Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	Continuing	Continuing
MD67: *Airborne Infrared (ABIR)*	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	Continuing	Continuing

Note

Airborne Infrared Sensor program is a new start for FY 2011.

For all Ballistic Missile Defense System Level Test Schedule information, please refer to the Ballistic Missile Defense System Level Test Schedule.

A. Mission Description and Budget Item Justification

The best way to dissuade, deter, and defeat ballistic missile threats is through integrated ballistic missile defense capabilities--weapons, sensors, and Command and Control, Battle Management and Communications (C2BMC). A potential or actual attack may cross regions and may fly higher and faster than stand-alone, autonomous capabilities operated by a single Military Service can defend against. Integrated BMD capabilities draw on space-, land-, and sea-based assets operated by multiple Services to provide both the best sensor information on the enemy missile`s location and track as well as a more diverse and effective set of weapon options for the Combatant Commander to defeat the attack -- all connected by a unifying C2BMC system. As a result, an effort funded in a Program Element may be critical to success of efforts in other Program Elements -- we refer to these connections as ``interdependencies.`` Throughout the budget justification material, we have attempted to highlight interdependencies in order to fully explain the relationship between different parts of the proposed program.

Our submission reflects the greater emphasis on defense of U.S. forces, allies, and friends from regional threats posed by thousands of short- and medium-range ballistic missiles. The most cost-effective missile defense architecture is one that emphasizes intercepts of a threat missile in the early phases of flight. BMDS sensors can observe early intercepts the opportunity to shoot, assess, and shoot again, minimizing the need for costly salvos. Additionally, engaging earlier will serve to mitigate threat countermeasure effectiveness.

As the Department shifts focus to address the looming threat of regional forces in large numbers, we aligned our technology investments with these objectives. Our systems engineering and architecture work uncovered gaps in our ability to 1) address large raid sizes, and 2) intercept the enemy early in his trajectory when the enemy is most vulnerable - assess - then reengage if necessary. We demonstrated the ability of infrared sensors carried aboard Navy Reaper unmanned aerial

systems to observe ballistic missiles in flight at long distance during the ``Stellar Daggers`` test in Hawaii and the Delta II launch in California. The impressive results of these tests lead us to believe airborne sensors can be an effective component of the Ballistic Missile Defense System as early as 2015.

Our technology development effort proves the capabilities needed to achieve early intercepts by conducting a series of ground and flight tests in FY 2010 - 2012, which allow a thorough operational assessment and proof of capability. These demonstrations incrementally prove the key functions of an airborne infrared sensor: acquisition of a threat based on a cue from Overhead Persistent Infrared satellites; tracking of a threat throughout its flight; generation of a 2-dimensional track prediction of the threat`s flight path based on a single airborne sensor; fusing multiple 2-dimensional tracks into a 3-dimensional track with sufficient accuracy to launch an interceptor; and delivering this information through the C2BMC system to the shooter.

The Phased Adaptive Approach (PAA) was developed in response to the rapid proliferation of short and medium range ballistic missiles in Iran and the threat they pose to U.S. Allies and partners, as well as to U.S. deployed personnel and their accompanying families in the Middle East and in Europe. By leveraging recent advances in sensor and interceptor technologies, the United States will aggressively counter this growing regional threat with a more powerful and agile system. The United States is pursuing a four phased approach which will provide a more effective missile defense capability for defense of NATO territories and enhance U.S. homeland defense, it will be complementary of and interoperable with those being developed by NATO, be applicable in other theaters around the world, and will be more adaptable and flexible in order to counter threat advances and provide increased defended areas over time. The initial phase includes the deployment of current and proven missile defense, including the sea-based Aegis Weapons System, the SM-3 interceptor (Block IA), and sensors such as the forward-based Army Navy/Transportable Radar Surveillance system (AN/TPY-2). Subsequent phases will be implemented based on technical maturity, appropriate testing, and threat driven requirements. Airborne Infrared Sensors are planned as a Phase 2 capability for the Phased Adaptive Approach and the associated functionality will be captured in future BMDS Integrated Build documentation when approved.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Defense Agency	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604884C: *AIRBORNE INFRARED (ABIR)*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	111.671	0.000	111.671
Total Adjustments	0.000	0.000	111.671	0.000	111.671
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment Detail	0.000	0.000	111.671	0.000	111.671

Change Summary Explanation

No FY 2011 data provided in PB10.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*	PROJECT MD67: *Airborne Infrared (ABIR)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MD67: *Airborne Infrared (ABIR)*	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	Continuing	Continuing
Quantity of RDT&E Articles	0	0	1	0	1	0	0	0	0		

Note

A. Mission Description and Budget Item Justification

Tracking enemy ballistic missile raids with airborne sensors forward in the theater closes the gap between the enemy`s launch and our first track. Depending on the range of the threat, this could increase our battle space by hundreds of seconds and give us the ability to shoot, look, then shoot again. This significantly improves the probability that our Ballistic Missile Defense System will successfully engage the threat and defeat it.

In FY 2010 we took the first steps in exploring this nascent capability. In October, we began assessing platform and sensor alternatives with MIT`s Lincoln Laboratory and our partners at the Joint Integrated Air and Missile Defense Organization. This effort will point the way to the vehicle most suited to fill this role among a group of candidates including the currently deployed MQ-9 Reaper and RQ-4 Global Hawk. At the same time, we`re engaging with Joint Forces Command and the Combatant Commanders (COCOM)to develop a concept of operations for adding this mission to the Nation`s unmanned aerial systems fleet. Armed with the results of the alternatives assessment, we will work with industry, the Combatant Commanders and the services to modify and test the chosen platform and sensor combination.

Meanwhile we`re executing an experimental plan that leverages existing platforms and sensors through a series of knowledge points targeted at proving the capability. These knowledge points include proving sensor performance, target auto tracking, raid handling capacity, secure communications and system Quality of Service (QoS) (that is, data of sufficient accuracy and low enough latency) to enable Command and Control, Battle Management and Communications (C2BMC) and BMDS interceptors to complete ballistic missile engagements. Our development and test plan progresses from computer-in-the-loop to hardware-in-the-loop experiments to incrementally verify and validate functionality. These experiments culminate in Aegis intercept flight tests using primarily airborne sensors for fire control at the Pacific Missile Range Facility in Hawaii in the summer of 2012. This testing, interspersed with regular campaigns in theater, lead to an operationally useful architecture as early as 2015.

Goals for Airborne Infrared Sensor program

Develop and test prototypes that integrate with the operational layers of the BMDS to provide precise early missile track information with a sufficient Quality of Service of Command and Control, Battle Management and Communications (C2BMC) and sensor data for engaging theater, regional, and strategic threats.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
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Prove the ability of airborne sensors to execute early intercept of regional ballistic missiles.
Deliver knowledge to enable acquisition decisions to procure and field an operational system.

We will employ Knowledge Points to execute our airborne sensors development and test plan that leverages existing platform and sensor systems resulting in an experimental capability in FY 2012 and an operational capability in FY 2015.

Knowledge Points

Verify sensor field of view.
Verify sensor performance.
Verify sensor auto tracking capability.
Verify 3-D tracking performance.
Assess raid handling capability.
Verify track quality.
Launch interceptor on Airborne Infrared sensor tracks.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
ABIR	0.000	0.000	105.671	0.000	105.671
See Description Below					
FY 2009 Accomplishments:					
FY 2010 Plans:					
FY 2011 Base Plans: Modify sensors Demonstrate sensor field of regard Deliver software to experiments` software/hardware in the loop and platforms Deliver System Engineering Modeling and Simulation drops					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Deliver 1 platform and ground station Demonstrate Sensor Performance Demonstrate Target Auto Tracking Functionality Demonstrate 3-Dimensional Tracking Performance Demonstrate Multiple Target Tracking Functionality Demonstrate software functionality in hardware in the loop testing Demonstrate airborne sensors risk reduction capability BMDS and targets of opportunity flight testing *FY 2011 OCO Plans:* NA					
ABIR Fielding See Description Below *FY 2009 Accomplishments:* *FY 2010 Plans:* *FY 2011 Base Plans:* Site planning and associated designs required for the FY 2015 fielding of Airborne Infrared assets. *FY 2011 OCO Plans:* NA	0.000	0.000	6.000	0.000	6.000
Accomplishments/Planned Programs Subtotals	0.000	0.000	111.671	0.000	111.671

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*	PROJECT MD67: *Airborne Infrared (ABIR)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: *Ballistic Missile Defense Technology*	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: *Ballistic Missile Defense Terminal Defense Segment*	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: *Ballistic Missile Defense Mid-Course Segment*	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: *Ballistic Missile Defense Boost Defense Segment*	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: *Ballistic Missile Defense Sensors*	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: *Ballistic Missile Defense System Interceptor*	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603888C: *Ballistic Missile Defense Test and Targets*	906.952	823.333	1,113.425	0.000	1,113.425	1,105.959	951.371	871.929	829.608	0	6,602.577
• 0603890C: *Ballistic Missile Defense Enabling Programs*	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: *SPECIAL PROGRAMS - MDA*	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: *BMD AEGIS*	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: *SPACE TRACKING & SURVEILLANCE SYSTEM*	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: *MULTIPLE KILL VEHICLE*	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: *BMD SYSTEM SPACE PROGRAM*	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: *BMD C2BMC*	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: *BMD HERCULES*	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency			DATE: February 2010
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603898C: *BMD JOINT WARFIGHTER SUPPORT*	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: *DIRECTED ENERGY RESEARCH*	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: *MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)*	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: *REGARDING TRENCH*	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: *SEA BASED X-BAND RADAR (SBX)*	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: *BMD EUROPEAN INTERCEPTOR SITE*	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: *BMD EUROPEAN MIDCOURSE RADAR*	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: *BMD EUROPEAN CAPABILITY*	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: *BMD European Comm Support*	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: *ISRAELI COOPERATIVE*	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: *LAND-BASED SM-3*	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: *Aegis SM-3 BLOCK IIA CO-DEVELOPMENT*	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: *PRECISION TRACKING SPACE SYSTEM*	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0605502C: *Small Business Innovative Research BMDO*	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: *Pentagon Reservation*	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0901598C: *Management Headquarters-MDA*	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

MDA`s fiscal year FY 2010 budget submission reflected an emphasis on early intercept research and development. The acquisition strategy to conduct this technology development effort consists of three focus areas. First, leverage the technical expertise of Federally Funded Research and Development Centers and University Applied Research Centers. Second, continue to leverage relevant existing contracts within the limits of Competition and Contracting Act taking into account contractor past performance, scope, ceiling and period of performance. Third, for new technology initiatives, seek industry solutions via the Advanced Technology Broad Agency Announcement and competitive procurements.

MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.

E. Performance Metrics

NA

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency		DATE: February 2010
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Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Airborne Infrared Sensors MD67	Various/ Various	Various Various	0.000	0.000		57.800		0.000		57.800	76.300	134.100	134.100
		Subtotal	0.000	0.000		57.800		0.000		57.800	76.300	134.100	134.100

Remarks

NA

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Research MD67	TBD/TBD	MIT/LL Lexington, MA	0.000	0.000		20.971		0.000		20.971	33.500	54.471	54.400
ABIR Fielding Planning & Design MD67	TBD/TBD	TBD TBD	0.000	0.000		6.000		0.000		6.000	0	6.000	0
		Subtotal	0.000	0.000		26.971		0.000		26.971	33.500	60.471	54.400

Remarks

NA

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency		DATE: February 2010
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Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Testing MD67	Various/ Various	Various Various	0.000	0.000		21.200		0.000		21.200	32.100	53.300	53.300
		Subtotal	0.000	0.000		21.200		0.000		21.200	32.100	53.300	53.300

Remarks

Airborne Infrared Sensor Program support for the Missile Defense Agency Integrated Master Test Plan execution equates to : FY 2011 $11.789M, FY 2012 $8.998M, FY 2013 $10.686M, FY 2014 $13.986M, FY 2015 $7.9M.

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Program Management MD67	Various/ Various	MDA MIT/LL	0.000	0.000		5.700		0.000		5.700	15.100	20.800	20.800
		Subtotal	0.000	0.000		5.700		0.000		5.700	15.100	20.800	20.800

Remarks

NA

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		111.671		0.000		111.671	157.000	268.671	262.600

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency			DATE: February 2010
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

NA

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*	PROJECT MD67: *Airborne Infrared (ABIR)*	

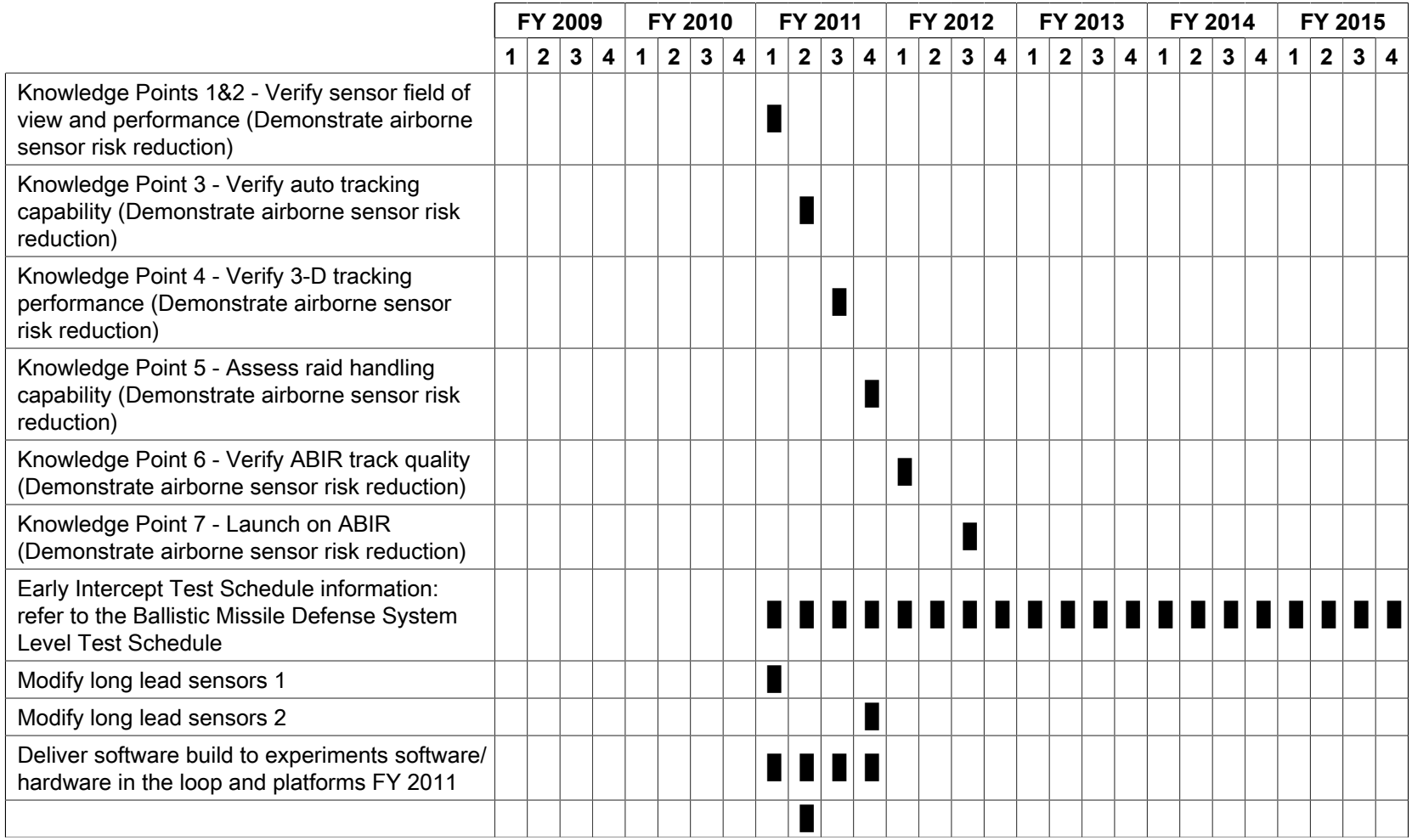

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*	PROJECT MD67: *Airborne Infrared (ABIR)*

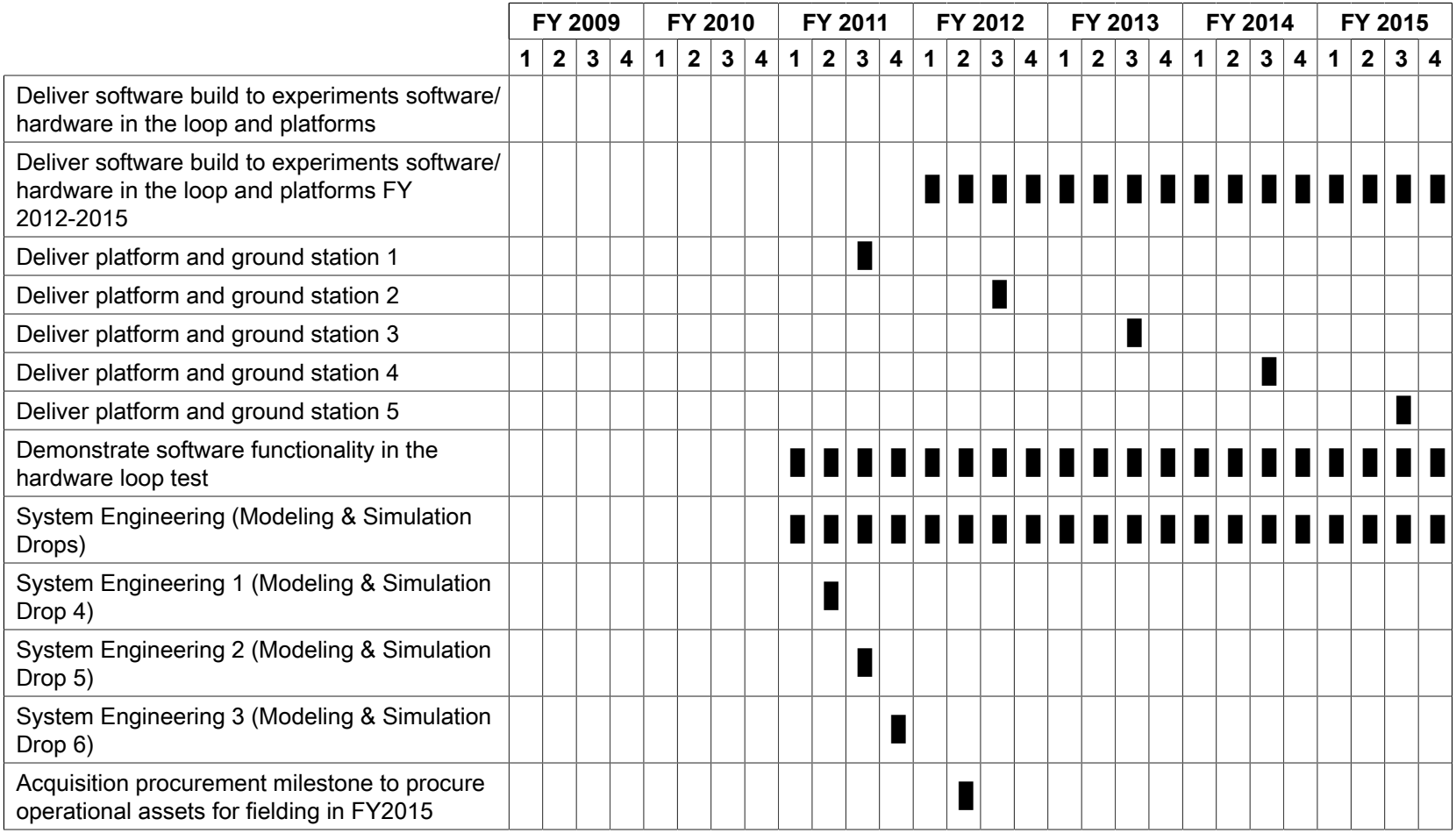

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604884C: *AIRBORNE INFRARED (ABIR)*	**PROJECT** MD67: *Airborne Infrared (ABIR)*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Knowledge Points 1&2 - Verify sensor field of view and performance (Demonstrate airborne sensor risk reduction)	1	2011	1	2011
Knowledge Point 3 - Verify auto tracking capability (Demonstrate airborne sensor risk reduction)	2	2011	2	2011
Knowledge Point 4 - Verify 3-D tracking performance (Demonstrate airborne sensor risk reduction)	3	2011	3	2011
Knowledge Point 5 - Assess raid handling capability (Demonstrate airborne sensor risk reduction)	4	2011	4	2011
Knowledge Point 6 - Verify ABIR track quality (Demonstrate airborne sensor risk reduction)	1	2012	1	2012
Knowledge Point 7 - Launch on ABIR (Demonstrate airborne sensor risk reduction)	3	2012	3	2012
Early Intercept Test Schedule information: refer to the Ballistic Missile Defense System Level Test Schedule	1	2011	4	2015
Modify long lead sensors 1	1	2011	1	2011
Modify long lead sensors 2	4	2011	4	2011
Deliver software build to experiments software/hardware in the loop and platforms FY 2011	1	2011	4	2011
Deliver software build to experiments software/hardware in the loop and platforms	2	2011	2	2011
Deliver software build to experiments software/hardware in the loop and platforms FY 2012-2015	1	2012	4	2015
Deliver platform and ground station 1	3	2011	3	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604884C: *AIRBORNE INFRARED (ABIR)*	PROJECT MD67: *Airborne Infrared (ABIR)*

	Start		End	
Event	Quarter	Year	Quarter	Year
Deliver platform and ground station 2	3	2012	3	2012
Deliver platform and ground station 3	3	2013	3	2013
Deliver platform and ground station 4	3	2014	3	2014
Deliver platform and ground station 5	3	2015	3	2015
Demonstrate software functionality in the hardware loop test	1	2011	4	2015
System Engineering (Modeling & Simulation Drops)	1	2011	4	2015
System Engineering 1 (Modeling & Simulation Drop 4)	2	2011	2	2011
System Engineering 2 (Modeling & Simulation Drop 5)	3	2011	3	2011
System Engineering 3 (Modeling & Simulation Drop 6)	4	2011	4	2011
Acquisition procurement milestone to procure operational assets for fielding in FY2015	2	2012	2	2012