, adding significant capability to the BMDS as the threat missiles transition from the mid-course to terminal phase.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*

Ballistic Missile Defense (BMD) Systems Engineering develops System Description and Document System Specifications that drive designing, building, integrating, and testing THAAD with BMDS components. The specifications and function flow down optimize performance and further ensure the assessment of the designed BMD System with ground and flight testing. Compliance of THAAD element to BMD System level requirements is monitored in a series of requirements and design reviews both at the system and element levels. Further, the Technical Baseline management process ensures and the Element Chief Engineers certify element compliance with allocated BMD System requirements.

MDA Element testing is based on an integrated, comprehensive, and phased test program. THAAD testing is reflected in this Program Element (PE). This PE also funds THAAD participation in the consolidated MDA-wide System Test Program and the resources for the planning, design, execution, and management of THAAD in BMD System testing in accordance with the BMDS Test Policy. This applies to all Flight, Integrated Ground, and Distributed Ground Tests and Post-test analysis and reconstructions listed in the Integrated Master Test Plan (IMTP). The THAAD investment in compliance with the IMTP across the three projects (BX07, EX07, MD07) is as follows ($M): FY 2011- $81.0; FY 2012- $79.6; FY 2013- $70.8; FY 2014- $59.2; FY 2015- $68.5; FY 2016- $68.0; TOTAL- $427.1.

The THAAD element integrates five major components (Interceptors, Launchers, Army Navy/Transportable Radar Surveillance - Type 2 (AN/TPY-2) Radars, THAAD Fire Control and Communication (TFCC), and THAAD-Peculiar Support Equipment) into the BMDS. The THAAD interceptor is a certified round that is propelled by a single-stage, solid-propellant rocket booster. The kill vehicle possesses a divert and attitude control system and an infrared seeker used in destroying its target through hit-to-kill technology. The THAAD Launcher consists of the U.S. Army M1120 Heavy Expanded Mobility Tactical Truck-Load Handling System variant that transports an integrated interceptor round pallet and supports and secures eight ready-to-launch interceptors. The AN/TPY-2 Radar is an X-Band, solid state, phased array radar capable of tracking multiple threats and multiple interceptors during engagements. The AN/TPY-2 Radar uses fence, volume, and cued search modes and provides surveillance, acquisition, track, discrimination, interceptor communications, and hit assessment data collection for the fire control. The AN/TPY-2 Radar hardware is a transportable system composed of the antenna equipment unit, electronics equipment unit, cooling equipment unit, and the prime power unit. The THAAD Fire Control and Communication (TFCC) is composed of the Tactical Operations Station, the Launch Control Station, and the Station Support Group. These three components together are called the Tactical Station Group (TSG). A THAAD Fire Control and Communication (TFCC) includes two TSGs. The TFCC provides the engagement planning, fire control, coordination, execution, and communications necessary to fulfill the THAAD mission in a coherent and fully integrated fashion. It is interoperable with C2BMC and external air and missile defense and intelligence systems and agencies that are integrated into the BMDS.

Research, Development, Test & Evaluation (RDT&E):

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*

The THAAD element contributes to the Ballistic Missile Defense System (BMDS) by providing a capability for THAAD Interceptor to engage with Army Navy/ Transportable Radar Surveillance-Type 2 (AN/TPY-2) (THAAD Mode). When integrated into the BMDS with the BMDS Command and Control/Battle Management and Communications (C2BMC), Aegis BMD and PATRIOT Systems, the rapidly deployable THAAD element improves the Ballistic Missile Defense Systems (BMDS) overall effectiveness by engaging threat ballistic missiles in the late mid-course and terminal phases of their trajectory.

Baseline Capability Development (BCD) (THAAD 1.0) (formerly Block 2.0) and Sustainment: THAAD incremental development began with the design and development of fundamental capability against short-to-medium-range Ballistic Missiles (BMs) and asymmetric threats inside and outside the atmosphere. This initial phase allows other BMDS Elements with Link 16 compatibility (Aegis BMD, PATRIOT) the capability to conduct engagement coordination with THAAD. THAAD development added and will test additional radar discrimination algorithms, added Common Data Link Interface Module (CDLIM) in fire control to facilitate communications within the BMDS, and provides engagement coordination with other BMDS elements. BCD is the foundation for the acquisition and delivery of two THAAD Batteries to support operational assessment and fielding of a BMDS capability useful to the combatant commanders. The delivery of Batteries #1 and #2 consists of a basic load of 48 Interceptors, 6 Launchers, two AN/TPY-2 (THAAD Mode) Radars (one funded in the Sensors Program) and two THAAD Fire Control and Communications (TFCCs), consisting of four Tactical Support Groups (TSGs). Delivery of THAAD units to the Warfighter provides flexibility to augment and support the BMDS in the Phased Adaptive Approach. THAAD transitioned to production utilizing the procurement appropriation in FY 2009. The FY 2009 procurement appropriation was for long lead materials and obsolescence mitigation. Battery hardware procurement will begin in 2010. These Batteries will be sustained utilizing Operations and Maintenance (O&M) appropriation starting in FY 2012.

Common threat engineering produces common and consistent adversary trajectory and signature data to enable Ballistic Missile Defense (BMD) System and sub-system concept and requirements, design, verification, and assessment. Common Threat data is contained in the Adversary Capability Document and Adversary Data Packages (ADP) and drives the Element design and BMDS ground tests, flight tests, digital simulations, and premission analysis activities. It is also invoked by the BMD System Description Document and BMD System Specification through the compliance threat allocations to BMDS Elements as a design driver..

The continuation of THAAD`s integration into BMDS provides data to support the Capability Development 4 (CD-04) decision and will be accomplished through THAAD`s Advanced Capability Development (ACD) Contract (formerly Block 5.0). ACD enables THAAD`s continuation in the integrated MDA Flight Test and Ground Test Campaigns, as reflected in the Integrated Master Test Plan, using both developmental test assets and equipment and soldiers from Army THAAD Batteries. The ACD Contract also continues the development of the THAAD capability into the future, addressing the Prioritized Capabilities List. This Acquisition Strategy continues the concept of a rapidly deployable configuration to support the Terminal Defense Segment (TDS) mission as well as supporting other BMDS elements` engagements by providing surveillance and tracking data. THAAD`s flight test campaign continues under the ACD Contract providing data from 4 additional flight tests and completes

its participation in MDA`s Ground Test 04 Campaign, data that will facilitate the CD-04 capability decision. Furthermore, it continues the development and testing of Build 2.0 capability in order to more fully integrate THAAD into the BMDS. The capabilities developed and delivered under THAAD Baseline Capability Development and Advanced Capability Development (ACD) support the Prioritized Capability List. Beginning in FY 2011, ACD activities are included in project MD07.

Modeling and Simulation (Ballistic Missile Defense System (BMDS) & Program):

The THAAD element supports the BMDS HWIL Modeling and Simulation Program by providing and integrating into the BMDS system-level HWIL single stimulation framework to support full-envelope BMDS ground test, flight test, and training events based upon Agency and warfighter needs.

THAAD`s Models and Simulations efforts are focused on Development, Verification, Validation and Accreditation (VV&A) Goals. Actions in support of this goal are conducted in parallel. Three major efforts are planned in support of Model and Simulation Development goals: (1) Continue efforts with the Integrated Simulation and Tactical Software (ISTS) model, ensuring that the Simulation is current and THAAD Flight Test Compliant and serves as a tool for risk reduction and prediction of THAAD flight testing; (2) Maintain Hardware-in-the-Loop facility keeping pace with both hardware and software changes to support the THAAD participation in the MDA Flight Test Program; (3) Continue hardware and software development for the Simulation-Over-Live Driver (SOLD). THAAD`s development work in support of its VV&A Goals are focused on data reduction and analysis from both the MDA BMDS Ground Test Campaign and Flight Testing to ensure that the models used remain anchored with actual system performance data.

THAAD will support System Pre-Flight predictions for each system level flight test using the test framework set up with the BMDS configuration for a particular flight test. This provides the confidence in flight test execution by predicting element performance and exercising element interfaces. This work is also used to prove out the construct of the flight test to ensure if the required data and data management plan will support System Post Flight Reconstruction objectives. System Post Flight Reconstruction (SPFR) will use a Hardware-in-the-Loop (HWIL) and/or a Digital Modeling and Simulation (M&S) Environment to replicate the day of flight for the Ballistic Missile Defense System (BMDS) configuration, modified to represent the actual environmental conditions and target dynamics observed in flight. The results of this testing are used to increase confidence in the models and simulations by anchoring the results with emphasis on the Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) back to the real world event. System Post Flight Reconstruction (SPFR) is used for validation (anchoring) of models and simulations. The CECs/EMEs shape and focus flight and ground tests within Test Campaigns. The net effect of this rigorous M&S accreditation is the effective operationalization of BMDS RDT&E technical capabilities by the Warfighter. Credibly quantifying BMDS capabilities and limitations, and making informed capability acceptance and employment decisions in relation to Warfighter Operations Plans (OPLANs) and Concept Plans (CONPLANs) is the goal.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
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There are 23 CECs and EMEs which equates to a total of 34 different CEC/EME Key Test Points (KTPs) for data collection. These KTPs are designed to support Verification, Validation and Accreditation (VV&A) of the THAAD Models and Simulations (M&S). The Integrated Master Test Plan (IMTP) contains the test schedule, test event descriptions, and the mapping of the CEC/EME data collects to the flight and ground test events. The THAAD data collection plan per IMTP 10.2 will provide a cumulative data collection summary.

The test plan will provide opportunities for multiple data collects of the Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) Key Test Points (KTPs). These demonstrations will be used to build additional confidence in the Models and Simulations. THAAD testing goals are:

- Develop, test, field and sustain THAAD missile defense capabilities to defend the United States, forward deployed forces and Allies against short and medium range ballistic missiles
- Continue to incrementally improve and integrate THAAD capabilities into the Ballistic Missile System that are adaptive and responsive to intelligence based judgments of the threat
- Demonstrate and prove THAAD system performance in ground, flight, and operational testing to enable decisions on production, fielding, and materiel release
- Field a reliable, high quality, and fiscally sustainable THAAD weapon system - with responsive support to meet the needs of the Warfighter
- Integrate THAAD into the BMDS International Strategy and execute Foreign Military Sales of the THAAD weapon system
- Partner with our Industry team to implement and manage THAAD program with world class business practices and processes

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	715.732	436.482	250.275	-	250.275
Current President's Budget	690.054	436.482	290.452	-	290.452
Total Adjustments	-25.678	-	40.177	-	40.177
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-5.579	-			
• SBIR/STTR Transfer	-9.116	-			
• Other Adjustment Detail	-10.983	-	40.177	-	40.177

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
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Change Summary Explanation

The FY12 $40.177 million increase in this program element is the result of internal MDA adjustments and scope realignments offset by efficiency savings. This program has realized $44.267 million in efficiency savings.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT BX07: *Terminal High Altitude Area Defense (THAAD) Block 2.0*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
BX07: *Terminal High Altitude Area Defense (THAAD) Block 2.0*	576.337	-	-	-	-	-	-	-	-	0.000	576.337
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project BX07 has been transferred to project MD07

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: See Project MD07 for FY 2010 Accomplishments	576.337	-	-
Articles:	0		
Description: See Description Below			
FY 2010 Accomplishments:			
Accomplishments/Planned Programs Subtotals	576.337	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT EX07: *Terminal High Altitude Area Defense (THAAD) Block 5.0*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
EX07: *Terminal High Altitude Area Defense (THAAD) Block 5.0*	17.129	-	-	-	-	-	-	-	-	0.000	17.129
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project EX07 has been transferred to project MD07.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: See Project MD07 for FY2010 Accomplishments	17.129	-	-
Articles:	0		
Description: See Description Below			
FY 2010 Accomplishments:			
Accomplishments/Planned Programs Subtotals	17.129	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT XX07: *Terminal High Altitude Area Defense (THAAD) Sustainment*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
XX07: *Terminal High Altitude Area Defense (THAAD) Sustainment*	36.937	-	-	-	-	-	-	-	-	0.000	36.937
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project XX07 has been transferred to project MD07.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: See Project MD07 for FY 2010 Accomplishments	36.937	-	-
Articles:	0		
Description: See Description Below			
FY 2010 Accomplishments: Project XX07 transferred to Project MD07. See Project MD07 for FY 2010 Accomplishments.			
Accomplishments/Planned Programs Subtotals	36.937	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD07: *THAAD*	-	420.463	276.667	-	276.667	302.951	293.312	323.739	304.668	Continuing	Continuing
Quantity of RDT&E Articles	0	25	24		24	0	0	0	0		

A. Mission Description and Budget Item Justification

The Terminal High Altitude Area Defense (THAAD) is an element of the Terminal Defense Segment (TDS) of the Ballistic Missile Defense System (BMDS). The THAAD element provides a rapidly transportable capability for the THAAD Interceptor to engage ballistic missiles using the Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) (THAAD Mode). THAAD enhances the TDS by expanding, complementing, and extending the BMDS battle-space and capability to engage ballistic targets in the late mid-course and terminal phases of their trajectory through the C2BMC actively managing the battle and subsequent engagements. The TPY-2 with THAAD will perform a sensor surveillance mission, providing sensor data to cue other elements of the BMDS. THAAD, in conjunction with the fielded PATRIOT System, provides the TDS and supports the objective of enhancing the BMDS capability. Five major components (Interceptors, Launchers, AN/TPY-2 (THAAD Mode) Radar, THAAD Fire Control and Communication (TFCC), and Peculiar Support Equipment) will be integrated into the THAAD element and the BMDS.

THAAD Baseline Capability Development (BCD) (THAAD 1.0) began with the design and development of fundamental capability against short to medium-range Ballistic Missiles and asymmetric threats inside and outside the atmosphere. This encompasses the following: (1) Test interceptor with inside and outside the atmosphere algorithms; (2) AN/TPY-2 (THAAD Mode) Radar with Initial Discrimination Capability; and (3) TFCC with tactical digital information link and defense design planner (which is an offline tool for defense and engagement planning). The initial phase of development laid the foundation for the capability of other BMDS Elements (Aegis BMD, Ground Missile Defense, PATRIOT) to continue to develop and test Build 2.0 capability in order to more fully integrate THAAD into the BMDS.

THAAD development will evolve through improvements to the AN/TPY-2 (THAAD Mode) Radar discrimination, salvo firing doctrine, and the ability to operate in a full spectrum of tactical interceptor environments and survivability. To facilitate tactical employment by soldiers, it also includes TFCC embedded training, automated defense planning, and extensive interoperability. THAAD development provides additional capability for other BMDS elements. BCD flight tests began in FY 2006 and complete in FY 2011. THAAD on multiple occasions demonstrated the ability to support BMDS on alert. The THAAD element will support coordinated engagements with the BMDS via the Ballistic Missile Defense System (BMDS) Command and Control/Battle Management and Communications (C2BMC). BCD culminates in demonstrated THAAD capabilities both inside and outside the atmosphere and supports Capability Delivery 04. BCD is the foundation for the acquisition and delivery of THAAD Batteries #1 and #2 to support operational assessment and fielding of a BMDS capability useful to the Combatant Commanders. The delivery of Batteries #1 and #2 consists of a basic load of 48 Interceptors, six Launchers, two AN/TPY-2 Radars (provided by the Sensors Directorate) and two TFCCs consisting of 4 Tactical Support Groups (TSGs) total.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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THAAD Advanced Capability Development (ACD) (formerly Block 5.0) continues the concept of a rapidly deployable configuration to support the Terminal Defense Segment (TDS) mission as well as supporting the strategic surveillance missions. AN/TPY-2 Radar development will be performed under the Sensors Program Element and integrated into the THAAD weapon system.

Operations & Sustainment Support of THAAD Batteries provides for logistical support to field, operate, maintain, repair and replenish the THAAD weapon system as it is fielded to the Army. Contractor Logistics Support (CLS) technicians are responsible for field and sustainment maintenance including the repair and supply chain management of the required spares and repair parts, as well as providing engineering support services and software maintenance support. The Operations & Sustainment Support associated with the Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radars allocated to THAAD Batteries are provided for under the Sensors Program Element.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Weapon Sys Engr Integ & Test (WSEIT)	-	61.716	98.460
Articles:	0	0	24
Description: See Description Below			
FY 2010 Accomplishments: Funding for these FY 2010 accomplishments are reported in prior year budget projects BX07 ($57,149) and EX07 ($15,134) Weapon System Engineering Integration & Test is responsible for all engineering efforts required to translate approved Ballistic Missile Defense System (BMDS) requirements into THAAD requirements, the implementation of those requirements into a THAAD design and capability, and the verification and validation of THAAD capability. Activities include coordination and requirements analysis, system integration, software engineering to include independent verification and validation, configuration management, integration of the THAAD components into the THAAD element, and BMDS integration of the THAAD element. THAAD WSEIT is responsible for risk management, system security, and information assurance. WSEIT emphasis remains the testing, verification and validation of the THAAD capability and to continue to develop limited peer-to-peer engagement coordination (TADIL-J communication and implementation of Joint Range Extension to execute regional defense missions). WSEITs accomplishments include: -Provided support to the flight test program at Pacific Missile Range Facility (PMRF) including FTT-11 (THAAD Intercept Flight Test) (No Test) and FTT-14 (THAAD Intercept Flight Test) -Conducted pre-flight testing for two flight test events FTT-11 and FTT-14 (THAAD Intercept Flight Tests) in the System Integration Laboratory (SIL) Hardware-in-the Loop (HWIL) facility			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Continued System Analysis and mission planning in support of three flight test events: FTT-11, FTT-12, and FTT-14 (THAAD Intercept Flight Tests). -Continued to provide analysis in support of THAAD Government Ground Testing, and tracking and identification of alternatives for corrective actions test observations -Provided both planning and technical assistance to fielding of THAAD Battery #1 to the Army at Force Development Experimentation (FDE), Limited User Test (LUT) and THAAD participation in Juniper Cobra 2010 -Initiated Element Verification of THAAD capability to meet requirements from THAAD system specification -Continued integration and implementation of THAAD and its components in the BMDS through participation in MDA Ground Test Campaign and Combatant Commander (COCOM) war games, and exercises, and Performance Assessments -*Continued the development and integration of Simulation-Over-Live Driver (SOLD) into the flight test program and Ballistic Missile Defense System (BMDS) ground test campaign -Continued to support Insensitive Munitions/Final Hazard Classification (IM/FHC) design and testing -Demonstrated the THAAD Prototype Planner which is an offline tool for defense and engagement planning -Demonstrated THAAD communications with C2BMC and Aegis BMD over Extremely High Frequency (EHF) Satellite Communications (SATCOM) -Conducted engineering, integration, and coordination activities in support of development of suitability statements for THAAD Materiel Release -Initiated the planning for software requirements development and preliminary design reviews for the Post Deployment Software Support (PDSS) builds for each THAAD component -**Continued the development of the THAAD BMDS to include resolution process for correlation issues involving Link-16 Tracks, enhanced engagement coordination by adding J7.7 association message to our external interface -Conducted THAAD interoperability planning with joint and coalition planning systems demonstrated in Joint Project Optic Windmill (JPOW 10) -Developed designs for Launch on Link 16 based BMD System Track (formerly Launch on BMDS System Track) which is the ability to initiate an engagement from sensor data from BMDS sources outside of the THAAD Battery to launch THAAD Interceptors -Updated THAAD interface specifications and interface control documents for required BMDS changes -Initiated support planning for BMDS Flight Test events for THAAD interoperability, engagement coordination, and debris mitigation with other BMDS Elements to include PATRIOT, Aegis BMD, C2BMC and Space Tracking and Surveillance System (STSS) -Participated in Scenario Certification, Mission Planning, and Mission Readiness Reviews for BMDS test events -Initiated consolidation of Engineering Teams and databases for Requirements and Trouble Reports to include integration and test facilities			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT MD07: *THAAD*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Initiated the design, development, and integration of hardware and software to combine the capability of Simulation-Over-Live-Drive (SOLD), Concurrent Test, Training and Operation (CTTO), and Distributed Multi-Echelon System (DMeTs) into a CTTO capability -Continued to assess THAAD capability against BMDS allocated threat -Continued to evaluate incremental hardware/software build capabilities for BMDS Test Events * Simulation-Over-Live Driver (SOLD) is an enabling activity to demonstrate THAAD`s Multi-Target Engagement capability on FTT-11 and FTT-14 (THAAD Intercept Flight Tests). ** These enabling activities will allow delivery of the THAAD Launch on Link 16 based BMD System Track capability which is the ability to initiate an engagement from sensor data from BMDS sources outside of the THAAD Battery to launch THAAD Interceptors.			
FY 2011 Plans: -Continue pre-flight testing (trajectory, debris, nominal and tolerance scenario analyses) in the System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) facility -Continue integration and implementation of THAAD and its components in the BMDS through participation in MDA Ground Test Campaign and Combatant Commander (COCOM) war games, and exercises, as well as Performance Assessments -Continue System Analysis and mission planning in support of two flight test events: FTT-12 and FTT-13 (THAAD Intercept Flight Tests). -Conduct analysis of Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data collected during flight testing -Complete the re-accreditation of the Simulation-Over-Live-Driver (SOLD) to include upgraded hardware platforms and the Radio Frequency Scene Generator (RFSG) -Continue to support Insensitive Munitions/Final Hazard Classification (IM/FHC) testing to support transportation of Interceptor in a Single Missile Round Transport Container (SMRTC) -Attain Army Materiel Fielding Release -Continue THAAD interoperability planning with joint and coalition planning systems -Update THAAD battle management design for System Track processing which is the ability to use sensor data from BMDS sources outside of the THAAD Battery -**Develop designs for Launch on BMD Overhead Persistent Infra-Red (OPIR) Architecture (BOA), Remote Sensor, and Link 16 Based BMD System Track data for weapon system utilization -Update THAAD interface specifications and interface control documents for required BMDS changes			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Continue support planning for BMDS Flight Test events for THAAD interoperability with other BMDS Elements -Continue to evaluate incremental hardware/software capabilities for BMDS Test Events -Continue participation in flight Scenario Certification, Mission Planning, and Mission Readiness Review BMDS test events -Continue consolidation Engineering Teams and databases for Requirements and Trouble Reports to include integration and test facilities -Design, develop, qualification test, release, field, and support incremental first annual release of Post Deployment Software Support (PDSS) builds and automated test tools for each THAAD component * New capability developed for FY 2011 ***FY 2012 Plans:*** Plans include scope that was previously documented in THAAD element breakouts: System Engineering, THAAD Fire Control and Communication, Launcher, Interceptor, and Batteries #1 and #2. -Deliver 24 Interceptors for Batteries #1 and #2 that were purchased with FY 2007 through FY 2011 funds -Continue to support C2BMC in the integration of Extremely High Frequency (EHF) and Super High Frequency (SHF) communications capabilities into the THAAD weapon system -Continue in the design, development, qualification testing, release, field, and support incremental release of Post Deployment Software Support (PDSS) builds for each THAAD component -Continue the development of automated test tools for PDSS activities -Continue to provide real-time closed loop system and component testing utilizing THAAD hardware-in-the-loop (HWIL) facilities -Conduct analysis of Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data collected during flight testing -Determine impacts to Joint data link standard MIL-STD-3011 by assessing interoperability capabilities of THAAD system, concept of operations, and developed Software (S/W) -Continue development of Netted Embedded Training to enable THAAD Battery participation in common training scenarios, near real time with other THAAD Batteries, lower tier units, other elements of the Ballistic Missile Defense System (BMDS) (through Distributed Multi-Echelon Training Systems) -Continue to develop, maintain, and integrate THAAD Integrated Simulation and Tactical Software (ISTS) into BMDS digital framework and conduct Verification, Validation and Accreditation (VV&A) for Simulation-Over-Live-Driver (SOLD), ISTS at the THAAD Evaluation Center (TEC) HWIL facility			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Continue Models and Simulations (M&S) development to support Element and BMDS events including all Integrated Master Test Plan (IMTP) M&S related activities to include System Pre Mission Tests (SPMTs) and System Post Flight Reconstruction (SPFRs) -Update THAAD interface specifications and interface control documents for required BMDS changes -Conduct threat assessments of the BMDS Adversary Development Package (ADP) -Continue in the design, development, and integration of the THAAD planner interface with C2BMC planning initiatives -Continue THAAD interoperability planning with joint and coalition planning systems -Continue in the redesign, development, and requalification testing of the Optical Block and Flight Sequencing Assembly and complete Ignition System Safety Review Board (ISSRB) testing of optical block re-design -Implement Mandatory Information Assurance Updates and perform Information Assurance Vulnerability Assessments (IAVA) on all THAAD component software -Rehost, test, and qualify new Launcher Operating System to minimize Information Assurance vulnerabilities			
Title: THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) ***Articles:*** ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget projects BX07 ($24,151) -Delivered the Formal Release of TFCC Software Build 5.2 -Maintained TFCC Software build 5.2 featuring Solaris 10 and Information Assurance for the Foreign Exercise, Flight Test, and Fielding -Conducted Service Level (Army) Certification Test in support of Army Interoperability Certification Testing -Completed Government Ground Test including completion of Natural Environments Testing, E3, Altitude and Rail Impact Testing -Coordinated and verified implementation of software updates in preparation for Ballistic Missile Defense System (BMDS) tests (FTT-11, FTT-14, FTX-06, JFTM-3, GTX-04A, GTI-04B), exercises and fielding -Completed Army Interoperability Certification Testing, Joint Interoperability Certification Testing, and obtained an Interim Certificate to Operate (ICTO) -Ensured Compliance with Information Assurance (IA) requirements, and conducted Joint Interoperability Certification Testing, incorporated information assurance settings within tactical assets and implementing a 90 day cycle to mitigate future IA concerns -Prototyped design and began implementation of the Link 16 requirements for MIL-STD-6016D to maintain Joint Interoperability Test Command (JITC) Certification	- 0	27.634 0	- 0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Conducted Fire Control Obsolescence Assessment to determine design changes required to address obsolete hardware and sustainability requirements for fielded TSGs and future Batteries -Completed baseline design update in identifying Tactical Support Group changes required for incorporating satellite communications and joint tactical interfaces for Battery 1 and 2 TSGs and future TSG production -Provided technical support to fielding of THAAD Battery #1 to the Army at Force Development Experimentation (FDE) and Limited User Test (LUT) and THAAD participation in Juniper Cobra 2010 -Began implementation of the Fire Control Obsolescence resolution for hardware, software and GFI (Common Message Processor (CMP), Common User Interface (CUI), Common Data Link Interface Module (CDLIM)) for future Batteries -Conducted and began implementation of Post Deployment Software Support (PDSS) Planning and Analysis to incorporate THAAD Fire Control and Communication (TFCC) soldier requested capabilities, approved Link-16 interface change proposals/ MIL-STD-6016D extracts, Software Change Requests, and improved Interoperability by mitigating track ID proliferation issue between THAAD and Aegis BMD into the first PDSS Engineering Build -Upgraded the TFCC development environments to Solaris 10 and TFCC SW Build 5.2 -Supported the Integrated Operational Capability Demonstration -Supported C2BMC in the integration of Extremely High Frequency (EHF) communications capabilities into the TFCC component by demonstrating proof of concept during FTT-14 (THAAD Intercept Flight Test), completing tactical design, conducting contract award, and procuring long lead hardware for prototype modification kits -Continued the design and implementation of BMDS requirements including Link 16 update requirements to support BMDS to include correlation, engagement coordination and planning -Supported Concurrent Test, Training and Operations (CTTO) software development and integration -*Supported concept development for Launch on Link 16 based BMD System Track and Sensor Management in support of the BMDS -Initiated THAAD Portable Planner development and integration via THAAD Defense Planner Prototype (TDP2) enhancement which is an offline tool for defense and engagement planning to support THAAD integration into Army and theater-level ballistic missile defense planning * This enabling activity will allow delivery of the THAAD Launch on Link 16 based BMD System Track capability, which is the ability to initiate an engagement from sensor data from BMDS sources outside of the THAAD Battery to launch THAAD Interceptors and is an addition of the BMDS Integrated Build D. ***FY 2011 Plans:***			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
The THAAD Fire Control and Communication (TFCC) is composed of two Tactical Station Groups (TSGs). Each TSG consists of a Tactical Operations Station, a Launch Control Station, and a Station Support Group. The TFCC serves as the interface with the Ballistic Missile Defense System (BMDS) and provides planning, control, coordination, execution, and communications necessary to fulfill the THAAD mission in a coherent and fully integrated fashion. It is interoperable with external air and missile defense and intelligence systems and agencies integrated into the BMDS. TFCC software changes, to include, improvement to Link 16 track correlation and engagement coordination with other BMDS elements; and external interface changes for integration of Command, and Control/Battle Management and Communications (C2BMC) Enhanced Communications are being incorporated. -Conducted TEMPEST Testing, using implemented hardware updates, to address known vulnerabilities identified in previous TEMPEST test events -Continued support of C2BMC in the integration of Extremely High Frequency (EHF) communications capabilities into the TFCC component by completing the prototype EHF modification kit and testing the new TSG EHF communication capabilities in support of Joint Interoperability Test Command (JITC) assessment/certification testing. TFCC will conduct EHF testing in January as part of the assessment -Supporting C2BMC in the integration of Extremely High Frequency (EHF) communications capabilities into the TFCC component -Deliver and install four EHF WIN_T Modification Kits for the A/2 and A/4 Tactical Station Groups Tactical Test Beds -Deliver and install four EHF WIN_T Modification Kits for the Tactical Test Beds -Initiate development of Netted Embedded Training (Netted ET) to enable THAAD Battery participation in common training scenarios, near real time with other THAAD Batteries, lower tier units, other elements of the Ballistic Missile Defense System (BMDS) (through Distributed Multi-Echelon Training System) -Support Flight Test program at Pacific Missile Range Facility (PMRF) -Continue implementation of Post Deployment Software Support (PDSS) Planning and Analysis to incorporate THAAD Fire Control and Communication (TFCC) Soldier requested capabilities, Software Change Requests, Information Assurance Updates, and improved Interoperability by mitigating track ID proliferation issue between THAAD and Aegis BMD via Link 16 upgrades into subsequent PDSS Builds ***FY 2012 Plans:*** Plans for this scope are now included in THAAD element breakouts: Weapon System Engineering Integration & Test and System Test			
Title: Launcher ***Articles:*** ***Description:*** See Description Below	- 0	15.174 0	- 0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: Funding for these FY 2010 accomplishments are reported in prior year budget projects BX07 ($8,758) and EX07 ($1,725) -Provided engineering services and technical supported System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) integration activities to include maintenance and updates for hardware and software -Provided engineering and technical support at Pacific Missile Range Facility (PMRF) for FTT-11 and FTT-14 (THAAD Intercept Flight Tests) -Completed Carrier Electronics Module (CEM) Qualification Testing -Completed Software Build 4.02.04 to support FTT-11 and FTT-14 (THAAD Intercept Flight Tests) -Completed support of Concurrent Missile/Launcher Electromagnetic Environmental Effect (E3) Government Ground Testing -Continued Obsolescence Redesign effort to determine resolution for obsolete Carrier Electronics Module (CEM) hardware including Single Board Computer, Hard Drives and Launcher Computer Control Unit sub-back plane -Completed support of Launcher Environmental Government Ground Testing -Provided mission support during contingency operations at PMRF -Provided technical support for Force Development Experimentation (FDE), Limited User Test (LUT), and Reliability demonstrations ***FY 2011 Plans:*** -Received delivery of the Department of Defense Form 250 (DD250) for Launcher Test Bed #5 on 15 December 2010 -Completed Condition of Assembly At Release and Transfer (CART) of Software Build 4.02.04B on 9 December 2010 -Provide engineering and technical support at Pacific Missile Range Facility (PMRF) for FTT-12 (THAAD Intercept Flight Test) -Provide engineering services and technical supported System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) integration activities to include maintenance and updates for hardware and software -Support software development to support FTT-12 (THAAD Intercept Flight Test) ***FY 2012 Plans:*** Plans for this scope are now included in THAAD element breakouts: Weapon System Engineering Integration & Test and System Test.			
Title: System Test ***Articles:*** ***Description:*** See Description Below ***FY 2010 Accomplishments:***	- 0	63.322 0	99.299 0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Funding for these FY 2010 accomplishments are reported in prior year budget projects BX07 ($92,821) System Test is responsible for developing and executing the THAAD Flight Test program, Live Fire Test and Evaluation (LFT&E) program, Government Ground Test (GGT) program, range facility preparations, data analysis and reporting. -Continued flight test planning and analysis, range interface, coordination with Operational Test Agencies (OTAs), flight test operations, post-flight test analysis and reporting, data distribution and data storage at Pacific Missile Range Facility (PMRF) -Continued flight test planning and analysis, range interface and facilities design, flight test operations concepts, post-flight test analysis and reporting, data distribution and data storage requirements, and Uniformed Documentation System (UDS) requirements for missions at Reagan Test Site (RTS). Directed to stop efforts in 3QFY10 -Provided test execution, data management, facilities operations, and post test analysis and reporting support in support of BMDS System Tests including FTT-11 (THAAD Intercept Flight Test), FTT-14 (THAAD Intercept Flight Test), JFTM-3, FTX-06, USFT-4, Government Ground Test -Defined and interpreted THAAD target requirements and assessed proposed target solutions for flight test program -Monitored targets design, development, delivery, and execution to support flight test program -*Collected and analyzed Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data from flight testing -Provided data for Operational Assessment Report to support Materiel Release -Initiated support planning for BMDS Ground and Flight Test events for THAAD interoperability with other BMDS Elements -Completed Live Fire Test & Evaluation (LFT&E) Test Program and supported lethality assessments -Completed Light Gas Gun (LGG) Developmental Testing as a part of LFT&E and supported assessments -Completed Force Development Experiment (FDE) and Limited User Test (LUT) -Completed Electromagnetic Environmental Effects (E3) Interceptor and Launcher Test: Interceptor and Launcher Design Verification Test (DVT)/Government Ground Testing (GGT) including the Missile Round Pallet/Launcher (MRPL) Electromagnetic Radiation Operational (EMRO), MRPL Near Strike Lighting (NSL), and Missile Round Pallet (MRP) Direct Strike Lighting (DSL) testing -Supported completion of E3 THAAD Fire Control and Communication (TFCC) Test: Personnel Electrostatic Discharge (PESD) and EMRO testing at Redstone Test Center (RTC), Huntsville, AL and High Altitude Electromagnetic Pulse (HEMP) and NSL testing at White Sand Missile Range (WSMR), NM -Completed E3 Battery Support Center (BSC) Test: PESD at RTC, Huntsville, AL and HEMP and NSL testing at WSMR, NM -Completed E3 Radar Test: Radar testing at Pax River, Maryland.			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Completed HEMP, EMRO, most of NSL, most of PESD, and started Electromagnetic Radiation Hazard (EMRH) Deployed testing. -Conducted System Level Natural Environments Tests with TFCC, Launcher, Radar, and BSC at Eglin Air Force Base, FL -Completed Interceptor drop testing and E3 Ground Testing -Completed TFCC, Launcher, Radar, and Battery Support Center (BSC) Mobility Performance and Automotive Safety Government Ground Testing (GGT) -Conducted Hot and Cold Full Spectrum Missile Safety Testing (MST) of two missile rounds at RTC, Huntsville, AL to support issuance of a safety confirmation statement for THAAD fielding -Continued Insensitive Munitions/Final Hazard Classification (IM/FHC) design and testing including completion of Armor Panel Bullet and Fragment Impact Testing and Fragment Impact Test on Fueled Kill Vehicles with Booster Mock-up Canister to support transportation of Interceptor in a Single Missile Round Container (SMRTC) -Continued Radar Prime Power Unit (PPU) Mobility testing at Aberdeen Test Center (ATC), Maryland. Completed all of the automotive performance and safety testing -Completed Dual PPU failover testing -Completed THAAD System Reliability Demonstration -Initiated planning of GGT Cold Region Demonstration -Completed Rail Impact testing of the TFCC Launch Control Station (LCS) / Tactical Operations Station (TOS) shelters, Cable Support Vehicle (CSV) and Family of Medium Tactical Vehicle (FMTV) M-1085-A1 5 Ton truck -Continued GGT data management, distribution, and archival/storage -Completed the design of transportable launch and test support equipment * CEC/EMEs are the conditions and events where data is obtained from flight and ground test in order to anchor models and simulations			
FY 2011 Plans: -Completed Hot Full Spectrum Missile Safety Testing (MST) of two missile rounds at RTC, Huntsville, AL to support issuance of a safety confirmation statement for THAAD fielding on 21 October 2010. Cold Full Spectrum MST to be completed 13 January 2011 -Participate in Ballistic Missile Defense System (BMDS) Flight Tests FTT-12 (THAAD Intercept Flight Test) -Define and interpret THAAD target requirements and assess proposed target solutions for flight test program -Provide data management, facilities operations, and post test analysis and reporting support for the BMDS System Test -Continue flight test planning and analysis, range interface, coordination with Operational Test Agencies (OTAs), flight test operations, post-flight test analysis and reporting, data distribution and data storage at Pacific Missile Range Facility (PMRF)			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Monitor targets design, development, delivery, and execution to support flight test program -Collect and analyze Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data from flight testing -Support development of Operational Assessment Report -Complete Insensitive Munitions/Final Hazard Classification (IM/FHC) testing including Fast Cook-off, Slow Cook-off, Drop Test, Bullet Impact and Fragment Impact testing of Interceptor configuration with Thermal Initiated Venting System (TIVS) to support transportation of Interceptor with TIVS in a Missile Round Pallet (MRP) and Single Missile Round Transport Container (SMRTC) -Complete Government Ground Test (GGT) data management, distribution, and archival/storage -Continue support of lethality assessment ***FY 2012 Plans:*** Plans include scope that was previously documented in THAAD element breakouts: THAAD Fire Control and Communication, Launcher, and Interceptor. -Support Flight Test, Ground Test, Mission Planning, Performance Assessment, Systems Analysis, and Range Safety analysis in accordance with IMTP v10.2 -Continue flight test planning, range interface, coordination with Operational Test Agencies (OTAs) and execution of flight test operations at Pacific Missile Range Facility (PMRF) for FTT-13 (THAAD Intercept Flight Test) and FTO-01 (BMDS Operational Flight Test) -Continue flight test planning, range interface, coordination with Operational Test Agencies (OTAs) at Pacific Missile Range Facility (PMRF) for FTT-15 (THAAD Intercept Flight Test) -Support planning and execution of BMDS interoperability exercises and overlays -Provide data management, facilities operations, and post-test analysis and reporting support in support of BMDS System Tests -Monitor targets design, development, delivery, and execution to support flight test program -Support pre-flight testing in the System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) facility -Conduct JITC and Army certification testing to support incremental release of Post Deployment Software Support (PDSS) builds for THAAD Fire Control & Communication (TFCC) -Collect and analyze Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data from flight testing -Onsite range support for THAAD component maintenance, repair and fueling -Continue to provide pre-mission planning, pre and post mission analysis, reporting support, and execution to BMDS Ground Test campaigns			
Title: Integrated Logistics Support (ILS)	-	23.024	-
Articles:	0	0	0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Description: See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget project BX07 ($26,408) Provide maintenance and transportation for each THAAD component and ensure Government Furnished Equipment (GFE) is available as required. In coordination with the user, develop and maintain training and training equipment and conduct training for THAAD Battery fielding. -Completed a Performance Based Logistics (PBL) strategy working in conjunction with the Army -Completed Logistics documentation for Type Classification and Materiel Release Review Board (MRRB) -Completed Logistics products required for Sustainment Strategy including Logistics Management Information (LMI) and Spares) -Procured Missile Handling Equipment (Side Lift Forklift) to support ingress and egress operations for bunker storage at Anniston Munitions Center (ANMC) -Performed THAAD missile round Stockpile to Target pathfinder mission -Update/maintain training materials and courseware as a result of Lessons Learned from Battery #1 Collective Training, Force Development Experimentation and Limited User Test -Completed effort for Baseline Capability Development TFCC Netted Embedded Training -Completed Missile Round Trainers (24) for Battery #2 -Continued THAAD Integrated Logistics Support (ILS) 24 hour maintenance and supply operations center -Finalized and distributed the Final Materiel Fielding Plan, Materiel Fielding Agreement and Materiel Requirements List for Battery #2 -Finalized the Depot Maintenance Study to identify reparable items and facilities/tools required for Depot Maintenance Perform a Level of Repair Analysis (LORA) -Continued to coordinate and conduct transportation operations for THAAD Flight Test Interceptors, Ground Components, and Simulation-Over-Live-Driver (SOLD) hardware -Participated in Force Development Experimentation (FDE) and Limited User Test (LUT) -Updated the Unique Identification (UID) Plan; commence Unique Item Identifier marking; update the UID Registry -Published Demilitarization/Disposal Plan -Selected Product Support Integrator; identify Product Support Providers; develop and publish Performance Based Agreements (PBAs)			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Provided technical support and transportation at Pacific Missile Range Facility (PMRF) for FTT-11 and FTT-14 (THAAD Intercept Flight Tests) -Completed the Battery Support Cost (BSC) Government Ground Test program mobility and Natural Environmental testing -Completed the BSC Government Ground Test program Electromagnetic Environmental Effects (E3) testing -Completed 8 Single Missile Round Transportation Container (SMRTCs) -Completed 1 Missile Transport Trailer (MTT) -Completed 4 Single Missile Round Transport Trailers (SMRTTs) -Completed 5 Tactical Active Leak Sensor Systems -Completed Battery #2 ground component hardware integration -Initiated New Equipment Training for Battery #2 -Continued Fix or Fight documentation -Created Depot Maintenance Support Plan -Completed Missile Supply Bulletin -Continued development of Interactive Electronic Technical Manual (IETM) ***FY 2011 Plans:*** -Conduct Material Release Board with Army -Provide technical support and transportation at Pacific Missile Range Facility (PMRF) for FTT-12 (THAAD Intercept Flight Test) -Complete Core Logistics Assessment and Core Depot Assessment/Source of Repair Analysis -Finalize Depot Maintenance Support Plan -Complete New Equipment Training (NET) for Battery #2 -Initiate Collective Training for Battery #2 -Initiate Institutional Conduct of Fire (ICOFT) design and acquisition -Complete Mobile Training Devices to support Battery sustainment ***FY 2012 Plans:*** Plans for this scope are now included in Maintenance, Training and Transportation.			
Title: Interceptor	-	27.726	-
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: Funding for these FY 2010 accomplishments are reported in prior year budget project BX07 ($94,657)			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
The THAAD Interceptor is a certified round that is propelled by a single-stage, solid-propellant rocket booster. Its Kill Vehicle (KV) possesses a Divert and Attitude Control System (DACS) and an infrared Seeker used to destroy its target through hit-to-kill technology. -Continued Interceptor ground test program to verify missile requirements -Continued production and delivery of interceptors to support ground and flight testing -Provided engineering and technical support at Pacific Missile Range Facility (PMRF) for FTT-11 and FTT-14 (THAAD Intercept Flight Tests) -Continued ground testing and interceptor safety tests -Provided hardware for Insensitive Munitions/Final Hazard Classification (IM/FHC) testing -Inspect and refurbish Flight Test STS Vehicle and installed Range Safety Instrumentation System (RSIS) components to support flight tests -Continued Interceptor and Interceptor component delta qualification -Continued engineering support of Battery Interceptor production -Continued Flight Sequencing Assembly (FSA) design changes to support Ignition System Safety Review Board (ISSRB) requirement (integration of optical block) -Performed assembly design changes and conducted re-qualification testing on Flight Sequencing Assembly, Optical Block, and Heatshield -Supported planning and execution of Ballistic Missile Defense System (BMDS) Integration tests -Evaluated missile performance against real world scenarios and potential threats -Initiated development and fabrication of test instrumentation kits to support BMDS flight tests -Continued stockpile reliability test program and development of the Missile Stockpile Test Set -Prepared documentation/reports for submission to Materiel Release Review Board -Provided mission support during contingency operations at Pacific Missile Range Facility (PMRF) -Refurbished two Block Qualification Test interceptors and support government ground safety tests -Initiated procurement of additional Range Safety Instrumentation Safety (RSIS) kits -Maintained formal release of Interceptor software ***FY 2011 Plans:*** -Complete Interceptor ground test program to verify missile requirements and support Materiel Release Review Board (MRRB) -Continue to support Insensitive Munitions/Final Hazard Classification (IM/FHC) testing			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Continue the qualification testing of the Flight Sequencing Assemblies, Optical Blocks, and Automated Test Consoles to prove compliance with MIL-STD-331 requirements -Complete (2) Missile Stockpile Test Sets and support stockpile reliability test program -Provide engineering and technical support at Pacific Missile Range Facility (PMRF) for FTT-12 -Continue engineering support of Battery Interceptor production -Continue to support planning and execution of BMDS Integration tests -Evaluate missile performance against real world scenarios and potential threats -Continue development and fabrication of test instrumentation kits to support BMDS flight tests ***FY 2012 Plans:*** Plans for this scope are now included in THAAD element breakouts: Weapon System Engineering Integration & Test and System Test.			
Title: Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar ***Articles:*** ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget projects BX07 ($51,742) and EX07 ($270) The Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) (THAAD Mode) Radar is a solid state, phased array radar capable of tracking multiple threats and multiple interceptors during engagements. The radar uses fence, volume, and cued search modes, and provides surveillance, acquisition, track, discrimination, interceptor communications, and hit assessment data collection for the fire control. The radar hardware is a transportable system composed of the Antenna Equipment Unit, Electronics Equipment Unit, Cooling Equipment Unit, and the Prime Power Unit (PPU). The manufacturing cost associated with the AN/TPY-2 (THAAD Mode) Radars for THAAD Batteries are provided for under the Sensors Program Element. -Continued to support the flight test program at Pacific Missile Range Facility (PMRF) -Continued to maintain Formal Release of Software Build 4.2.4 -Completed Government Ground Testing	- 0	24.640 0	- 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Provided technical support to fielding of THAAD Battery #1 to the Army at Force Development Experimentation (FDE) and Limited User Test (LUT) and THAAD deployment in Joint Project Optic Windmill ***FY 2011 Plans:*** -Support the BMDS flight test program -Complete the re-accreditation of the Simulation-Over-Live-Driver (SOLD) to include the Radio Frequency Scene Generator (RFSG) ***FY 2012 Plans:*** These plans are now in the Sensor Program Element.			
Title: Batteries #1 and #2 ***Articles:*** ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget project BX07 ($168,849) Incremental funding for Batteries #1 and #2 which are composed of a basic load of 48 Interceptors, six Launchers (one provided by the development contract), two Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) (THAAD Mode) Radars (provided by Sensors Program Element), 4 THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) (two provided by the development contract), the required Peculiar and Common Support Equipment, and two Interceptors for flight test (provided to development contract). Following operational testing, the Batteries will be fielded to the Army starting in FY 2011. -Continued assembly of tactical Interceptors -Delivered three Launchers -Complete Battery #2 ground component hardware integration -Delivered one flight test vehicle -Completed BSC #2 -Completed ICSS #2 ***FY 2011 Plans:*** -Deliver 30 Interceptors and 1 flight test vehicle ***FY 2012 Plans:***	- 0	63.851 25	- 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Plans for this scope are now included in THAAD element breakout: Weapon System Engineering Integration & Test			
Title: Sustainment	-	85.985	-
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: Funding for these FY 2010 accomplishments are reported in prior year budget project XX07 ($36,937) Operations & Sustainment Support of THAAD Batteries provides for logistical support to field, operate, maintain, repair and replenish the THAAD weapon system as it fielded to the Army. Contractor Logistics Support (CLS) technicians are responsible for field and sustainment maintenance including the repair and supply chain management of the required spares and repair parts, as well as providing engineering support services and software maintenance support. The Operations & Sustainment Support associated with the Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radars allocated to THAAD Batteries are provided for under the Sensors Program Element. -Continued THAAD field support/Contract Logistics Support (CLS) for Battery #1 and #2 hardware -Completed software maintenance plan required for Post Deployment Software Sustainment (PDSS) -Provided maintenance support for components tactical software -Continued procurement of replenishment spares -Supported Force Development Experimentation (FDE) and Limited User Test (LUT) for Battery #1 -Supported New Equipment Training for Battery #2 -Provided Supportability Engineering and Planning Support			
FY 2011 Plans: -Continue THAAD field support/CLS for Battery #1 and #2 hardware -Provide maintenance support for components tactical software -Continue procurement of replenishment spares -Support New Equipment Training and Collective Training for Battery #2 -Initiate Battery #1 Replacement Training -Provide Supportability Engineering and Planning Support			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
This effort moved to Defense Wide Operations and Maintenance Appropriation.			
Title: Program Management	-	14.301	-
Articles:	0	0	0
Description: See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget project BX07 ($19,706) Program Management provides procurement support function across the program such as strategic planning, program integration, cost estimating, contracting, and financial management. This includes preparation of financial statements, reimbursement of financial services provided by Defense Finance Accounting Service (DFAS), internal review and audit, earned-value management, and program assessment. -Provided management, leadership, and planning for all activities -Provided salaries, travel, training, and supplies -Continued to provide project-wide programmatic support (Program Management and Integration (PM&I) ***FY 2011 Plans:*** -Provide management, leadership, and planning for all activities -Provide support to the Advanced Capability Development System Requirements Review (SRR) -Provide salaries, travel, training, and supplies -Continue to provide project-wide programmatic support (Program Management and Integration (PM&I) ***FY 2012 Plans:*** FY 2012 activities are included in Weapon System Engineering Integration & Test			
Title: Modeling and Simulations	-	13.090	7.113
Articles:	0	0	0
Description: See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments are reported in prior year budget project BX07 ($32,096)			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
The THAAD element will support the BMDS Hardware-in-the-Loop (HWIL) Modeling and Simulation Program by providing and integrating into the BMDS system-level HWIL single stimulation framework to support full-envelope BMDS ground test, flight test, and training events based upon Agency and warfighter needs. BMDS HWIL provides development, integration, and test funding to both MDA and non-MDA Elements participating in the BMDS ground test campaigns. BMDS HWIL also provides the core Lethality and Phenomenology models for use in analysis and BMDS and Element mission requirements. BMDS HWIL additionally maintains the Advanced Research Center and Simulation Center High Performance Computing Capabilities to support test and Modeling and Simulation (M&S) requirements across MDA. -Continued to develop, integrate, and test a common Ballistic Missile Defense (BMDS) HWIL stimulation framework with the Elements for the GTI-04, GTD-04 ground tests -Conducted BMDS HWIL stimulation framework Verification and Validation (V&V) for BMDS GTI-04 and GTD-04 ground tests -Defined and planned for enhancement to the Single Stimulation Framework (SSF) required for execution of the GT-05 campaign to include identification of interdependencies required for execution -Provided development, Operations and Maintenance, and Independent V&V of standardized phenomenology and lethality tools and models for the common environmental toolset -Provided support to integrate common Radar Digital Signal Injection System (RDSIS) for X-Band radars -Evolved and enhanced the SSF to provide increased Warfighter support, specifically Training and Exercises Integrate the SSF with additional Allied/Coalition elements to expand Distributed Ground Test and Exercise venues Initiate the technical integration of the SSF with the Digital Stimulation Architecture -Product Line development, sustainment, maintenance and product support for HWIL products -Planned, developed, integrated and tested a common Ballistic Missile Defense System (BMDS) Hardware-in-the-Loop (HWIL) stimulation framework with the Elements for the GTX, GTI, GTD ground tests, Active Layered Theatre Ballistic Missile Defense (ALTBMD) exercises, Assured Response (AR) exercises, Foreign Exercises, Near-Term Discrimination (NTD) excursions tests, and Concurrent Test, Training, and Operations (CTTO) demos -Conducted BMDS HWIL stimulation framework V&V for BMDS GTX, GTI, GTD ground tests, ALTBMD exercises, Assured Response (AR) exercises, Foreign Exercises, and Concurrent Test, Training and Operations (CTTO) demos -Provided systems engineering support to upgrade the BMDS stimulation framework to support wideband debris for BMDS sensors -Initiated integration of the BMDS stimulation framework with the additional sensors; provide common threat representations and scenarios to meet specific event and customer requirements for BMDS HWIL Framework			
FY 2011 Plans:			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
-Develop and deliver releases of M&S digital products: Digital Simulation Architecture framework for use in Technical Assessments; Missile Defense Space-warning Tool (MDST) for use in Technical Assessments and Warfighter Exercises; BMD International Simulation for use in International virtual BMD demonstrations, BMD education, and Warfighter wargames -Integrate, test, functionally qualify, and deliver BMDS constructive Performance Assessment Simulation (utilizing DSA and MDST) to support full-envelope BMDS performance assessment for Technical Assessments -Continue software operations/maintenance 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 Technical Assessments -Provide transitional DSA framework/modeling support to C2BMC software Spiral Testing for MDA`s release of C2BMC v8.x development -Procure, install and maintain Performance Assessment Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL			
FY 2012 Plans: -Develop and delivered major releases of M&S digital products: Digital Simulation Architecture framework for use in Performance Assessment as part of the CD04 Operational Test, real-time venues including Warfighter Exercises, Warfighter Training, C2BMC software Spiral Testing for MDA`s release of C2BMC v8.x development, and Ground Test campaign; Missile Defense Space warning Tool (models validated space-borne assets of BMDS) for use in Performance Assessments and Warfighter Exercises; BMD International Simulation for use in International virtual BMD demonstrations, BMD education, and Warfighter wargames -Integrate, test, functionally qualify, and deliver end-to-end BMDS simulations supporting various uses: Performance Assessment Simulation (utilizing DSA, MDST, and Element-provided high-resolution models) to support full-envelope BMDS performance assessment for Performance Assessment events; Real-time Digital Simulation (utilizing DSA, 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 Assessment events -Control and maintain Performance Assessment Simulation "ensembles" for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL			
Title: Maintenance, Training and Transportation	-	-	49.956
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
All FY 2010 activities are funded in Integrated Logistic Support in project BX07 ($26,408) ***FY 2011 Plans:*** All FY 2011 activities are funded in Integrated Logistic Support ($23,024) ***FY 2012 Plans:*** Plans include scope that was previously documented in THAAD element breakouts: Integrated Logistics Support Provide maintenance and transportation for each THAAD component and ensure Government Furnished Equipment (GFE) is available as required. In coordination with the user, develop and maintain training and training equipment and conduct training for THAAD Battery fielding. -Continue support of THAAD Hybrid Army Cell Operations and Support to include Labor and Administrative Services -Provide supportability planning & analysis, training oversight, peculiar support equipment, transportation controls, deployment and sustainment support -Complete Collective Training for Battery #2 -Continue to plan for THAAD New Equipment Training (NET) and Collective Training for Batteries 3 through 9 -Continue to plan, update, manage and conduct replacement training in support of fielded systems -Provide maintenance support on multiple hardware and software configurations of THAAD components -Continue maintenance, operations and transportation in support of the THAAD development -Refurbishment of one Tactical Station Group in preparation for Institutional Training -Continue production of Institutional Conduct for Fire Trainer (ICOFT) -Complete design and initiate production of Radar March Order & Emplacement Trainer (MOET) -Continue support of Army requirement for additional training devices For Institutional Training Base (ITB) based on update to System Training Plan (STRAP)			
Title: Project Redwood- Details at a Higher Classification ***Articles:*** ***Description:*** See Description Below ***FY 2010 Accomplishments:*** N/A ***FY 2011 Plans:***	- 0	- 0	21.839 0

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
N/A ***FY 2012 Plans:*** This project is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress.			
Accomplishments/Planned Programs Subtotals	-	420.463	276.667

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0603884C: *Ballistic Missile Defense Sensors*	544.352	454.859	222.374		222.374	357.271	336.514	318.321	348.944	Continuing	Continuing
• 0603888C: *Ballistic Missile Defense Test and Targets*	737.863	1,113.425	1,071.039		1,071.039	898.680	790.906	787.113	878.215	Continuing	Continuing
• 0603892C: *BMD AEGIS*	1,418.992	1,467.278	960.267		960.267	957.992	1,001.510	970.607	1,033.710	Continuing	Continuing
• 0603896C: *BMD C2BMC*	327.074	342.625	364.103		364.103	330.337	353.081	338.835	304.217	Continuing	Continuing
• 0603911C: *BMD EUROPEAN CAPABILITY*	47.342	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	47.342
• 0603913C: *ISRAELI COOPERATIVE*	195.652	121.735	106.100		106.100	99.873	95.819	96.840	103.977	Continuing	Continuing
• Line Number 33: *THAAD*	419.004	858.870	833.150		833.150	728.561	921.781	955.514	745.430	Continuing	Continuing

D. Acquisition Strategy

The planned acquisition strategy for Advance Capability Development activities is for modification to the existing Development contract and award of Task Order contract, targeted for award in FY 2011. The program is posturing for potential competitive awards of select components in FY 2013. Continuation of a Sole Source Task Order Delivery Order Contract for Field Support and Contractor Logistics Support is included.

E. Performance Metrics

N/A

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Weapon Sys Engr Integ & Test (WSEIT) Lockheed Martin 14 MD07	SS/CPAF	LMSSC:Sunnyvale, CA; Huntsville, AL	98.406	25.104	Nov 2010	73.587	Nov 2011	-		73.587	Continuing	Continuing	Continuing
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) LMSSC and Raytheon MD07	SS/CPAF	LMSSC and Raytheon:Huntsville, AL	71.645	18.611	Nov 2010	-		-		-	100.168	190.424	118.779
Launcher Lockheed Martin 15 MD07	SS/CPAF	LMSSC:Huntsville, AL	22.773	8.628	Nov 2010	-		-		-	77.255	108.656	85.883
Integrated Logistics Support (ILS) Lockheed Martin 17 MD07	SS/CPAF	LMSSC/Sunnyvale, CA:Huntsville, AL	66.395	13.417	Nov 2010	-		-		-	136.300	216.112	149.717
Interceptor Lockheed Martin 18 MD07	SS/CPAF	LMSSC:CA/ TX,AL,MA,NH,IL,FL & MD	163.811	14.426	Nov 2010	-		-		-	182.761	360.998	197.186
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar Lockheed Martin 19 MD07	SS/CPAF	Raytheon:Bedford, MA	272.399	21.852	Nov 2010	-		-		-	102.111	396.362	123.963
Batteries #1 and #2 Lockheed Martin 20 MD07	SS/CPIF	LMSSC:Sunnyvale, CA; Huntsville, AL; NM & HI	570.467	63.851	Nov 2010	-		-		-	0.000	634.318	63.851
Batteries #1 and #2 Raytheon MD07	SS/CPIF	Raytheon :Wolburn, MA; Huntsville, AL	56.000	-		-		-		-	Continuing	Continuing	Continuing
Sustainment Lockheed Martin 21 MD07	SS/CPIF	LMSSC and Raytheon:CA/ TX,AL,MA,NH,IL,FL & MD	70.967	85.985	Nov 2010	-		-		-	0.000	156.952	85.985
Program Management Lockheed Martin 15 MD07	SS/CPAF	LMSSC:Sunnyvale, CA; Huntsville, AL	61.152	5.694	Nov 2010	-		-		-	65.511	132.357	71.205
Modeling and Simulations Teledyne Brown Eng MD07	SS/CPAF	THAAD, Huntsville, AL:Huntsville, AL	34.145	13.090	Nov 2010	7.113		-		7.113	26.318	80.666	39.408
		Subtotal	1,488.160	270.658		80.700		-		80.700			

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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Weapon Sys Engr Integ & Test (WSEIT) Contract Support Services (CSS) 1 MD07	C/FFP	Dynetics, BAE & L3:Huntsville, AL & Salt Lake City, UT	31.040	5.771	Nov 2010	13.641	Nov 2011	-		13.641	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) Other Government Agencies (OGA) 1 MD07	MIPR	RDEC :Huntsville, AL	38.981	24.075	Nov 2010	5.477	Nov 2011	-		5.477	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) MDA Program Support 1 MD07	Various	MDA:Arlington, VA	39.459	6.766	Nov 2010	5.755	Nov 2011	-		5.755	Continuing	Continuing	Continuing
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) Contract Support Services 2 MD07	C/FFP	Dynetics, DCD, & Davidson Tech:Silver Spring, MD & Huntsville, AL	3.392	2.107	Nov 2010	-		-		-	8.810	14.309	10.917
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) Other Government Agencies 2 MD07	MIPR	NRDEC, RDEC :Natick, MA & Huntsville, AL	0.960	3.643	Nov 2010	-		-		-	9.443	14.046	13.086
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) MDA Program Support 2 MD07	Various	MDA:Arlington, VA	12.592	3.273	Nov 2010	-		-		-	7.958	23.823	11.231
Launcher Contract Support Services (CSS) 3 MD07	C/FFP	Teledyne Solutions:Huntsville, AL	1.914	1.600	Nov 2010	-		-		-	6.691	10.205	8.291
Launcher Other Government Agencies 3 MD07	MIPR	RDEC :Huntsville, AL	0.835	2.767	Nov 2010	-		-		-	7.172	10.774	9.939
Launcher MDA Program Support 3 MD07	Various	MDA:Huntsville, AL	6.309	2.179	Nov 2010	-		-		-	6.018	14.506	8.197
System Test Contract Support Services (CSS) MD07	C/CPFF		52.941	3.659	Nov 2010	-		-		-	Continuing	Continuing	Continuing

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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Multiple to include Dynetics, L3 & TSI:Huntsville, AL											
System Test Other Government Agency (OGA) MD07	MIPR	Multiple to include WSMR, PMRF, ATEC, RDEC & SMDC:NM, HI, VA & Huntsville, AL	174.436	33.930	Nov 2010	-		-		-	Continuing	Continuing	Continuing
System Test MDA Program Support MD07	Various	MDA:Arlington, VA	26.666	4.779	Nov 2010	3.300	Nov 2011	-		3.300	Continuing	Continuing	Continuing
Integrated Logistics Support (ILS) Contract Support Services 5 MD07	C/FFP	Dynetics, TST.BAE:Huntsville, AL; & Rockville, MD	20.065	3.520	Nov 2010	-		-		-	14.721	38.306	18.241
Integrated Logistics Support (ILS) Other Government Agencies 5 MD07	MIPR	IMMC & USAADASCH:Huntsville, AL; & Fort Bliss, TX	16.562	6.087	Nov 2010	-		-		-	15.777	38.426	21.864
Integrated Logistics Support (ILS) MDA Program Support 15 MD07	MIPR	CECOM, TACOM, GSA, RDEC & SMDC:Ft. Monmouth, NJ; Warren, MI & Huntsville, AL	4.570	-	Nov 2010	-		-		-	8.985	13.555	8.985
Interceptor Contract Support Services (CSS) 6 MD07	C/FFP	Dynetics & GA Tech:Huntsville, AL & GA	17.586	4.800	Nov 2010	-		-		-	20.074	42.460	24.874
Interceptor Other Government Agencies 6 MD07	MIPR	RDEC & SMDC:Huntsville, AL	10.735	8.300	Nov 2010	-		-		-	21.515	40.550	29.815
Interceptor MDA Program Support 5 MD07	Various	MDA:Huntsville, AL	7.263	0.200	Nov 2010	-		-		-	9.935	17.398	10.135
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar MDA Program Support 6 MD07	Various	MDA:Arlington, VA	1.420	2.788	Nov 2010	-		-		-	8.079	12.287	10.867
Army Navy/Transportable Radar Surveillance - Model	MIPR	Multiple to include CECOM, RDEC &	1.598	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT MD07: *THAAD*	

Support ($ in Millions)

				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
2 (AN/TPY-2) Radar Other Government Agency MD07		SMDC:Ft. Monmouth, NJ & Huntsville, AL											
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar Contract Support Services MD07	C/CPFF	Multiple to include Dynetics & GA Tech:Huntsville, AL & GA	2.367	-		-		-		-	Continuing	Continuing	Continuing
Batteries #1 and #2 GFE MD07	MIPR	Multiple to include CECOM, TACOM, GSA, RDEC & :Ft. Monmouth, NJ; Warren, MI & Huntsville, AL	1.945	-		-		-		-	Continuing	Continuing	Continuing
Sustainment GFE MD07	MIPR	Multiple to include CECOM, TACOM, GSA, RDEC & SMDC:Huntsville, AL	0.424	-		-		-		-	Continuing	Continuing	Continuing
Program Management Contract Support Services 4 MD07	C/FFP	Dynetics, BAE & Tecolote:Huntsville, AL	15.241	2.560	Nov 2010	-		-		-	10.706	28.507	13.266
Program Management Other Government Agencies 4 MD07	MIPR	IMMC & USAADASCH:Huntsville, AL & Fort Bliss, TX	1.788	4.427	Nov 2010	-		-		-	11.474	17.689	15.901
Program Management MDA Program Support 4 MD07	Various	MDA:Arlington, VA	7.874	1.620	Nov 2010	-		-		-	4.873	14.367	6.493
Maintenance, Training and Transportation Lockheed Martin 30 MD07	SS/CPAF	LMSSC:Sunnyvale, CA/ Huntsville, AL	-	-		31.000	Nov 2011	-		31.000	Continuing	Continuing	Continuing
Maintenance, Training and Transportation Other Government Agency MD07	MIPR	RDEC:Huntsville,AL/ FT Bliss, TX	-	-		16.900	Nov 2011	-		16.900	Continuing	Continuing	Continuing
Maintenance, Training and Transportation MDA Program Support 10 MD07	Various	MDA:Huntsville, AL	-	-		2.056	Nov 2011	-		2.056	Continuing	Continuing	Continuing
	SS/FP	N/A:N/A	-	-		21.839	Oct 2011	-		21.839	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT MD07: *THAAD*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Redwood- Details at a Higher Classification Special Programs MD07													
		Subtotal	498.963	128.851		99.968		-		99.968			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test BMDS Level Testing MD07	SS/CPAF	LMSSC, Dynetics, WSMR, PMFR, ATEC, RDEC and SMDC:Sunnyvale, CA; Huntsville, AL; NM & HI	50.848	20.954	Dec 2010	95.999	Jan 2012	-		95.999	Continuing	Continuing	Continuing
		Subtotal	50.848	20.954		95.999		-		95.999			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,037.971	420.463		276.667		-		276.667			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Launcher Build 4 S/W Formal Release Integrated at SIL	1	2010	1	2010
AN/TPY Radar B4.2 Formal Update Rel	1	2010	1	2010
Advanced Capability Modification to Development Contract	1	2010	1	2010
Conduct FTT-11 (THAAD Intercept Flight Test) (No Test)	1	2010	1	2010
Fire Control and Comm B5 S/W Formal Rel of Information Assurance	1	2010	1	2010
Launcher Block Qualification Test (BQT)	1	2010	3	2010
Fire Control and Comm Block Qual Test (BQT) Comp	1	2010	3	2010
Insensitive Munitions/Hazards Testing Phase 3	1	2010	4	2010
AN/TPY-2 Block Qual Test (BQT)	1	2010	4	2010
Interceptor Block Qualification Test	2	2010	4	2010
GTX-04a (Regional Focused HWIL Test)	2	2010	2	2010
Battery #2 Ground Components/Battery Support Center Deliveries Complete	2	2010	2	2010
Field Support and CLS FY 2010 Contract Award	2	2010	2	2010
Conduct FTT-14 (THAAD Intercept Flight Test)	3	2010	3	2010
Interceptor Delivery for FTT-14 (THAAD Intercept Flight Test)	3	2010	3	2010
GTI-04b (Full BMDS Integrated Test)	4	2010	4	2010
THAAD System B1 S/W Formal Release	1	2011	1	2011
Block Qualification Test (BQT) Completion	2	2011	2	2011
Interceptor Block Qualification Test-2	2	2011	2	2011
Element Weapon System Verification	2	2011	2	2011
Battery #1 8th Interceptor Delivery	2	2011	2	2011
Advanced Capability Development SRR	2	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD07: *THAAD*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Advanced Capability Development Contract Award	2	2011	2	2011
Insensitive Munitions/Hazards testing Phase 4	2	2011	3	2011
Conduct FTT-12 (THAAD Intercept Flight Test)	4	2011	4	2011
Interceptor (1 of 2) Deliver for FTT-12 (THAAD Intercept Flight Test)	4	2011	4	2011
Interceptor (2 of 2) Deliver for FTT-12 (THAAD) Intercept Flight Test	4	2011	4	2011
Battery #1 Interceptor Deliveries Complete	4	2011	4	2011
Advanced Capability Development Element Design Review (EDR)	1	2012	1	2012
Battery #2 Interceptor Deliveries Complete	2	2012	2	2012
Interceptor Delivery for FTT-13 (THAAD Intercept Flight Test)	3	2012	3	2012
Conduct FTT-13 (THAAD Intercept Flight Test)	3	2012	3	2012
Update to THAAD System Spec, PIDS, ICDs	4	2012	4	2012
Conduct FTO-01 (Aegis/THAAD/PATRIOT Multiple Engagement Flight Test)	4	2012	4	2012
Conduct FTT-11a (THAAD Intercept Flight Test)	3	2013	3	2013
THAAD System B2 S/W Formal Release	4	2013	4	2013
Complete Institutional Conduct of Fire trainer (ICOFT)	1	2014	1	2014
Conduct FTT-15 (THAAD Intercept Flight Test)	3	2014	3	2014
THAAD System B3 S/W Formal Release	4	2015	4	2015
Elements Requirements Verification	4	2015	4	2015
Conduct FTO-2 (GMD/Aegis/THAAD/PATRIOT Multiple Engagement Flight Test)	4	2015	4	2015
Complete Institutional Training Devices	2	2016	2	2016
Conduct FTT-17 (THAAD Intercept Flight Test)	3	2016	3	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT WX06: *Patriot Advanced Capability-3 (PAC-3)*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
WX06: *Patriot Advanced Capability-3 (PAC-3)*	20.961	-	-	-	-	-	-	-	-	0.000	20.961
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project WX06 Patriot Advanced Capability-3 (PAC-3) has been transferred to Project MD06 Patriot Advanced Capability (PAC-3).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Patriot Advanced Capability-3 (PAC-3)	20.961	-	-
Articles:	0		
Description: See Description Below			
FY 2010 Accomplishments: -SW Coding, Performance Testing, Flight Testing, & Integration scheduled as part of PDB-7.0 Test & Fielding Program.			
Accomplishments/Planned Programs Subtotals	20.961	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT MD06: *Patriot Advanced Capability-3 (PAC-3)*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD06: *Patriot Advanced Capability-3 (PAC-3)*	-	1.200	1.230	-	1.230	1.182	1.138	1.153	1.239	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

PATRIOT Advanced Capability (PAC 3) is one of the most mature elements of the Ballistic Missile Defense System and is now operational with the U.S. Army. It is a land-based element built upon the proven PATRIOT air and missile defense infrastructure.

The PATRIOT Advanced Capability-3 System was deployed to the Middle East as part of Operation Iraqi Freedom where it successfully engaged several ballistic missiles.

The Army is responsible for production and further development of Advanced Capability-3 System; the Missile Defense Agency remains responsible for the Ballistic Missile Defense System interoperability and integration efforts.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: General Support	-	1.200	1.230
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: -SW Coding, Performance Testing, Flight Testing, & Integration scheduled as part of PDB-7.0 Test & Fielding Program. Funding for these FY2010 accomplishments are reported in prior year budget project WX06 Patriot Advanced Capability-3 (PAC 3) ($20,961).			
FY 2011 Plans: -Support the day to day tasking that is leveraged upon Lower Tier Project Office (LTPO) by MDA based on the Transfer and Transition Plan Annex L.			
FY 2012 Plans: -Support the day to day tasking that is leveraged upon Lower Tier Project Office (LTPO) by MDA based on the Transfer and Transition Plan Annex L.			
Accomplishments/Planned Programs Subtotals	-	1.200	1.230

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD06: *Patriot Advanced Capability-3 (PAC-3)*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The design objective of the PATRIOT system is to provide an element of the Ballistic Missile Defense System capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*		PROJECT MD06: *Patriot Advanced Capability-3 (PAC-3)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
General Support Evolutionary Development Program (EDP) Task 2 MD06	SS/FFP	Multiple:Multiple	32.360	-		-		-		-	32.360	64.720	32.360
		Subtotal	32.360	-		-		-		-	32.360	64.720	32.360

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
General Support General Support MD06	C/FFP	ITT/CAS:Huntsville, AL	1.160	1.200	Jan 2011	1.230	Jan 2012	-		1.230	Continuing	Continuing	Continuing
		Subtotal	1.160	1.200		1.230		-		1.230			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	33.520	1.200		1.230		-		1.230			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD06: *Patriot Advanced Capability-3 (PAC-3)*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD06: *Patriot Advanced Capability-3 (PAC-3)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Task 2 Follow-On CDR	3	2010	3	2010
Task 2 Follow-On PDR	1	2010	1	2010

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT ZX40: *Program-Wide Support*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
ZX40: *Program-Wide Support*	38.690	-	-	-	-	-	-	-	-	0.000	38.690
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Project ZX40 has been transferred project MD40.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Civilian Salaries and Support	38.690	-	-
Articles:	0		
Description: See Description Below			
FY 2010 Accomplishments: NA			
Accomplishments/Planned Programs Subtotals	38.690	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	PROJECT MD40: *Program-Wide Support*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD40: *Program-Wide Support*	-	14.819	12.555	-	12.555	14.612	15.444	16.077	14.731	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of 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. Other costs included provide facility capabilities for MDA Executing Agent 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, 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 among the PEs on a pro-rata basis and therefore fluctuates by year based on the total MDA budget and the individual PE`s budget amount.

Funding for the FY 2010 accomplishments is reported in prior year budget project ZX40 ($35,902).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Civilian Salaries and Support	-	14.819	12.555
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: Funding for the FY 2010 accomplishments is reported in prior year budget project ZX40 ($35,902).			
FY 2011 Plans: See paragraph A, Mission Description and Budget Item Justification			
FY 2012 Plans: See paragraph A, Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	-	14.819	12.555

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	**PROJECT** MD40: *Program-Wide Support*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

NA