

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Justification						Date May 2009		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603904C Missile Defense Integration & Operations Center (MDIOC)				

COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total PE Cost	77,102	106,040	86,949					
CX22 Missile Defense Integration & Operations Center (MDIOC) - Block 3.0	0	21,826	23,343					
YX22 Missile Defense Integration & Operations Center (MDIOC) Core	72,901	81,435	61,539					
ZX40 Program-Wide Support	4,201	2,779	2,067					

A. Mission Description and Budget Item Justification

A.1 System Element Description

The Missile Defense Integration and Operations Center (MDIOC) is MDA's field operating activity in Colorado Springs, CO. It provides the necessary infrastructure and support services through a mission execution platform for nine MDA elements/components and designated Combatant Commanders' Ballistic Missile Defense System (BMDS) operations executing missions at the MDIOC. The MDA/IC is the organization responsible for providing a single, integrated set of skilled personnel matrixed from MDA Functionals to manage this mission execution platform. The MDIOC mission execution platform consists of a highly secure research and development complex and a mission support facility located within a military installation (Schriever AFB) that is adjacent to and North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM). As a mission execution platform supporting MDA efforts, the MDIOC hosts and supports the Ground-based Midcourse Defense (GMD)'s Mission Control Center Facility (MCCF) that is utilized for both flight and distributed ground tests; the C2BMC's Integration and Test Centers (BITCs) and Experimentation Laboratories (X-Labs); the Space Tracking and Surveillance System (STSS)'s Missile Defense Space Experimentation Center (MDSEC); the Targets & Countermeasure's Joint Target Operations Center (JTOC); and the Enterprise Network Operations and Support Center for the Agency's Chief Information Officer (CIO). For the COCOMs, the MDIOC provides infrastructure support for USNORTHCOM's C2BMC Command and Control Center; United States Strategic Command (USSTRATCOM)'s Joint Functional Component Command-Integrated Missile Defense (JFCC-IMD); and the Missile Defense Element (MDE) manned by the 100th Missile Defense Brigade. The MDA/IC organization directly supports the missions of the Warfighter Support Center, the BMDS Ground Test, and MDA's BMDS Digital Modeling and Simulation effort to develop applications vital to BMDS wargaming and system testing. The MDA/IC provides mission critical system technical capabilities and subject matter expertise in a dedicated and adaptable environment that enables developers, testers, and operators to evolve, assess and quickly deliver the capabilities required for layered missile defense execution and homeland defense. The MDIOC interfaces with the MDA Information Technology/Information Assurance Enterprise to provide high availability access to worldwide secure communications connectivity, network health and status monitoring, mission critical restoral capability, and technical expertise for all MDA directed activities and events

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<p>performed on-site. Additionally, the MDIOC functions (within MDA's capabilities-based acquisition strategy) as the only system-level integration and interoperability mission execution platform for BMDS fire control; and it provides the physical interface between the developers and the Combatant Commanders.</p> <p><u>A.2 System Element Budget Justification and Contribution to the Ballistic Missile Defense System (BMDS)</u></p> <p>The MDIOC mission execution platform contributes to the BMDS by directly supporting the concept of Concurrent Test, Training, and Operations (CTTO) for the BMDS. The MDIOC accomplishes this by providing engineering integration, resource scheduling, configuration management, and implementation development support for MDA and BMDS-level test, training, and operational mission execution. The MDA/IC provides engineering integration by: implementing the technical event architectures for the models and simulations used to support missile defense planning seminars, wargames, exercises, tests, and analyses; supporting the planning and execution of the only end-to-end operator-in-the-loop/element-in-the-loop missile defense wargames accomplished by the Warfighter Support Center; supporting BMDS Critical Engagement Conditions (CEC) testing and analysis by operating the Test Execution Control (TEC) for distributed BMDS ground tests; and, providing network operations and information assurance for all on-site integration activities. The MDIOC mission execution platform provides BMDS-level operational support by: integrating and sustaining the enabling infrastructure, services, and processes that support the operation of designated elements of the BMDS and resident Combatant Command (COCOM) operations and/or support centers; providing technical support for the BMDS Watch Officers (BWOs), BMDS Safety Officers (BSOs), and Information Assurance Officers in their efforts to monitor and assess the health and status of the networks and elements that impact BMDS test and operations; operating the Joint Early Warning Laboratory (JEWL) for anomaly resolution; and supporting the Intelligence Support Center (ISC) for critical situational awareness intelligence on worldwide ballistic missile developments that could affect the development and/or operation of the BMDS.</p> <p><u>A.3 Major System Element Goals</u></p> <p>Missile Defense Integration and Operations Center (MDIOC) Major Program Goals</p> <ul style="list-style-type: none">• Provide the capabilities and services necessary to support engineering integration, resource scheduling, configuration management, and implementation development support of on-site activities• Ensure around the clock support and restoration of designated on-site operational activities• Improve physical interface with designated COCOM missile defense activities; host/support the headquarters and operations center for USSTRATCOM's Joint Functional Component Command - Integrated Missile Defense (JFCC-IMD)		

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<ul style="list-style-type: none"> Continue to achieve cost effectiveness and efficiencies through the leveraging of existing MDIOC infrastructure, services, processes, and expertise to support assigned missions Maintain and improve as designated the reliability, availability, and maintainability of mission critical systems 			
<u>A.4 Major Events Schedule and Description</u>			
Major Event	Project	Timeframe	Description
Contract Activity			
C2BMC Control Center Support			
BMDS Network Operations Support Build	CX22	1Q FY 2009 - 2Q FY 2009	
CCC Facility Upgrade	CX22	2Q FY 2009 - 3Q FY 2009	
BMDS Network Operations Support Build	CX22	4Q FY 2009	
CCC Facility Upgrade	CX22	4Q FY 2009	
C2BMC Testbed			
BITC Spiral 8.2 Upgrades	CX22	3Q FY 2010 - 4Q FY 2010	
Emulated Host Center Services Upgrades			
Spiral 8.2 Upgrades	CX22	4Q FY 2010	
Global Engagement Manager (GEM)			
GEM Spiral 8.2 Test Env #1	CX22	2Q FY 2010	
GEM Spiral 8.2 Test Env #2	CX22	3Q FY 2010	
GEM Spiral 8.2 Test Env #3	CX22	4Q FY 2010	
System Test Control Room			
System Test Control Room	CX22	4Q FY 2009 - 1Q FY 2010	
Infrastructure Repair and Sustainment			
Recapitalization AF Tenant Space 1201 Ph 1 & 2	YX22	1Q FY 2009 - 2Q FY 2009	
Uninterruptible Power Supply Replacement Design/Demo/Site Prep	YX22	1Q FY 2009 - 2Q FY 2009	
Recapitalization AF Tenant Space 1201 Ph 1 & 2	YX22	3Q FY 2009 - 4Q FY 2009	
Uninterruptible Power Supply Replacement Design/Demo/Site Prep	YX22	3Q FY 2009 - 4Q FY 2009	
Uninterruptible Power Supply Replacement Install	YX22	3Q FY 2009 - 4Q FY 2009	
Uninterruptible Power Supply Replacement Install	YX22	1Q FY 2010 - 2Q FY 2010	
Recapitalization AF Tenant Space 1201 Ph 1 & 2	YX22	3Q FY 2010 - 4Q FY 2010	
MDIOC Wargame and Exercise Participation: Baseline Configuration Integrity and Mission Assurance			
Vigilant Shield 09	YX22	1Q FY 2009	
Keen Edge 09	YX22	2Q FY 2009	
Assured Response 09A	YX22	3Q FY 2009	

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Major Event	Project	Timeframe	Description
Eagle Resolve	YX22	3Q FY 2009	
Global Thunder 09	YX22	3Q FY 2009	
Terminal Fury 09	YX22	3Q FY 2009	
Global Lightning 10	YX22	1Q FY 2010	
JC-10	YX22	1Q FY 2010	•
Keen Edge 10	YX22	1Q FY 2010	•
Vigilant Shield 10	YX22	1Q FY 2010	
Assured Response 04A	YX22	2Q FY 2010	
EC OITL 09	YX22	2Q FY 2010	
JC-10	YX22	2Q FY 2010	•
Keen Edge 10	YX22	2Q FY 2010	•
JC-10	YX22	3Q FY 2010	•
Keen Edge 10	YX22	3Q FY 2010	•
Nimble Titan 10	YX22	3Q FY 2010	
JC-10	YX22	4Q FY 2010	•
Keen Edge 10	YX22	4Q FY 2010	•
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance			
FTG-05	YX22	1Q FY 2009	
GT-198 (TOO)	YX22	1Q FY 2009	
GTD-03	YX22	1Q FY 2009	
GTX-03c	YX22	1Q FY 2009	
JFTM-02	YX22	1Q FY 2009	
AEP Test Campaign	YX22	1Q FY 2009 - 2Q FY 2009	
Patriot 7-2	YX22	2Q FY 2009	
PA09	YX22	2Q FY 2009 - 3Q FY 2009	
ATM-48	YX22	3Q FY 2009	
FTM-15	YX22	3Q FY 2009	
GT-195 (TOO)	YX22	3Q FY 2009	
AEP Test Campaign	YX22	3Q FY 2009 - 4Q FY 2009	
FTG-06	YX22	4Q FY 2009	
FTK-01	YX22	4Q FY 2009	
FTT-11	YX22	4Q FY 2009	
FTX-06	YX22	4Q FY 2009	
GTX-04a	YX22	4Q FY 2009	
PA09	YX22	4Q FY 2009 - 1Q FY 2010	
BVT-01	YX22	1Q FY 2010	

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Major Event	Project	Timeframe	Description
FCE-C Distr	YX22	1Q FY 2010	
FCE-C HW IL	YX22	1Q FY 2010	
FTT-12 THF-15-I	YX22	1Q FY 2010	
FTX-06 E2,3,4	YX22	1Q FY 2010	
G-17-L	YX22	1Q FY 2010	
G-27-L	YX22	1Q FY 2010	
G-28-L	YX22	1Q FY 2010	
G-29-L	YX22	1Q FY 2010	
GT-200	YX22	1Q FY 2010	
JFTM-03	YX22	1Q FY 2010	
P2RF-23-T	YX22	1Q FY 2010	
FTK-02	YX22	2Q FY 2010	
FTS-01	YX22	2Q FY 2010	
G-01b-L	YX22	2Q FY 2010	
GTI-04	YX22	2Q FY 2010 - 3Q FY 2010	
Contingency Ops	YX22	3Q FY 2010	
FTT-13 THF-04-I	YX22	3Q FY 2010	
GMD 3 Stg Int	YX22	3Q FY 2010	
GTD-04	YX22	3Q FY 2010	
P2RF-39-T	YX22	3Q FY 2010	
F-10a-T (CDU)	YX22	4Q FY 2010	
F-10b-Non-C-TOO	YX22	4Q FY 2010	
GTX-05b	YX22	4Q FY 2010	
P2RF-24-T	YX22	4Q FY 2010	
P2RF-25-I (FTM-16)	YX22	4Q FY 2010	
PA10	YX22	4Q FY 2010	

B. Program Change Summary	FY 2008	FY 2009	FY 2010	FY 2011
Previous President's Budget (FY2009 PB)	78,557	96,404	100,437	0
Current President's Budget (FY2010 PB)	77,102	106,040	86,949	0
Total Adjustments	-1,455	9,636	-13,488	0
Congressional Program Reductions	0	0	0	0
Congressional Rescissions	0	0	0	0
Total Congressional Increases	0	9,636	0	0
Total Reprogrammings	-204	0	0	0

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B. Program Change Summary	FY 2008	FY 2009	FY 2010	FY 2011
SBIR/STTR Transfer	-1,251	0	0	0
Adjustments to Budget Years	0	0	-13,488	0

FY08 Program Changes: The decrease of \$1.455 million includes SBIR/STTR transfer and MDA reprogrammings.

FY09: Program Changes: The increase of \$10.000 million reflects Modeling and Simulations Congressional add; the decrease of \$.364 million reflects MDA programmatic changes to support BMDS priorities.

FY10 Program Changes: The decrease of \$13.488 million reflects MDA programmatic changes to support BMDS priorities.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date May 2009		
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)				
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COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
CX22 Missile Defense Integration & Operations Center (MDIOC) - Block 3.0	0	21,826	23,343					
RDT&E Articles Qty	0	0	0					

Note: CX22 Project was funded within the Command and Control, Battle Management, and Communications (C2BMC) program under CX01 in FY08 and accomplishments are captured under that project.

A. Mission Description and Budget Item Justification

The C2BMC Testbed located at the Missile Defense Integration and Operations Center (MDIOC) supports the program office by providing the test articles, test environment, analysis tools, and communications interfaces to conduct Element Verification, Hardware-in-the-Loop Tests, and Systems Test programs. The testbed provides systems and support to recurring warfighter training, exercises, and war-game events. In addition, the C2BMC Testbed maintains the Experimentation Lab (X-Lab) where advanced concepts, new technology, and risk reduction prototypes are developed and tested. The C2BMC Testbed also provides infrastructure support to the warfighter by managing the requirements and facilities for the C2BMC Control Center (CCC) and the Distributed Multi-echelon Training System (DMETS). The Joint Early Warning Lab (JEWL) is a computing and analysis resource located at the Missile Defense Integration and Operations Center (MD IOC). The JEWL is used by several tasks to support analysis and studies to assess and improve theater Early Warning (EW) and Ballistic Missile Defense (BMD) performance. The different Technical Requirement Document (TRD) tasks using the JEWL support Missile Defense Agency (MDA), United States Strategic Command (USSTRATCOM) and Joint Integrated Air and Missile Defense Organization (JIAMDO) with resources and Subject Matter Expertise (SME)s in a wide variety of disciplines including early warning, tactical communications, data links, tactical data processors and theater EW architectures and radar Infrared (IR) integration efforts.

The JEWL is the USSTRATCOM designated facility for testing all changes or additions to the Theater Event System (TES) architecture. JEWL replicates all known theater EW architecture and maintains a replay capability for fault isolation, anomaly identification, and can modify data to isolate anomalies. JEWL supports BMD system by providing timely analysis and comparisons of BMD and legacy EW data. Quick Reports and Comparison Reports provide MDA/BC timely insight into the OverheadNon-Imagining Infrared (ONIR) data provided to C2BMC by ground processors and C2BMC reporting. The JEWL brings together the technical and operational EW communities.

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010	FY 2011
C2BMC Test Beds	0	19,722	21,194	
RDT&E Articles (Quantity)	0	0	0	

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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The C2BMC Test Beds function as the core integration activity for exercising, evaluating, analyzing and refining advanced missile defense concepts that can then be used to improve follow-on blocks to the BMDS. It does this by planning, providing technical support, and maintaining an infrastructure for executing Operator-in-the-Loop and Element-in-the-Loop Wargames; Joint Warfighter Exercises and Experiments; Missile Defense Ground Tests; C2BMC integration testing and experiments, and System Level Missile Defense Analyses. These activities allow the developer, tester, and operator to assess capabilities in the same operationally representative environment.

FY09 Planned Program:

- Build out and upgrade C2BMC Testbed to support integration and testing of C2BMC and Global Engagement Manager (GEM) suites
- Support interoperability and integration of the BMDS program elements
- Support conduct of system tests across flight tests, ground tests, sensor tests, and COCOM exercises using improved operational realistic architectures
- Sustain the C2BMC Components of the Distributed Multi-Echelon Distributed Training system (DMETS)
- Provide infrastructure support to the C2BMC Control Center (CCC) and the BMDS Network Operations and Security Center (BNOSC)
- Support conduct of C2BMC Experimentation (X-Lab) events to mature BMDS technologies such as BMDS Overhead Non-Imagining Infrared (ONIR) Architecture (BOA), Missile Defense / Missile Warning Integration, Discrimination Framework, Sensor Registration
- Operate the International Point of Presence (iPOP) in support of BMDS integration with NATO, friends, and allies

FY10 Planned Program

- Build out and upgrade C2BMC Testbed to support integration and testing of C2BMC and Global Engagement Manager (GEM) suites
- Support interoperability and integration of the BMDS program elements
- Support conduct of system tests across flight tests, ground tests, sensor tests, and COCOM exercises using improved operational realistic architectures
- Sustain the C2BMC Components of the Distributed Multi-Echelon Distributed Training system (DMETS)
- Provide infrastructure support to the C2BMC Control Center (CCC) and the BMDS Network Operations and Security Center (BNOSC)
- Support conduct of C2BMC Experimentation (X-Lab) events to mature BMDS technologies such as BMDS Overhead Non-imaging Infrared (ONIR) Architecture (BOA), refine C2BMC to BMDS Element interfaces, Missile Defense / Missile Warning Integration, Discrimination Framework
- Operate the International Point of Presence (iPOP) in support of BMDS integration with NATO, friends, and allies

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
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APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603904C Missile Defense Integration & Operations Center (MDIOC)

	FY 2008	FY 2009	FY 2010	FY 2011
Joint Early Warning Laboratory (JEWL)	0	2,104	2,149	
RDT&E Articles (Quantity)	0	0	0	

The Joint Early Warning Lab (JEWL) is a computing and analysis resource located at the Missile Defense Integration and Operations Center (MD IOC) used to support analysis and studies to assess and improve theater Early Warning (EW) and Ballistic Missile Defense (BMD) performance. It supports MDA, United States Strategic Command (USSTRATCOM) and Joint Integrated Air and Missile Defense Organization (JIAMDO) with resources and Subject Matter Expertise (SME)s in a wide variety of disciplines including early warning, tactical communications, data links, tactical data processors and theater EW architectures and radar IR integration efforts.

FY09 Planned Program

- Perform BMDS Early Warning test, integration and fielding support
- Maintain database on all missile events recorded since Jan 2003
- Perform United State Strategic Command (USSTRATCOM) Configuration Control Board (CCB) assessments of new systems for inclusion in Theater Missile Warning(TMW) Theater Event System (TES) Architecture
- Support testing and integration of TMW producer improvement initiatives testing
- Perform Early Warning communications integration
- Support integration and testing of the C2BMC Net Centric Architecture
- Provide BMDS C2BMC Test support
- Perform Operational Early Warning Anomaly Tracking and Analysis

FY10 Planned Program

- Perform BMDS Early Warning test, integration and fielding support
- Perform Joint Early Warning operational assessments and support
- Record data on all missile events broadcast over Theater Event System (TES)
- Maintain database on all missile events recorded since Jan 2003
- Perform USSTRATCOM Configuration Control Board (CCB) assessments of new systems for inclusion in Theater Missile Warning(TMW) TES Architecture
- Support testing and integration of TMW producer improvement initiatives testing
- Perform Early Warning communications integration

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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- Perform testing on new systems for inclusion into the TMW architecture
- Perform Early Warning Target of Opportunity (TOO) initial quick reports and comparative analysis
- Support integration and testing of the C2BMC Net Centric Architecture
- Provide BMDS C2BMC Test support
- Perform Operational Early Warning Anomaly Tracking and Analysis
- Provide BMDS C2BMC Early Warning Integration support
- Perform Operator/Warfighter TMW Exercise Data Analysis
- Provide and chair USSTRATCOM CCB Engineering Subgroup
- Establish the Early Warning Incident / Anomaly tracking database in support of the TMW CCB and BMDS EW SPT reporting and metrics tracking
- Upgrade JEWL hardware/software/communications
- Perform C2BMC display analysis
- Perform in-theater Health checks in support of the warfighter
- Perform Joint Early Warning support for BMDS Early Warning Special Product Team (EW SPT)

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C. Other Program Funding Summary									
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total Cost
PE 0603175C Ballistic Missile Defense Technology	106,437	119,308	109,760						-
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,034,478	956,686	719,465						-
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,198,664	1,507,481	982,922						-
PE 0603883C Ballistic Missile Defense Boost Defense Segment	503,475	400,751	186,697						-
PE 0603884C Ballistic Missile Defense Sensors	574,231	777,693	636,856						-
PE 0603886C Ballistic Missile Defense System Interceptors	330,874	385,493	0						-
PE 0603888C Ballistic Missile Defense Test and Targets	619,137	919,956	966,752						-
PE 0603890C Ballistic Missile Defense Enabling Programs	416,937	402,778	369,145						-
PE 0603891C Special Programs – MDA	193,157	175,712	301,566						-
PE 0603892C Ballistic Missile Defense Aegis	1,126,337	1,113,655	1,690,758						-
PE 0603893C Space Tracking & Surveillance System	226,499	208,923	180,000						-
PE 0603894C Multiple Kill Vehicle	223,084	283,481	0						-
PE 0603895C BMD System Space Program	16,237	24,686	12,549						-
PE 0603896C BMD C2BMC	439,997	288,287	340,014						-
PE 0603897C BMD Hercules	51,387	55,764	48,186						-
PE 0603898C BMD Joint Warfighter Support	45,400	69,743	60,921						-
PE 0603906C Regarding Trench	1,945	2,968	6,164						-
PE 0603907C Sea Based X-Band Radar (SBX)	155,244	146,895	174,576						-
PE 0603908C BMD Europ Intercep Site	0	362,007	0						-
PE 0603909C BMD Europ Midcourse Radar	0	76,537	0						-
PE 0603911C BMD European Capability	0	0	50,504						-
PE 0603912C BMD European Comm Support	0	27,008	0						-
PE 0603913C Israeli Cooperative	0	0	119,634						-
PE 0605502C Small Business Innovative Research BMDO	137,409	0	0						-
PE 0901585C Pentagon Reservation	5,971	19,667	19,709						-
PE 0901598C Management Headquarters – MDA	83,907	81,174	57,403						-

Note: The Ballistic Missile Defense System (BMDS) is an integrated, interoperable, global defense system. The programs which comprise the BMDS are interdependent.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date May 2009
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D. Acquisition Strategy

The strategy for C2BMC mission execution is to employ an integration contract to simultaneously perform all of the BMDS RDT&E tasks with integrated operation and sustainment. The C2BMC at the MDIOC is operated by missile defense subject matter experts composed of Government military and civilian personnel, JNIC Research and Development Contract, Federally Funded Research and Development Center, and JNIC Technical Advisory and Assistance Services.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date May 2009
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Subtotal Product Development										

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Subtotal Support Costs										

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
C2BMC Test Beds										
C2BMC Testbed	C/CPAF	MDIOC/Northrop Grumman Mission Systems/ Colorado Springs, CO	0	17,801	1/2Q	19,229	1/2Q			37,030
C2BMC Testbed	C/FFP	MDIOC/SRS/Mantech/ Colorado Springs, Co	0	1,091	N/A	1,135	N/A			2,226

Remarks

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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/Oblg Date	FY 2010 Cost	FY 2010 Award/Oblg Date	FY 2011 Cost	FY 2011 Award/Oblg Date	Total Cost
C2BMC Testbed	C/FFRDC	IDA/ Colorado Springs, Co	0	830	N/A	830	N/A			1,660
Joint Early Warning Laboratory (JEWL)										
JEWL	Various	MULT/ Colorado Springs, CO	0	2,104	1/2Q	2,149	N/A			4,253
Subtotal Test and Evaluation			0	21,826		23,343				45,169
Remarks										
IV. Management Services Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/Oblg Date	FY 2010 Cost	FY 2010 Award/Oblg Date	FY 2011 Cost	FY 2011 Award/Oblg Date	Total Cost
Subtotal Management Services										
Remarks										
Project Total Cost			0	21,826		23,343				45,169
Remarks										

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
C2BMC Control Center Support																																
BMDs Network Operations Support Build																																
CCC Facility Upgrade																																
C2BMC Testbed																																
BITC Spiral 8.2 Upgrades																																
Emulated Host Center Services Upgrades																																
Spiral 8.2 Upgrades																																
Global Engagement Manager (GEM)																																
GEM Spiral 8.2 Test Env #1																																
GEM Spiral 8.2 Test Env #2																																
GEM Spiral 8.2 Test Env #3																																
System Test Control Room																																
System Test Control Room																																

Legend			
	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date April 2009 Created: 4/15/2009		
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)				
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Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
C2BMC Control Center Support								
BMDS Network Operations Support Build		1Q-2Q,4Q						
CCC Facility Upgrade		2Q-3Q,4Q						
C2BMC Testbed								
BITC Spiral 8.2 Upgrades			3Q-4Q					
Spiral 8.2 Content Agreement		3Q						
Emulated Host Center Services Upgrades								
Spiral 8.2 Upgrades			4Q					
Global Engagement Manager (GEM)								
GEM Spiral 8.2 Test Env #1			2Q					
GEM Spiral 8.2 Test Env #2			3Q					
GEM Spiral 8.2 Test Env #3			4Q					
System Test Control Room								
System Test Control Room		4Q	1Q					

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date May 2009		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603904C Missile Defense Integration & Operations Center (MDIOC)				

COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
YX22 Missile Defense Integration & Operations Center (MDIOC) Core	72,901	81,435	61,539					
RDT&E Articles Qty	0	0	0					

Note:

A. Mission Description and Budget Item Justification

The Missile Defense Integration and Operations Center (MDIOC) supports the technical development integral to the mission execution platform for several critical Agency activities at the MDIOC. The MDIOC mission execution platform supports the Ground-based Midcourse Missile Defense Mission Control Center Facility, as well as the Command, Control, Battle Management, and Communications (C2BMC) Integration and Test Centers and the C2BMC Experimentation Laboratories. It provides infrastructure support for the Satellite Tracking and Surveillance System's Missile Defense Space Experimentation Center; the Targets and Countermeasures' Joint Target Operations Center; and the developmental support to the External Sensors Laboratory (ESL) as directed, of a common satellite ground station and sensor netting test bed for designated Ballistic Missile Defense System (BMDS) elements. It also supports BMDS Critical Engagement Conditions testing and analysis through the operation of the Test Execution Control node for distributed BMDS ground tests. The MDIOC provides the mission execution platform that supports operations of the Missile Defense Element, manned by the 100th Missile Defense Brigade, the United States Northern Command (USNORTHCOM) C2BMC Command and Control Center, and United States Strategic Command's (USSTRATCOM's) Joint Functional Component Command-Integrated Missile Defense (JFCC-IMD) and the Missile Defense Agency (MDA) Warfighter Support Center. In addition, the MDIOC mission execution platform supports the MDA Operations Support Center, which provides situational awareness of the health and status of the end-to-end BMDS and provides network subject matter expertise and technical reach back for the program elements and Combatant Commanders. Funds BMDS wargames and exercises in support of the warfighter. Funds Modeling and Simulation to provide and integrate digital modeling and simulation assets to the Digital System Architecture to form system-level constructive simulations for full-envelope BMDS performance assessment with surrogate capability for BMDS ground tests. The MDIOC maintains a technical repository of BMDS Implementation Architectures for real-time operations and configuration control; provides both state change management and asset management technical support for the BMDS; and provides the technical environment for BMDS Watch Officers, Safety Officers, and Information Assurance Officers to execute their assigned duties. The MDIOC also supports the operations of the Joint Early Warning Laboratory, which provides USSTRATCOM with quick response analyses of real-world launches, and rapid anomaly identification and resolution.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010	FY 2011
Infrastructure Systems and Support	19,181	22,355	19,185	
RDT&E Articles (Quantity)	0	0	0	

FY08 Accomplishments

- Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance)
 - Provided information technology, information management services, and information assurance to MDA elements/components, BMDS elements, and Combatant Command (COCOM) and warfighter operational elements resident at the MDIOC
 - Deployed and managed high availability data storage capacity in support of resident MDA elements/components
 - Responded to over 35,000 IT Requests for Service and ensured the completion of over 825 IT change management activities supporting BMDS operations, Test and Evaluation, and Administrative/General Services

- MDIOC Communication Services
 - Acquired and distributed mission critical unclassified and secure communications capability to ten resident MDA elements/components and BMDS and warfighter operational elements, managing 400 data paths
 - Upgraded voice network switching (Public Branch Exchange) capability
 - Provided communications and technical services in support of all Flight and Ground Test Missions at the MDIOC Facility

- Network Management Transport Services
 - Installed communications and networking infrastructure (hardware/software) in support of the mission and test requirements of resident MDA development, testing, training, and operational activities
 - Executed network operating system upgrades to the administrative and general services client and server infrastructure

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Information Assurance Systems<ul style="list-style-type: none">• Developed and maintained 15 Department of Defense Information Assurance Certification and Accreditation Process (DIACAP) accreditation packages; managed the Information Assurance Vulnerability Assessment Program and provided technical assistance to 8 Controls Validation Tests• Provided DIACAP package management, and ensured timely submissions to Information Assurance Manager/Designated Approving Authority (IAM/DAA) for MDA Admin/General Services (GENSER) and Event Packages• Performed architecture design, engineering, and configuration management reviews for over 100 projects• Managed the Information Assurance Vulnerability Assessment and Communications Tasking Order remediation and implementation compliance process• Infrastructure Implementation Engineering<ul style="list-style-type: none">• Provided the interface from the MDA Information Technology/Management Enterprise to resident MDA elements /components• Implemented intelligence hardware/software updates as required to support the Operations Support Center (OSC)• Provided MDIOC centric test event network related Detailed Designs in support of Test Events and real world operational events, provided implementation plans, updated interface control documents, and performed Change Control and Configuration Management services<ul style="list-style-type: none">• Planned, designed, tested and operated the IT and communications technical architecture including Internet Protocol addressing schema, routing tables, switching policies, data paths, information assurance controls, fire wall configurations, application configurations, band width allocations for sub networks and eventual post event return to base line.• Provided technical health and status monitoring, troubleshooting, and break/fix, IT/Communications support for each of the event architectures including critical asset identification, monitoring, Quality Assurance/Quality Control (QA/QC) seals with configuration management and job control• Software Licenses, Services and Applications<ul style="list-style-type: none">• Maintained must-fund software licensing and maintenance agreements to meet essential customer and legal requirements; enabled continued software support necessary to maintain the directed computer network defense posture and ensure continued system operational availability• Critical Infrastructure Systems Repair and Sustainment<ul style="list-style-type: none">• Refreshed the Automated Data Processing Equipment for all designated customers <p>FY09 Planned Accomplishments</p>		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance)<ul style="list-style-type: none">• Continue to maintain a mission execution platform to provide an enabling infrastructure (to include hardware, software maintenance, licenses, and upgrades) that supports MDA RDT&E efforts at the MDIOC for the MDA elements/components, and Combatant Command and warfighter operational elements• Provide file, print, and messaging services; manage and maintain automated patching software, and virus protection servers. Manage and maintain the MDA Enterprise directory services supporting user access to MDA Enterprise network resources; perform preventive maintenance and ensure data recovery capability through proper data backup scheduling and execution• Provide computer hosting of specified threat models and support the integration of other threat tools as required• MDIOC Communication Services<ul style="list-style-type: none">• Acquire and distribute mission critical unclassified and secure communications capability to ten resident MDA elements/components and BMDS and warfighter operational elements• Provide telephony services to include: Telephone/Fax Service: Provide local (99), long distance (98) and Defense Switch Network (DSN-94) telephone systems. Telephone Switch Operations: Operate, maintain, and upgrade (per government direction) telephone switches, nodes, and Private Branch Exchanges to include 911 support• Network Management Transport Services<ul style="list-style-type: none">• Install communications and networking infrastructure (hardware/software) in support of changing and expanding mission requirements of resident MDA development, testing, training, and operational activities• Provide management of network capabilities by monitoring and controlling the network infrastructure, available bandwidth, hardware, and distributed software resources.• Maintain the optimum condition of the hardware and software that comprises the technical infrastructure. This equipment includes, but is not limited to: Routers, and switches, Core Cryptographic Devices; Edge Encryption Devices; Global Engagement Manager (GEM); base and long-haul communications• Information Assurance Systems<ul style="list-style-type: none">• Provide information assurance to MDA elements/components, BMDS elements, COCOM and warfighter operational elements resident at the MDIOC		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">Develop and maintain DIACAP accreditation packages as required; manage the Information Assurance Vulnerability Assessment Program and provide technical assistance to Controls Validation Tests as directedProvide DIACAP package management, ensure timely submissions to IAM/DAA for MDA Admin/GENSER and Event Packages.Perform architecture design, engineering, and configuration management reviews for over all assigned projectsManage the Information Assurance Vulnerability Assessment and Communications Tasking Order remediation and implementation efforts to ensure Defense Information Systems Agency (DISA)/JTF-GNO directed compliance <ul style="list-style-type: none">Infrastructure Implementation Engineering<ul style="list-style-type: none">Improve Information Technology change and configuration management capabilities in support of the MDA Chief Information Officer and MDA test eventsProvide MDIOC centric test event network related detailed designs in support of Test Events and real world operational events, provide implementation plans, update interface control documents and perform Change Control and Configuration Management services<ul style="list-style-type: none">Plan, design, test and operate the IT and communications technical architecture including Internet Protocol addressing schema, routing tables, switching policies, data paths, information assurance controls, fire wall configurations, application configurations, band width allocations for sub networks and eventual post event return to base line.Provide technical health and status monitoring, troubleshooting, and break/fix, IT/Communications support for each of the event architectures including critical asset identification, monitoring, Quality Assurance/Quality Control (QA/QC) seals with configuration management and job controlImplement intelligence hardware/software updates as required to support the Operations Support Center (OSC)Plan/Initiate, when directed, the installation of any additional intelligence data feeds required to support the OSCSoftware Licenses, Services and Applications<ul style="list-style-type: none">Maintain must-fund software licensing and maintenance agreements to meet essential customer and legal requirements that enable continued software support necessary to maintain the directed computer network defense posture and ensure continued system operational availabilityCritical Infrastructure Systems Repair and Sustainment<ul style="list-style-type: none">Improve audio-visual distribution capability in the MDIOC for MDA elements/components and warfighter operational elementsUpgrade the MDIOC Local Area Network backbone capability in support of voice, video, and data transport requirementsContinue to refresh Automated Data Processing Equipment for all designated customers		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
FY10 Planned Accomplishments		
<ul style="list-style-type: none">• Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance)<ul style="list-style-type: none">• Continue to maintain a mission execution platform to provide an enabling infrastructure (to include hardware, software maintenance, licenses, and upgrades) that supports MDA RDT&E efforts at the MDIOC for the MDA elements/components, and Combatant Command and warfighter operational elements• Provide computer hosting of specified threat models and support the integration of other threat tools as required• Plan/Initiate, when directed, the installation of any additional intelligence data feeds required to support the OSC• Provide file, print, and messaging services; manage and maintain automated patching software, and virus protection servers. Manage and maintain the MDA Enterprise directory services supporting user access to MDA Enterprise network resources; perform preventive maintenance and ensure data recovery capability through proper data backup scheduling and execution • MDIOC Communication Services<ul style="list-style-type: none">• Provide telephony services to include: Telephone/Fax Service: Provide local (99), long distance (98) and Defense Switch Network (DSN-94) telephone systems. Telephone Switch Operations: Operate, maintain, and upgrade (per government direction) telephone switches, nodes, and Private Branch Exchanges to include 911 support• Install communications and networking infrastructure (hardware/software) in support of changing and expanding mission requirements of resident MDA development, testing, training, and operational activities • Network Management Transport Services<ul style="list-style-type: none">• Acquire and distribute mission critical unclassified and secure communications capability to ten resident MDA elements/components and BMDS and warfighter operational elements• Provide management of network capabilities by monitoring and controlling the network infrastructure, available bandwidth, hardware, and distributed software resources.• Maintain the optimum condition of the hardware and software that comprises the technical infrastructure. This equipment includes, but is not limited to: Routers and switches, Core Cryptographic Devices; Edge Encryption Devices; GEM; base and long-haul communications		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	

- Information Assurance Systems
 - Provide information assurance to MDA elements/components, BMDS elements, and COCOM and warfighter operational elements resident at the MDIOC
 - Maintain DIACAP accreditation packages; manage the Information Assurance Vulnerability Assessment Program and provide technical assistance to Controls Validation Tests
 - Provide DIACAP package management; ensure timely submissions to IAM/DAA for MDA Admin/GENSER and Event Packages
 - Perform architecture design, engineering, and configuration management reviews for all assigned projects
 - Manage the Information Assurance Vulnerability Assessment and Communications Tasking Order remediation and implementation efforts to ensure DISA/JTF-GNO directed compliance
- Infrastructure Implementation Engineering
 - Implement intelligence hardware/software updates as required to support the Operations Support Center
 - Provide MDIOC centric test event network related detailed designs in support of Test Events and real world operational events, provide implementation plans, update interface control documents and perform Change Control and Configuration Management services
 - Plan, design, test and operate the IT and communications technical architecture including Internet Protocol addressing schema, routing tables, switching policies, data paths, information assurance controls, fire wall configurations, application configurations, band width allocations for sub networks and eventual post event return to base line.
 - Provide technical health and status monitoring, troubleshooting, and break/fix, IT/Communications support for each of the event architectures including critical asset identification, monitoring, Quality Assurance/Quality Control (QA/QC) seals with configuration management and job control
- Software Licenses, Services and Applications
 - Maintain must-fund software licensing and maintenance agreements to meet critical customer and legal requirements, enable continued software support necessary to maintain the directed computer network defense posture and ensure continued system operational availability

	FY 2008	FY 2009	FY 2010	FY 2011
Facilities and Maintenance	19,236	21,810	22,255	
RDT&E Articles (Quantity)	0	0	0	

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
FY08 Accomplishments		
<ul style="list-style-type: none">• Utilities (Electrical, Gas, Sewer, Water, Steam, & Chilled Water)<ul style="list-style-type: none">• Procured utility services through 50th Space Wing (Host Base)• Sustained utility infrastructure and delivery systems • Facility Operations and Sustainment<ul style="list-style-type: none">• Provided 24x7 facility maintenance break/fix response for all facility systems (electrical, HVAC, plumbing, locksmith)• Conducted over 320 preventative maintenance inspections (PMIs) a month for all building systems • Environmental, Safety & Occupational Health (ESOH)<ul style="list-style-type: none">• Maintained and updated the program accident prevention plan; program remained accident free in FY08• Provided required industrial safety training to facility services personnel• Procured and distributed personal protection equipment for contracted activities• Ensured compliance with Hazardous Waste/Hazardous Material/Recycling and National Environmental Protection Association (NEPA) programs• Conducted recurring safety and environmental audit • Facilities Repair & Sustainment<ul style="list-style-type: none">• Corrected Facility Installation Standards (FIS) and Safety deficiencies identified in the previous fiscal year• Installed an electrical backup capability in the Computer Center for servers supporting operational missions• Replaced 150,000 square feet of single membrane roof on the Research and Development Complex (Building 720)<ul style="list-style-type: none">• Removed damaged insulation and decking material• Removed and replaced lighting protection system • Extended Video Teleconferencing and Classified Local Area Network (LAN) capabilities into the Consolidated Support Facility (CSF) Tower• Replaced inoperative Steam and Chilled Water Valves, and Missing/Damaged Pipe Insulation• Implemented Energy Management Control System (Phase II) completing the automation of the Heating, Ventilation, Air Conditioning (HVAC) system, resulting in a 15% energy savings		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Facilities Engineering<ul style="list-style-type: none">• Conducted Management Process/Facility Installation Standard Audits• Provided risk management analysis and mitigation plans• Maintained infrastructure drawings/configuration management databases• Developed and documented facility long range planning/programming• Provided consulting services, preliminary designs and engineering/rough order of magnitude estimates for required infrastructure builds/changes• MDIOC Operating Expenses<ul style="list-style-type: none">• Leased General Service Administration (GSA) Vehicles and one commercial warehouse• Funded Shriever AFB Support Costs (Defense Red Switch Network (DRSN) Support, Local Dial Tone, Long Distance, Cable TV, & Grounds Maintenance)• Facility Services<ul style="list-style-type: none">• Provided custodial services in Bldgs 720/730• Provided Copy Center and Shuttle Services• Provided In/Out Processing & Personnel Moves• Cable Plant/Cubicle/Workstation<ul style="list-style-type: none">• Installed facility connectivity cabling; provided trouble shooting and repair• Installed and reconfigured furniture and workstations• MDIOC Operational Security<ul style="list-style-type: none">• Provided maintenance and trouble shooting of the electronic security system• Installed upgrades, replacements, and modifications to the electronic security system• Independent Assessments<ul style="list-style-type: none">• Conducted an intensive electrical short circuit analysis, documenting the MDIOC electrical distribution baseline• Conducted infrastructure Reliability, Availability, and Maintainability (RAM) studies for both power distribution and HVAC systems		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">Conducted a Data Center up-time assessment leveraging industry expertise and best practicesEstablished facility excellence plan; providing standards for current and future infrastructure upgradesEstablished a Failure Modes, Effects, and Criticality Analysis (FMECA) in preparation for Reliability Centered Maintenance program		
FY09 Planned Accomplishments		
<ul style="list-style-type: none">Utilities (Electrical, Gas, Sewer, Water, Steam, & Chilled Water)<ul style="list-style-type: none">Procure utility services through 50th Space Wing (Host Base)Sustain utility infrastructure and delivery systemsFacility Operations and Sustainment<ul style="list-style-type: none">Provide 24x7 facility maintenance break/fix response for all facility systems (electrical, HVAC, plumbing, locksmith)Conduct over 320 preventative maintenance inspections (PMIs) a month for all building systemsEnvironmental, Safety & Occupational Health (ESOH)<ul style="list-style-type: none">Continue maintenance and update of the program accident prevention planProvide required industrial safety training to facility services personnelProcure and distribute personal protection equipment for contracted activitiesEnsure compliance with Hazardous Waste/Hazardous Material/Recycling and NEPA programsConduct recurring safety and environmental auditsFacilities Repair & Sustainment<ul style="list-style-type: none">Correct Facility Installation Standards (FIS) and Safety deficiencies identified in the previous fiscal yearReplace two 2250 KVA Uninterrupted Power Supply (UPS) Systems to include system modules and batteriesRemove and redistribute critical loads to the upgraded uninterruptible power supply and power distribution systemRenovate chilled water system, Phase I (installation of isolation valves and replace aging evaporative coolers coils)Repair elevators (Building 720)Plan the reconfiguration of the 1201 sector of the Research Building and Consolidated Support Facility Second Floor for operations support, Phase I		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Facilities Engineering<ul style="list-style-type: none">• Conduct Management Process/Facility Installation Standard Audits• Provide risk management analysis and mitigation plans• Maintain infrastructure drawings/configuration management databases• Develop and document facility long range planning/programming• Provide consulting services, preliminary designs and engineering/rough order of magnitude estimates for required infrastructure builds/chang• MDIOC Operating Expenses<ul style="list-style-type: none">• Lease GSA Vehicles and two commercial warehouses• Fund Shriever AFB Support Costs (DRSN Support, Local Dial Tone, Long Distance, Cable TV, & Grounds Maintenance)• Facility Services<ul style="list-style-type: none">• Provide custodial services for over 675,000 sf of floor space in Bldgs 720/730• Provide Copy Center and Shuttle Services for over 2,000 personnel• Provide In/Out Processing & Personnel Moves• Cable Plant/Cubicle/Workstation<ul style="list-style-type: none">• Install facility connectivity cabling; provide trouble shooting and repair• Install and reconfigure furniture and workstations• MDIOC Operational Security<ul style="list-style-type: none">• Provide maintenance and trouble shooting of the electronic security system• Install upgrades, replacements, and modifications to the electronic security system• Independent Assessments<ul style="list-style-type: none">• Provide UPS Installation Oversight• Review root cause analysis and procure consulting services• Update database single line drawings, both electrical and HVAC• Establish a robust Reliability Centered Maintenance program		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
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FY10 Planned Accomplishments		
<ul style="list-style-type: none">• Utilities (Electrical, Gas, Sewer, Water, Steam, & Chilled Water)<ul style="list-style-type: none">• Procure utility services through 50th Space Wing (Host Base) Sustain utility infrastructure and delivery systems • Facility Operations and Sustainment<ul style="list-style-type: none">• Provide 24x7 facility maintenance break/fix response for all facility systems (electrical, HVAC, plumbing, locksmith)• Conduct over 320 preventative maintenance inspections (PMIs) a month for all building systems • Environmental, Safety & Occupational Health (ESOH)<ul style="list-style-type: none">• Continue maintenance and update of the program accident prevention plan• Provide required industrial safety training to facility services personnel• Procure and distribute personal protection equipment for contracted activities• Ensure compliance with Hazardous Waste/Hazardous Material/Recycling, and NEPA programs• Conduct recurring safety and environmental audits • Facilities Repair & Sustainment<ul style="list-style-type: none">• Upgrade facility electrical distribution system for dual redundancy (Phase I)• Upgrade Power Plant Switchboard• Replace roof on Building 730• Plan and build-out the 1207 and 2304 Sectors of Building 720• Retrofit fire detection and suppression system • Facilities Engineering<ul style="list-style-type: none">• Conduct Management Process/Facility Installation Standard Audits• Provide risk management analysis and mitigation plans• Maintain infrastructure drawings/configuration management databases• Develop and document facility long range planning/programming		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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- Provide consulting services, preliminary designs and engineering/rough order of magnitude estimates for required infrastructure builds/changes for
- MDIOC Operating Expenses
 - Lease GSA Vehicles and two commercial warehouses
 - Fund Shriever AFB Support Costs (DRSN Support, Local Dial Tone, Long Distance, Cable TV, & Grounds Maintenance)
- Facility Services
 - Provide custodial services for over 675,000 sf of floor space in Bldgs 720/730
 - Provide Copy Center and Shuttle Services for over 2,000 personnel
 - Provide In/Out Processing & Personnel Moves
- Cable Plant/Cubicle/Workstation
 - Install facility connectivity cabling; provide trouble shooting and repair
 - Install and reconfigure furniture and workstations
- Independent Assessments
 - Conduct root cause analysis and consulting services as required
 - Conduct an electrical coordination study of technical and non-technical services
 - Provide Quality Assurance Assessments

	FY 2008	FY 2009	FY 2010	FY 2011
Engineering and Event Services	13,925	14,910	12,240	
RDT&E Articles (Quantity)	0	0	0	

- FY08 Accomplishments (Specific event support is embedded in schedule data)
- Mission Assurance and Event Execution Support
 - Implemented baseline technical control for all MDIOC mission critical subsystems and services

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none"> • Executed MDIOC engineering management, quality assurance, configuration management and integration of all mission critical systems including: <ul style="list-style-type: none"> • Technical power distribution, Uninterruptable Power Supply Systems, major transformer substations, and circuit protection • Heating, Ventilation and Air Conditioning (HVAC), chilled water and steam systems • Secure and non-secure voice communications for BMDS Operations, major tests, and general constituencies • Local and wide area secure data networking environments, and 24x7 network health and status tools • Ensured high availability and maintenance deconfliction of integrated MDIOC systems for 24x7 BMDS Operations support • Provided 'last mile' integration and implementation for BMDS Operations, BMDS test, Wargaming, exercise, training and general/admin services • Executed comprehensive configuration baseline integrity freezes, periods of interest and work screening for all major tests and real world contingencies • Coordinated process improvement investments across all mission areas • Executed aggressive, proactive and tailored risk management to ensure integrity and persistent connectivity for all MDIOC missions including: <ul style="list-style-type: none"> • C2MBC incremental development and integration across the Integration Lab, X-Lab, and the International Point of Presence • BMDS focused, system and distributed ground testing and Hardware-in-the-Loop execution • Modeling and Simulation program management; Digital Simulation Architecture Development; Validation, Verification & Accreditation • BMDS flight tests including FTG execution; FTM and FTT planning, coordination and situational awareness • Joint Target Operations Center (JTOC) Target of Opportunity (TOO) and target tracking, coordination and visualization • BMDS Operational Support Center 24x7 technical integration and implementation services • MDA Intelligence Support Cell and Threat Modeling Center services • BMDS Wargame, exercise and Distributed Multi-Eschlon Training System (DMETS) training execution; Warfighter Support Center program integration • Missile Defense Space Experimentation Center (MDSEC) Satellite Operations, Ground System and experiment support operations • External Sensor Laboratory experimental, networking and facility support and coordination • Ground Base Missile Defense (GMD) Fire Control component-level operations, integration, testing, and training • Joint Early Warning Laboratory mission services and connectivity • Combatant Command (COCOM) operations work centers including the USNORTHCOM C2BMC Control Center, 100th Missile Defense Brigade, and USSTRATCOM's Joint Functional Component Command-Integrated Missile Defense • MDA General Services Network and Operational Support Center and Network Communications Center 		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none"> • MDA Computer Emergency Response Team • 24x7 Technical Watch Support <ul style="list-style-type: none"> • Provided 12x7 on-site technical environment for BMDS Watch Officers, Safety Officers, and Information Assurance Officers to execute their duties • Implemented recall procedures to augment subject matter expertise availability during contingencies and major events • Executed tabletop exercises to asses readiness for COCOM Operational contingencies and major BMDS tests • Provided state change management and asset management technical support for the BMDS • Coordinated, reported and escalated critical information and BMDS test and operational event information to all MDIOC technical and management staff to ensure rapid break/fix actions were executed • JNIC Research and Development Contract (JRDC) Business & Finance Operations <ul style="list-style-type: none"> • Provided overarching contract and financial management support for all JRDC integrated programs/projects • Provided engineering coordination, resource management, and event integration across all MDIOC mission areas • Conducted continuous process improvement and implementation across all JRDC execution and MDIOC missions • Delivered integrated skill mix planning, coordination and workforce deployment across the dynamic spectrum of MDIOC events <ul style="list-style-type: none"> • Executed integrated resource forecasting and deconfliction • Performed project management for discrete enterprise enhancements • Event Architecture & Engineering Design <ul style="list-style-type: none"> • Coordinated design and implementation of technical architectures for all major MDIOC hosted BMDS tests, training, operations, and RDT&E activities • Delivered technical documentation packages for all major BMDS flight tests, ground tests, training and COCOM exercises supported from the MDIOC • Led requirements coordination and technical architecture enhancements for BMDS wargame, exercise and training networks • Updated BMDS end-to-end COCOM deployed architecture as-built documentation reflecting new spiral content and deployments • Maintained a technical repository of BMDS Implementation Architectures for real-time operations and configuration management • Event and Personnel Support <ul style="list-style-type: none"> • Provided quality event planning, coordination, logistics, security access and host support for 100+ events and 23,000 visitors 		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Delivered integrated service coordination for all MDIOC event and protocol support including:<ul style="list-style-type: none">• Event Registration Website• Offsite event registration• Security processing, including clearance verification and badging• Coordination of group lodging• Arrangement/Coordination/Scheduling of Bus Transportation• Liaison between event Point of Contact (POC) and catering POC • Reserved, setup and coordinated access for all primary shared MDIOC conference rooms• Operated Audio Visual equipment during events• Prepared and conducted official ceremonies; coordinated and hosted Distinguished Visitor itineraries; obtained information disclosure approval; and coordinated offsite dinners and socials• Special Program Support<ul style="list-style-type: none">• Developed and integrated Cross-Domain Solution implementations for BMDS ground testing and contingency deployments• Integrated experimental application and networking environments for multi-mission integration with external agencies and customers• Provided mission unique automation and Information Technology (IT) integration for Intelligence Support Center and Threat Modeling Center critical applications • Local Video Product Information Center Services<ul style="list-style-type: none">• Delivered multi-media products and services for wide spectrum of customer demands including test, training and operation support• Designed and delivered integrated graphics support for Distinguished Visitors (DVs), foreign dignitaries, Congressional inquires and MDIOC information briefings• Provided wide spectrum of graphics products and services including:<ul style="list-style-type: none">• Event Posters and signage• Visual Enhancements• Historical and Special Event Posters• Facility Design and Standardization• Ceremonial Programs• Certificates and awards• Informational Brochure Design		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Provided photographic services and products• Provided integrated audio-visual Motion Media products and services including:<ul style="list-style-type: none">• Three-dimensional animated modeling• Departmental overview videos• Training videos• Facility Engineering and Design• Classified mission and support videos• Audio Recording• Scripts and story boards• Web-based training module development• Historical video production• <p>FY09 Planned Accomplishments</p> <ul style="list-style-type: none">• Mission Assurance and Event Execution Support<ul style="list-style-type: none">• Implement baseline technical control for all MDIOC mission critical subsystems and services• Execute MDIOC engineering management, quality assurance, configuration management and integration of all mission critical systems including:<ul style="list-style-type: none">• Technical power distribution, Uninterruptable Power Supply Systems, major transformer substations, and circuit protection• Heating, Ventilation and Air Conditioning (HVAC), chilled water and steam systems• Secure and non-secure voice communications for BMDS Operations, major tests, and general constituencies• Local and wide area secure data networking environments and 24x7 network health and status tools• Ensure high availability and maintenance deconfliction of integrated MDIOC systems for 24x7 BMDS Operations support• Implement 'last mile' integration for BMDS Operations, BMDS test, Wargaming, exercise, training and general/admin services• Execute comprehensive configuration baseline integrity freezes, periods of interest and work screening for all major tests and real world contingencies• Coordinate process improvement investments across all mission areas• Execute aggressive, proactive and tailored risk management to ensure integrity and persistent connectivity for all MDIOC missions including:<ul style="list-style-type: none">• C2MBC incremental development and integration across the Integration Lab, X-Lab, and the International Point of Presence		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• BMDS focused, system and distributed ground testing and Hardware-in-the-Loop execution• Modeling and Simulation program management; Digital Simulation Architecture Development; Validation, Verification & Accreditation• BMDS flight tests including FTG execution; FTM and FTT planning, coordination and situational awareness• Joint Target Operations Center (JTOC) Target of Opportunity (TOO) and target tracking, coordination and visualization• BMDS Operational Support Center 24x7 technical integration and implementation services• MDA Intelligence Support Cell and Threat Modeling Center services• BMDS Wargame, exercise and DMETS training execution; Warfighter Support Center program integration• Missile Defense Space Experimentation Center (MDSEC) Satellite Operations, Ground System and experiment support operations• External Sensor Laboratory experimental, networking and facility support and coordination• GMD Fire Control component-level operations, integration, testing, and training• Joint Early Warning Laboratory mission services and connectivity• Combatant Command (COCOM) operations work centers including the USNORTHCOM C2BMC Control Center, 100th Missile Defense Brigade, and USSTRATCOM's Joint Functional Component Command-Integrated Missile Defense• MDA General Services Network and Operational Support Center and Network Communications Center• MDA Computer Emergency Response Team <ul style="list-style-type: none">• 24x7 Technical Watch Support<ul style="list-style-type: none">• Provide 24x7 on-site technical environment for BMDS Watch Officers, Safety Officers, and Information Assurance Officers to execute their duties• Implement recall procedures to augment subject matter expertise availability during contingencies and major events• Execute tabletop exercises to assess readiness for COCOM Operational contingencies and major BMDS tests• Provide state change management and asset management technical support for the BMDS• Coordinate, report and escalate critical information and BMDS test and operational event information to all MDIOC technical and management staff to ensure rapid break/fix actions are executed• JNIC Research and Development Contract (JRDC) Business & Finance Operations<ul style="list-style-type: none">• Provide overarching contract and financial management support for all JRDC integrated programs/projects• Provide engineering coordination, resource management, and event integration across all MDIOC mission areas• Conduct continuous process improvement and implementation across all JRDC execution and MDIOC missions• Deliver integrated skill mix planning, coordination and workforce deployment across the dynamic spectrum of MDIOC events		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none"> • Execute integrated resource forecasting and deconfliction • Perform project management for discrete enterprise enhancements • Event Architecture & Engineering Design <ul style="list-style-type: none"> • Coordinate design and implementation of technical architectures for all major MDIOC hosted BMDS tests, training, operations, and RDT&E activities • Deliver technical documentation packages for all major BMDS flight tests, ground tests, training and COCOM exercise support • Lead requirements coordination and technical architecture enhancements for BMDS wargame, exercise and training networks • Update BMDS end-to-end COCOM deployed architecture as-built documentation reflecting new incremental content and deployments • Maintain a technical repository of BMDS Implementation Architectures for real-time operations and configuration management • Event and Personnel Support <ul style="list-style-type: none"> • Provide quality event planning, coordination, logistics, security access and host support for all MDIOC events and visitors • Deliver integrated service coordination for all MDIOC event and protocol support including: <ul style="list-style-type: none"> • Event Registration Website • Offsite event registration • Security processing, including clearance verification and badging • Coordination of group lodging • Arrangement/Coordination/Scheduling of Bus Transportation • Liaison between event POC and catering POC • Reserve, setup and coordinate access for all primary shared MDIOC conference rooms • Operate Audio Visual equipment during events • Prepare and conduct official ceremonies; coordinate and host Distinguished Visitor itineraries; obtain information disclosure approval; coordinate offsite dinners and socials • Special Program Support <ul style="list-style-type: none"> • Develop and integrate Cross-Domain Solution implementations for BMDS ground testing and contingency deployments • Integrate experimental application and networking environments for multi-mission integration with external agencies and customers • Provide mission unique automation and IT integration for Intelligence Support Center and Threat Modeling Center critical applications 		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Local Video Product Information Center Services<ul style="list-style-type: none">• Deliver multi-media products and services for wide spectrum of customer demands including test, training and operation support• Design and deliver integrated graphics support for DVs, foreign dignitaries, Congressional inquires and MDIOC information briefings• Provide wide spectrum of graphics products and services including:<ul style="list-style-type: none">• Event Posters and signage• Visual Enhancements• Historical and Special Event Posters• Facility Design and Standardization• Ceremonial Programs• Certificates and awards• Informational Brochure Design• Provide photographic services and products• Provide integrated audio-visual Motion Media products and services including:<ul style="list-style-type: none">• Three-dimensional animated modeling• Departmental overview videos• Training videos• Facility Engineering and Design• Classified mission and support videos• Audio Recording• Scripts and story boards• Web-based training module development• Historical video production <p>FY10 Planned Accomplishments</p> <ul style="list-style-type: none">• Mission Assurance and Event Execution Support<ul style="list-style-type: none">• Implement baseline technical control for all MDIOC mission critical subsystems and services• Execute MDIOC engineering management, quality assurance, configuration management and integration of all mission critical systems including:		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• Technical power distribution, Uninterruptable Power Supply Systems, major transformer substations, and circuit protection• Heating, Ventilation and Air Conditioning (HVAC), chilled water and steam systems• Secure and non-secure voice communications for BMDS Operations, major tests, and general constituencies• Local and wide area secure data networking environments and 24x7 network health and status tools • Ensure high availability and maintenance deconfliction of integrated MDIOC systems for 24x7 BMDS Operations support• Implement 'last mile' integration for BMDS Operations, BMDS test, Wargaming, exercise, training and general/admin services• Execute comprehensive configuration baseline integrity freezes, periods of interest and work screening for all major tests and real world contingencies• Coordinate process improvement investments across all mission areas • Execute aggressive, proactive and tailored risk management to ensure integrity and persistent connectivity for all MDIOC missions including:<ul style="list-style-type: none">• C2MBC incremental development and integration across the Integration Lab, X-Lab, and the International Point of Presence• BMDS focused, system and distributed ground testing and Hardware-in-the-Loop execution• Modeling and Simulation program management; Digital Simulation Architecture Development; Validation, Verification & Accreditation• BMDS flight tests including FTG execution; FTM and FTT planning, coordination and situational awareness• Joint Target Operations Center (JTOC) Target of Opportunity (TOO) and target tracking, coordination and visualization• BMDS Operational Support Center 24x7 technical integration and implementation services• MDA Intelligence Support Cell and Threat Modeling Center services• BMDS Wargame, exercise and DMETS training execution; Warfighter Support Center program integration• Missile Defense Space Experimentation Center (MDSEC) Satellite Operations, Ground System and experiment support operations• External Sensor Laboratory experimental, networking and facility support and coordination• GMD Fire Control component-level operations, integration, testing, and training• Joint Early Warning Laboratory mission services and connectivity• Combatant Command (COCOM) operations work centers including the USNORTHCOM C2BMC Control Center, 100th Missile Defense Brigade, and USSTRATCOM's Joint Functional Component Command-Integrated Missile Defense• MDA General Services Network and Operational Support Center and Network Communications Center• MDA Computer Emergency Response Team		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<ul style="list-style-type: none">• 24x7 Technical Watch Support<ul style="list-style-type: none">• Provide 24x7 on-site technical environment for BMDS Watch Officers, Safety Officers, and Information Assurance Officers to execute their duties• Implement recall procedures to augment subject matter expertise availability during contingencies and major events• Execute tabletop exercises to assess readiness for COCOM Operational contingencies and major BMDS tests• Provide state change management and asset management technical support for the BMDS• Coordinate, report and escalate critical information and BMDS test and operational event information to all MDIOC technical and management staff to ensure rapid break/fix actions are executed• JNIC Research and Development Contract (JRDC) Business & Finance Operations<ul style="list-style-type: none">• Provide overarching contract and financial management support for all JRDC integrated programs/projects• Provide engineering coordination, resource management, and event integration across all MDIOC mission areas• Conduct continuous process improvement and implementation across all JRDC execution and MDIOC missions• Deliver integrated skill mix planning, coordination and workforce deployment across the dynamic spectrum of MDIOC events<ul style="list-style-type: none">• Execute integrated resource forecasting and deconfliction• Perform project management for discrete enterprise enhancements• Event Architecture & Engineering Design<ul style="list-style-type: none">• Coordinate design and implementation of technical architectures for all major MDIOC hosted BMDS tests, training and operations• Deliver technical documentation packages for all major BMDS flight tests, ground tests, training and COCOM exercise support• Lead requirements coordination and technical architecture enhancements for BMDS wargame, exercise and training networks• Update BMDS end-to-end COCOM deployed architecture as-built documentation reflecting new incremental content and deployments• Maintain a technical repository of BMDS Implementation Architectures for real-time operations and configuration management• Event and Personnel Support<ul style="list-style-type: none">• Provide quality event planning, coordination, logistics, security access and host support for all MDIOC events and visitors• Deliver integrated service coordination for all MDIOC event and protocol support including:<ul style="list-style-type: none">• Event Registration Website• Offsite event registration		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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- Security processing, including clearance verification and badging
- Coordination of group lodging
- Arrangement/Coordination/Scheduling of Bus Transportation
- Liaison between event POC and catering POC
- Reserve, setup and coordinate access for all primary shared MDIOC conference rooms
- Operate Audio Visual equipment during events
- Prepare and conduct official ceremonies; coordinate and host Distinguished Visitor itineraries; obtain information disclosure approval; coordinate offsite dinners and socials

- Special Program Support
 - Develop and coordinate Cross-Domain Solution architectures for high priority BMDS testing and contingency deployments
 - Coordinate MDA leveraged involvement in multi-mission integration opportunities sponsored by external agencies and customers

	FY 2008	FY 2009	FY 2010	FY 2011
Operations and Sustainment	9,704	10,302	7,859	
RDT&E Articles (Quantity)	0	0	0	

FY08 Accomplishments

- Government Civilian, SETA, Training, Travel, Federally Funded Research and Development Contract (FFRDC)
 - Funded Civilian positions supporting operations and sustainment of Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services
 - Funded SETA positions supporting operations and sustainment for Infrastructure Systems; Facility Maintenance; Engineering and Event Services
 - Funded Training and Travel for Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	
<p>FY09 Planned Accomplishments</p> <ul style="list-style-type: none">• Government Civilian, SETA, Training, Travel, Federally Funded Research and Development Contract (FFRDC)<ul style="list-style-type: none">• Fund Civilian positions supporting operations and sustainment of Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services• Fund SETA positions supporting operations and sustainment for Infrastructure Systems; Facility Maintenance; Engineering and Event Services• Fund Training and Travel for Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services <p>FY10 Planned Accomplishments</p> <ul style="list-style-type: none">• Government Civilian, SETA, Training, Travel, Federally Funded Research and Development Contract (FFRDC)<ul style="list-style-type: none">• Fund Civilian positions supporting operations and sustainment of Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services• Fund SETA positions supporting operations and sustainment for Infrastructure Systems; Facility Maintenance; Engineering and Event Services• Fund Training and Travel for Infrastructure Systems, and Support; Facility Maintenance; Engineering and Event Services		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date May 2009	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603904C Missile Defense Integration & Operations Center (MDIOC)		
	FY 2008	FY 2009	FY 2010	FY 2011
MDIOC BMDS Security	2,635	2,458	0	
RDT&E Articles (Quantity)	0	0	0	
<p>FY08 Accomplishments</p> <ul style="list-style-type: none"> • Provided program protection, force protection, and an anti-terrorism posture in compliance with Missile Defense Agency (MDA) and Department of Defense (DOD) requirements, capable of supporting various events scheduled at the MDIOC • Provided an integrated security approach for all new mission areas assigned to the MDIOC • Provided ongoing industrial and physical security, including foreign disclosure, counterintelligence analysis and threat assessment, and guard/response force management • Developed and managed secure emergency preparedness procedures <p>FY09 Planned Program</p> <ul style="list-style-type: none"> • Provide program protection, force protection, and an anti-terrorism posture in compliance with Missile Defense Agency (MDA) and Department of Defense (DOD) requirements, capable of supporting various events scheduled at the MDIOC • Provide an integrated security approach for all new mission areas assigned to the MDIOC • Provide ongoing industrial and physical security, including foreign disclosure, counterintelligence analysis and threat assessment, and guard/response force management • Develop and manage secure emergency preparedness procedures • 				
	FY 2008	FY 2009	FY 2010	FY 2011
Wargames and Exercises	8,220	0	0	
RDT&E Articles (Quantity)	0	0	0	
<p>FY08 Accomplishments</p> <ul style="list-style-type: none"> • Conducted U. S. Pacific Command (PACOM) Exercise TERMINAL FURY 08 • Conducted U.S. Forces Japan (USFJ) Exercise KEEN EDGE BMD Bridge Events 08 				

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date May 2009	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603904C Missile Defense Integration & Operations Center (MDIOC)		
<ul style="list-style-type: none"> • Conducted Exercise JOINT PROJECT ALLIANCE / WINDOW (JPOA/W) • Conducted BMDS overlay U. S. Central Command (CENTCOM) Exercise EAGLE RESOLVE 08 • Conducted U. S. Strategic Command (STRATCOM) GLOBAL SERIES Exercises 08 • Conducted JFCC-IMD Exercise ASSURED RESPONSE 08A/B • Conducted Wargames / Demos • Conducted CONGRESSIONAL WARGAME (APR 08), National Missile Defense Conference Wargame (APR 08), and Multi-National Missile Defense Conference Wargame (SEP 08) • Conducted a FUTURE EPOCH WARGAME. 				
	FY 2008	FY 2009	FY 2010	FY 2011
Modeling and Simulation (Congressional Add)	0	9,600	0	
RDT&E Articles (Quantity)	0	0	0	
<p>FY09 Planned Program</p> <ul style="list-style-type: none"> • Integration of Element-provided high fidelity models and testing of the resultant Ballistic Missile Defense System (BMDS) digital simulation for the Performance Assessment 2009 • Build-out of dedicated laboratory space for Performance Assessment 2009 event execution • Threat Modeling Center software engineering of enhanced six-degree-of-freedom (6DoF) models of ballistic missile threats. Modeling based on Defense Intelligence Agency information (capabilities and engineering estimates) and used for MDA-wide common threat need 				

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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C. Other Program Funding Summary

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total Cost
PE 0603175C Ballistic Missile Defense Technology	106,437	119,308	109,760						-
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,034,478	956,686	719,465						-
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,198,664	1,507,481	982,922						-
PE 0603883C Ballistic Missile Defense Boost Defense Segment	503,475	400,751	186,697						-
PE 0603884C Ballistic Missile Defense Sensors	574,231	777,693	636,856						-
PE 0603886C Ballistic Missile Defense System Interceptors	330,874	385,493	0						-
PE 0603888C Ballistic Missile Defense Test and Targets	619,137	919,956	966,752						-
PE 0603890C Ballistic Missile Defense Enabling Programs	416,937	402,778	369,145						-
PE 0603891C Special Programs – MDA	193,157	175,712	301,566						-
PE 0603892C Ballistic Missile Defense Aegis	1,126,337	1,113,655	1,690,758						-
PE 0603893C Space Tracking & Surveillance System	226,499	208,923	180,000						-
PE 0603894C Multiple Kill Vehicle	223,084	283,481	0						-
PE 0603895C BMD System Space Program	16,237	24,686	12,549						-
PE 0603896C BMD C2BMC	439,997	288,287	340,014						-
PE 0603897C BMD Hercules	51,387	55,764	48,186						-
PE 0603898C BMD Joint Warfighter Support	45,400	69,743	60,921						-
PE 0603906C Regarding Trench	1,945	2,968	6,164						-
PE 0603907C Sea Based X-Band Radar (SBX)	155,244	146,895	174,576						-
PE 0603908C BMD Europ Intercep Site	0	362,007	0						-
PE 0603909C BMD Europ Midcourse Radar	0	76,537	0						-
PE 0603911C BMD European Capability	0	0	50,504						-
PE 0603912C BMD European Comm Support	0	27,008	0						-
PE 0603913C Israeli Cooperative	0	0	119,634						-
PE 0605502C Small Business Innovative Research BMDO	137,409	0	0						-
PE 0901585C Pentagon Reservation	5,971	19,667	19,709						-
PE 0901598C Management Headquarters – MDA	83,907	81,174	57,403						-

Note: The Ballistic Missile Defense System (BMDS) is an integrated, interoperable, global defense system. The programs which comprise the BMDS are interdependent.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)	

D. Acquisition Strategy

The strategy for the Missile Defense Integration and Operation Center (MDIOC) mission execution is to employ an integration contract to simultaneously perform all of the Ballistic Missile Defense System (BMDS) Research, Development, Test and Evaluation (RDT&E) tasks with integrated operation and sustainment. The MDIOC is operated by missile defense subject matter experts (SME) composed of Government military and civilian personnel, Federally Funded Research and Development Center (FFRDC), MDIOC Technical Advisory and Assistance Services, and major defense contractors.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Subtotal Product Development										

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Infrastructure Systems and Support										
MDIOC	C/CPAF	MDIOC/Northrop Grumman Mission Systems, CO Springs	19,181	20,958	1/2Q	19,185	1/2Q			59,324
MDA	Various	MDA, Colorado Springs CO	0	1,397	4Q	0	N/A			1,397
Facilities and Maintenance										
MDIOC	MIPR	50TH Space Wing, Schriever AFB, CO	1,630	1,800	1Q	1,967	N/A			5,397
MDIOC	C/CPAF	MDIOC/Northrop Grumman Mission Systems, CO Springs	14,876	14,429	1/2Q	18,785	1/2Q			48,090
MDIOC	C/CPAF	MDIOC/Northrop Grumman, Colorado Springs, CO	1,314	2,733	1Q	0	N/A			4,047

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)					
MDIOC	Various	Various(GSA, 50th SW, Warehouses) CO Springs, CO	1,416	1,452	1/3Q	1,503	1/3Q			4,371
MDA	Various	MDA, Colorado Springs CO	0	1,396	4Q	0	N/A			1,396
Engineering and Event Services										
MDIOC	C/CPAF	MDIOC/Northrop Grumman Mission Systems, CO Springs	13,925	13,514	1/3Q	12,240	1/3Q			39,679
MDA	Various	MDA, Colorado Springs CO	0	1,396	4Q	0	N/A			1,396
Operations and Sustainment										
MDIOC		MDIOC, Colorado Springs, CO	4,372	4,619	1/3Q	4,137	1/3Q			13,128
MDIOC	C/FFP	MDIOC/SRS, Colorado Springs, CO	3,321	3,589	1/2Q	2,775	1/2Q			9,685
MDIOC	C/FFRDC	MDIOC/Colorado Springs, CO	1,639	1,759	1Q	605	1Q			4,003
MDIOC	Various	MDIOC, Colorado Springs, CO	372	335	1/4Q	342	1/4Q			1,049
MDIOC BMDS Security										
MDIOC	C/CPAF	QINETIQ/ Colorado Springs, CO	2,635	2,458	1/3Q	0	N/A			5,093
Wargames and Exercises										
MDIOC	C/CPAF	MDIOC/Northrop Grumman Mission Systems, CO Springs	6,563	0	N/A	0	N/A			6,563
MDIOC	C/FFP	MDIOC/SRS, Colorado Springs, CO	877	0	N/A	0	N/A			877

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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MDIOC		MDIOC, Colorado Springs, CO	780	0	N/A	0	N/A		780
Modeling and Simulation (Congressional Add)									
MDIOC/DES	C/CPAF	MDIOC/Northrop Grumman Mission Systems, CO Springs	0	9,600	1/2Q	0	N/A		9,600
Subtotal Support Costs			72,901	81,435		61,539			215,875

Remarks

These funds are for utilities and base communications as specified in the Inter-service Support Agreement with the 50th Space Wing and government salaries. In addition, funds are executed by the Missile Defense Integration and Operations Center (MDIOC) and provide Federally Funded Research and Development Center (FFRDC) and Technical Advisory and Assistance Services employees, for MDIOC operations and oversight of the Joint Research and Development Contractor (JRDC), as well as funding for JRDC work as required by the government.

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation										

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
Engineering and Event Services										
Subtotal Management Services			0	0		0				0

Remarks

Project Total Cost			72,901	81,435		61,539				215,875
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
May 2009

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603904C Missile Defense Integration & Operations Center (MDIOC)

Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MDIOC Wargame and Exercise Participation: Baseline Configuration Integrity and Mission Assurance																																
Assured Response 09A								Δ																								
Vigilant Shield 09					▲																											
Keen Edge 09						▲																										
Terminal Fury 09								Δ																								
Eagle Resolve								Δ																								
Global Thunder 09								Δ																								
Global Lightning 10									Δ																							
JC-10 (Execution dates Classified)									Δ	Δ	Δ	Δ																				
Keen Edge 10 (Execution dates Classified)									Δ	Δ	Δ	Δ																				
Vigilant Shield 10									Δ																							
Assured Response 04A										Δ																						
EC OITL 09										Δ																						
Nimble Titan 10											Δ																					

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
May 2009

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603904C Missile Defense Integration & Operations Center (MDIOC)

Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance																																
JFTM-02					▲																											
FTG-05					▲																											
GTX-03c					▲																											
GT-198 (TOO)					▲																											
GTD-03					▲																											
Patriot 7-2						▲																										
FTM-15								△																								
ATM-48								△																								
FTK-01												△																				
FTG-06												△																				
FTT-11												△																				
GT-195 (TOO)								△																								
FTX-06												△																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
May 2009

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603904C Missile Defense Integration & Operations Center (MDIOC)

Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance																																
AEP Test Campaign					▲	▲		▲	▲																							
PA09							▲	▲	▲	▲																						
GTX-04a								▲																								
BVT-01											▲																					
FCE-C Distr											▲																					
FCE-C HW IL											▲																					
FTT-12 THF-15-I											▲																					
FTX-06 E2,3,4											▲																					
G-17-L											▲																					
G-27-L											▲																					
G-28-L											▲																					
G-29-L											▲																					
GT-200											▲																					

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
May 2009

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603904C Missile Defense Integration & Operations Center (MDIOC)

Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance																																
JFTM-03									Δ																							
P2RF-23-T									Δ																							
FTK-02										Δ																						
FTS-01										Δ																						
G-01b-L										Δ																						
GTI-04										Δ	Δ																					
Contingency Ops											Δ																					
FTT-13 THF-04-I											Δ																					
GMD 3 Stg Int											Δ																					
GTD-04											Δ																					
P2RF-39-T											Δ																					
F-10a-T (CDU)												Δ																				
F-10b-Non-C-TOO												Δ																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
May 2009

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603904C Missile Defense Integration & Operations Center (MDIOC)

Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance																																
GTX-05b												△																				
P2RF-24-T												△																				
P2RF-25-I (FTM-16)												△																				
PA10												△																				
Infrastructure Repair and Sustainment																																
Recapitalization AF Tenant Space 1201 Ph 1 & 2					▲▲			▲▲				▲▲																				
Uninterruptible Power Supply Replacement Install								▲▲			▲▲																					
Uninterruptible Power Supply Replacement Design/Demo/Site Prep					▲▲			▲▲																								

Legend

▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	☆	Milestone Decision (planned)
◆	Element Test (complete)	◇	Element Test (planned)
▼	System Level Test (complete)	▽	System Level Test (planned)
▲▲	Complete Activity	▲▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date May 2009		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)				
Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
MDIOC Wargame and Exercise Participation: Baseline Configuration Integrity and Mission Assurance								
Assured Response 09A		3Q						
Vigilant Shield 09		1Q						
Keen Edge 09		2Q						
Terminal Fury 09		3Q						
Eagle Resolve		3Q						
Global Thunder 09		3Q						
Global Lightning 10			1Q					
JC-10			1Q,2Q,3Q,4Q					
Keen Edge 10			1Q,2Q,3Q,4Q					
Vigilant Shield 10			1Q					
Assured Response 04A			2Q					
EC OITL 09			2Q					
Nimble Titan 10			3Q					
MDIOC Test Support Participation: Baseline Configuration Integrity and Mission Assurance								
JFTM-02		1Q						
FTG-05		1Q						
GTX-03c		1Q						
GT-198 (TOO)		1Q						
GTD-03		1Q						
Patriot 7-2		2Q						
FTM-15		3Q						
ATM-48		3Q						
FTK-01		4Q						
FTG-06		4Q						
FTT-11		4Q						
GT-195 (TOO)		3Q						
FTX-06		4Q						
AEP Test Campaign		3Q-4Q						

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail				Date May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)			
PA09		4Q	1Q				
GTX-04a		4Q					
BVT-01			1Q				
FCE-C Distr			1Q				
FCE-C HW IL			1Q				
FTT-12 THF-15-I			1Q				
FTX-06 E2,3,4			1Q				
G-17-L			1Q				
G-27-L			1Q				
G-28-L			1Q				
G-29-L			1Q				
GT-200			1Q				
JFTM-03			1Q				
P2RF-23-T			1Q				
FTK-02			2Q				
FTS-01			2Q				
G-01b-L			2Q				
GTI-04			2Q-3Q				
Contingency Ops			3Q				
FTT-13 THF-04-I			3Q				
GMD 3 Stg Int			3Q				
GTD-04			3Q				
P2RF-39-T			3Q				
F-10a-T (CDU)			4Q				
F-10b-Non-C-TOO			4Q				
GTX-05b			4Q				
P2RF-24-T			4Q				
P2RF-25-I (FTM-16)			4Q				
PA10			4Q				
Infrastructure Repair and Sustainment							
Recapitalization AF Tenant Space 1201 Ph 1 & 2		3Q-4Q	3Q-4Q				
Uninterruptible Power Supply Replacement Install		3Q-4Q	1Q-2Q				

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail							Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)			
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Uninterruptible Power Supply Replacement Design/Demo/Site Prep		3Q-4Q						
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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
ZX40 Program-Wide Support	4,201	2,779	2,067					
RDT&E Articles Qty	0	0	0					

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Other costs included provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuations on a limited number of foreign contracts.

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010	FY 2011
Civilian Salaries and Support	4,201	2,779	2,067	
RDT&E Articles (Quantity)	0	0	0	

See Section A: Mission Description and Budget Item Justification

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail	Date May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603904C Missile Defense Integration & Operations Center (MDIOC)
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C. Other Program Funding Summary

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total Cost
PE 0603175C Ballistic Missile Defense Technology	106,437	119,308	109,760						-
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,034,478	956,686	719,465						-
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,198,664	1,507,481	982,922						-
PE 0603883C Ballistic Missile Defense Boost Defense Segment	503,475	400,751	186,697						-
PE 0603884C Ballistic Missile Defense Sensors	574,231	777,693	636,856						-
PE 0603886C Ballistic Missile Defense System Interceptors	330,874	385,493	0						-
PE 0603888C Ballistic Missile Defense Test and Targets	619,137	919,956	966,752						-
PE 0603890C Ballistic Missile Defense Enabling Programs	416,937	402,778	369,145						-
PE 0603891C Special Programs – MDA	193,157	175,712	301,566						-
PE 0603892C Ballistic Missile Defense Aegis	1,126,337	1,113,655	1,690,758						-
PE 0603893C Space Tracking & Surveillance System	226,499	208,923	180,000						-
PE 0603894C Multiple Kill Vehicle	223,084	283,481	0						-
PE 0603895C BMD System Space Program	16,237	24,686	12,549						-
PE 0603896C BMD C2BMC	439,997	288,287	340,014						-
PE 0603897C BMD Hercules	51,387	55,764	48,186						-
PE 0603898C BMD Joint Warfighter Support	45,400	69,743	60,921						-
PE 0603906C Regarding Trench	1,945	2,968	6,164						-
PE 0603907C Sea Based X-Band Radar (SBX)	155,244	146,895	174,576						-
PE 0603908C BMD Europ Intercep Site	0	362,007	0						-
PE 0603909C BMD Europ Midcourse Radar	0	76,537	0						-
PE 0603911C BMD European Capability	0	0	50,504						-
PE 0603912C BMD European Comm Support	0	27,008	0						-
PE 0603913C Israeli Cooperative	0	0	119,634						-
PE 0605502C Small Business Innovative Research BMDO	137,409	0	0						-
PE 0901585C Pentagon Reservation	5,971	19,667	19,709						-
PE 0901598C Management Headquarters – MDA	83,907	81,174	57,403						-

Note: The Ballistic Missile Defense System (BMDS) is an integrated, interoperable, global defense system. The programs which comprise the BMDS are interdependent.