Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605931F: B-2 Defensive Management System

BA 5: System Development & Demonstration (SDD)

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	281.056	303.500	-	303.500	259.400	168.300	115.000	89.700	Continuing	Continuing
653844: <i>B-2 DMS</i>	0.000	0.000	281.056	303.500	-	303.500	259.400	168.300	115.000	89.700	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

MDAP/MAIS Code(s): 431

Note

Air Force

In FY12, this effort was funded under PE 0101127F, project 676023.

A. Mission Description and Budget Item Justification

DMS-M is the #1 priority modification program in the B-2 program office. The B-2 Defensive Management System Modernization (DMS-M) program maintains the B-2 direct attack capability while addressing emerging 21st century threats. DMS-M will upgrade the Electronic Support Measures, antennas, and display processing units. Modernization of this system will resolve the #1 obsolescence issue in the B-2 fleet.

The B-2 DMS-M will provide the Joint Force Commander and the B-2 fleet with advanced situational awareness, improved supportability, enhanced lethality, increased platform survivability, and networked battlespace awareness. The DMS-M upgrade will provide the following core capabilities for the B-2 and joint warfighting force:

- 1) Ability to provide indication, type, and position of airborne and ground-based radio frequency (RF) threats with the situational awareness needed to avoid, engage, or negate threats,
- 2) Improved RF threat information that can be reported to control agencies or inter-flight for improved situation/battlespace awareness,
- 3) Ability to adequately control, process, and display incoming threat information to the aircrew and provide updated battle-space awareness,
- 4) Improved supportability and reduced operations and maintenance costs.

BA5 - This program is in Budget Activity 5, Engineering and Manufacturing Development (EMD, formerly known as System Development and Demonstration (SDD).) It is expected to pass Milestone B and begin conducting Engineering and Manufacturing Development tasks in FY14 aimed at meeting validated requirements prior to Full Rate Production.

PE 0605931F: B-2 Defensive Management System

UNCLASSIFIED
Page 1 of 8

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

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605931F: B-2 Defensive Management System

BA 5: System Development & Demonstration (SDD)

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	281.056	318.150	-	318.150
Current President's Budget	0.000	281.056	303.500	-	303.500
Total Adjustments	0.000	0.000	-14.650	-	-14.650
 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 Adjustments	0.000	0.000	-14.650	-	-14.650

Change Summary Explanation

FY14 adjusted to match the approved Service Cost Position (SCP).

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
Title: B-2 Defensive Management System Modernization (DMS-M) Tech Development Ph 1	0.000	12.429	0.000
Description: Refine DMS-M system concept. Begin avionics and Electronic Support Measures (ESM) hardware/software development. Conduct display processor and antenna competitions. Initiate rapid acquisition risk reduction efforts to accelerate program schedule.			
FY 2012 Accomplishments: In FY12, this effort was funded under PE 0101127F, project 676023.			
FY 2013 Plans: Complete delivery and install of CEESIM and long-lead developmental hardware supporting TD Phase 2 and EMD.			
Title: B-2 Defensive Management System Modernization (DMS-M) Tech Development Ph 2	0.000	259.853	189.251
Description: Continue hardware and software development from Phase 1. Conduct Preliminary Design Review (PDR) and Milestone B review in FY14. Initiate required upgrades for Mission Planning System (MPS) software and Trainers (hardware & software).			
FY 2012 Accomplishments: In FY12, this effort was funded under PE 0101127F, project 676023.			
FY 2013 Plans:			

PE 0605931F: B-2 Defensive Management System

UNCLASSIFIED Page 2 of 8

R-1 Line #90

Air Force

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force DATE: April 2013 APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force PE 0605931F: B-2 Defensive Management System BA 5: System Development & Demonstration (SDD) C. Accomplishments/Planned Programs (\$ in Millions) FY 2012 FY 2013 FY 2014 Continue software development and hardware integration. Conduct supplier PDRs. Initiate purchase of long-lead hardware to support early flight testing in EMD phase. Initiate contracts for MPS (software) and Trainer (hardware/software) upgrade development. FY 2014 Plans: Complete technology development. Conduct system PDR and Milestone B. Monitor long-lead hardware purchases to support EMD. Continue MPS and Trainer development activities. Title: B-2 Defensive Management System Modernization (DMS-M) Engineering and Manufacturing Development (EMD) 0.000 0.000 106.621 Description: Conduct Critical Design Review (CDR). Complete hardware/software development, final hardware/software integration, and test activities. Complete development and provide MPS software upgrade and initial Training System upgrades to support flight test. FY 2014 Plans: Conduct array-level demonstration of antennas. Continue hardware/software development/integration. Prepare for CDR in 1QFY15. Continue MPS software and Training System software/hardware development. Title: DMS PMA 0.000 8.774 7.628 **Description:** DMS PMA FY 2013 Plans: DMS PMA FY 2014 Plans: DMS PMA **Accomplishments/Planned Programs Subtotals** 0.000 281.056 303.500 D. Other Program Funding Summary (\$ in Millions) Cost To FY 2014 FY 2014 FY 2014 Line Item FY 2012 OCO FY 2015 FY 2016 FY 2017 FY 2018 Complete Total Cost FY 2013 Base Total APAF: BA05: B00200: B-2A 74.264 250.044 0.000 0.000 0.000 0.000 0.000 0.000 345.000 745.614 • RDT&E: BA05: PE 0101127F: 46.427 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 46.427 B-2 DMS-M Development APAF: BA06: 000999: Initial 3.087 0.000 0.000 0.000 0.000 0.000 0.000 14.651 32.400 49.938 Spares/Repair Parts

PE 0605931F: B-2 Defensive Management System

Air Force

Page 3 of 8

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605931F: B-2 Defensive Management System

BA 5: System Development & Demonstration (SDD)

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

FY 2014 FY 2014 FY 2014

Cost To

Line Item

FY 2012 FY 2013

OCO

Base

Total FY 2015

FY 2016 FY 201

FY 2017 FY 2018 Complete Total Cost

Remarks

E. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman) who will perform subsystem and component competitions where appropriate, use of cost plus incentive fee (CPIF) development contracts, and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.

F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

PE 0605931F: B-2 Defensive Management System

Air Force

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE PROJECT

PE 0605931F: B-2 Defensive Management

System

653844: *B-2 DMS*

Product Developmen	nt (\$ in M	illions)		FY 2	2012	FY 2	2013		2014 ise	FY 2	2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Air Vehicle - Technology Development Ph1	SS/CPIF	Various:,	0.000	0.000		12.429	Nov 2012	0.000		-		0.000	0.000	12.429	
Air Vehicle - Technology Development Ph 2	SS/CPIF	Various:,	0.000	0.000		258.633	Oct 2012	189.251	Dec 2013	-		189.251	3.943	451.827	TBD
Air Vehicle - Engineering and Manufacturing Development (EMD)	SS/CPIF	Various:,	0.000	0.000		0.000		105.401	May 2014	-		105.401	612.808	718.209	
		Subtotal	0.000	0.000		271.062		294.652		0.000		294.652	616.751	1,182.465	
Support (\$ in Million	s)			FY 2	2012	FY :	2013	FY 2	2014 ise	FY 2	2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation	(\$ in Milli	ons)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Government Test	PO	AFFTC:,	0.000	0.000		1.220	Oct 2012	1.220	Oct 2013	-		1.220	41.801	44.241	TBD
		Subtotal	0.000	0.000		1.220		1.220		0.000		1.220	41.801	44.241	

Management Service	es (\$ in M	illions)		FY 2	012	FY 2	2013		2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:,	0.000	0.000		8.774	Oct 2012	7.628	Oct 2013	-		7.628	24.519	40.921	TBD
		Subtotal	0.000	0.000		8.774		7.628		0.000		7.628	24.519	40.921	

PE 0605931F: *B-2 Defensive Management System* Air Force

UNCLASSIFIED
Page 5 of 8

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605931F: B-2 Defensive Management | 653844: B-2 DMS

System

PROJECT

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	281.056	303.500	0.000	303.500	683.071	1,267.627	

Remarks

In FY12, this effort was funded under PE 0101127F, project 676023.

Northrop-Grumman, the prime contractor for the B-2 weapon system, is the integrator and major contractor for B-2 DMS activities.

PE 0605931F: B-2 Defensive Management System

Air Force

UNCLASSIFIED

Page 6 of 8

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605931F: B-2 Defensive Management

System

PROJECT

653844: *B-2 DMS*



B-2 FY14 PB DMS-M Detailed Schedule

FY12 FY13 FY14 FY15 FY16 FY17 FY18

DMS-Modernization



DATE: April 2013 Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE **PROJECT**

3600: Research, Development, Test & Evaluation, Air Force PE 0605931F: *B-2 Defensive Management* | 653844: *B-2 DMS* BA 5: System Development & Demonstration (SDD)

System

Schedule Details

	Si	tart	End		
Events	Quarter	Year	Quarter	Year	
DMS-M Technology Development Ph 1 Contract Award	1	2012	1	2012	
DMS-M Preliminary Design Review	1	2014	1	2014	
DMS-M Technology Development Ph 2 Contract Award	1	2013	1	2013	
DMS-M Milestone B Decision	3	2014	3	2014	
DMS-M EMD Contract Award	3	2014	3	2014	
DMS-M EMD Contract Period of Performance	3	2014	4	2018	
DMS-M Critical Design Review	1	2015	1	2015	
DMS-M Flight Test Program	3	2016	3	2018	
DMS-M Milestone C	3	2017	3	2017	
DMS-M Low Rate Initial Production Contract Award	4	2017	4	2017	
DMS-M Full Rate Production Contract Award	4	2018	4	2018	