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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604458F: <i>Air & Space Ops Center</i>
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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	58.861	-	58.861	58.909	0.000	0.000	0.000	Continuing	Continuing
644945: AOC Inc 10.2	-	0.000	0.000	58.861	-	58.861	58.909	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] 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

Note

In FY 2014, Project Number 644945, AOC Increment 10.2, efforts were transferred from PE 0207410F, AOC WS, Project Number 675117 in order to improve transparency for this major program.

AOC 10.2 is PRCP Program Number (PNO) N42.

A. Mission Description and Budget Item Justification

The Air Operations Center Weapons System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS), is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Combined/Joint Force Air Component Commander (C/JFACC) for planning, executing, and assessing theater-wide air and space operations. The C/JFACC provides air, space and cyber support to the Combined/Joint Forces Commander (C/JFC) by coordinating, deconflicting and assessing the progress of various weapon systems to advance the C/JFC's campaign. The AOC WS develops operations strategy and planning documents. The weapon system also disseminates tasking orders; executes day-to-day peacetime and combat air, space and cyber operations; and provides rapid reaction to immediate situations by exercising positive control of friendly forces.

The AOC Increment 10.2 program keeps the AOC interoperable, certified, supportable, and compliant through the integration, testing and fielding of new capabilities and sustainment upgrades to the AOC WS baseline. The program supports mission requirements at Geographic and Functional AOCs, as well as Support and Manpower Augmentation units. To keep the AOC current and interoperable with the COCOMs, cyber requirements, and fifth generation weapon system/weapons, the AOC WS program plans to evolve the AOC through the integration and test of progressively improving capabilities. These activities ensure a system of systems engineering perspective for the AOC WS, and include weapon system standardization activities as defined by AOC WS requirements documents. The Modernization contractor, which was awarded the Modernization contract on 25 October 2011, has commenced with AOC 10.2 pre-Engineering and Manufacturing Development (EMD) activities, including a Systems Requirements Review (SRR), an Interim Design Review (IDR), and a delta-Preliminary Design Review (delta-PDR). In accordance with AOC 10.2 Milestone Decision Authority (MDA) direction (23 June 2010), the AOC 10.2 Modernization program will conduct prototyping and Limited Early Install (LEI) activities through an iterative build methodology prior to Milestone B (MS B) to reduce integration risk and improve user feedback in the acquisition process. AOC 10.2 EMD activities include the design (i.e., Critical Design Review), development, integration of 3rd party capabilities, testing (Contractor in-plant system testing, Developmental Test and Evaluation, Operational Test and Evaluation, Operational Assessment, Test Readiness Review, etc.) of the AOC 10.2 baseline, as well as build-up and fielding of the Help Desk (HD), Formal Training Unit (FTU) and Combined Air Operations Center-eXperimental (CAOC-X) suite.

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Activities also include studies and analysis to support current program planning and execution, as well as future program planning.						
This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.						
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	0.000	0.000	-	0.000
Current President's Budget		0.000	0.000	58.861	-	58.861
Total Adjustments		0.000	0.000	58.861	-	58.861
• 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	58.861	-	58.861
Change Summary Explanation						
In FY 2014, Project Number 644945, AOC Inc 10.2, efforts were transferred from PE 0207410F, AOC WS, Project Number 675117 in order to improve transparency for this major program.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: AOC 10.2 Modernization				0.000	0.000	40.791
Description: AOC 10.2 infrastructure modernization and mission capability integration. Development of a robust, open, Net-Centric infrastructure with a Services Oriented Architecture (SOA).						
FY 2012 Accomplishments: N/A						
FY 2013 Plans: N/A						
FY 2014 Plans: Effort will complete prototyping and LEI activities to support risk reduction and operational feedback. Will perform EMD contract activities (upon achievement of MS B), including but not limited to the following: a) AOC 10.2 development, systems analysis, and						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
corresponding documentation, b) capability provider engagement and integration, c) build-up and field the Help Desk (HD), d) Integration and Test Lab (ITL) operation and management, and e) continued planning, coordination, and execution of Contractor System Testing / Developmental Test and Evaluation / Operational Test and Evaluation. Will continue risk mitigation and development / test execution activities to support upcoming MS C decision in FY15. Will participate in joint service investments to support overall AOC modernization design and development.				
Title: AOC 10.2 Test and Evaluation Description: Test and Evaluation FY 2012 Accomplishments: N/A FY 2013 Plans: N/A FY 2014 Plans: Will plan and implement comprehensive Modernization contractor testing (in-plant integration and test, functional testing, security testing, etc.), Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E) on the AOC 10.2 baseline, to include test planning, conducting test, and documentation review.		0.000	0.000	1.710
Title: AOC 10.2 Training Description: Training FY 2012 Accomplishments: N/A FY 2013 Plans: N/A FY 2014 Plans: Effort will include, but is not limited to, support of the Modernization effort for AOC 10.2 training analysis, planning, and development during EMD, to include both contractor-developed capabilities and supplemental training for contractor modified 3rd party capabilities. This also includes curriculum and courseware / material development, instructor training, class / Computer Based Training conduct, and training surveys / analysis / updates.		0.000	0.000	2.160
Title: AOC 10.2 Systems Engineering Description: Systems Engineering		0.000	0.000	6.570

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C. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A											
FY 2013 Plans: N/A											
FY 2014 Plans: System engineering activities will include requirements analyses, C2 integration and architecture studies, risk reduction assessments, review of technical documentation, prototyping activities and feedback assessments (both at the contractor's Integrated Test Lab and the Combined Air Operations Center-eXperimental location), system development, integration & test (System Test and Evaluation, etc.), performance evaluation (AOC 10.2 post-Critical Design Review, etc.), buildup and fielding of the help desk, and technical expertise to support MS C. This effort will ensure collaboration between the new Modernization contractor and multiple AF, DoD, and commercial providers to allow for successful development, integration, test and out-year sustainment.											
Title: AOC 10.2 Program Management Administration									0.000	0.000	7.630
Description: Program Management Administration											
FY 2012 Accomplishments: N/A											
FY 2013 Plans: N/A											
FY 2014 Plans: Program Support efforts will include: Government contract oversight, technical expertise and program management office support associated with AOC WS activities.											
Accomplishments/Planned Programs Subtotals									0.000	0.000	58.861
D. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• RDTE: BA07: PE 0207410F: Air and Space Operations Center Weapon System (AOC WS)	97.663	50.674	0.000		0.000	0.000	0.000	0.000	0.000	0.000	130.575

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D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF: BA03: Line Item # 834530: <i>Air & Space Operations</i> <i>Ctr - WPN SYS</i>	0.000	0.000	1.806		1.806	5.984	54.010	57.227	58.258	Continuing	Continuing
Remarks											
E. Acquisition Strategy											
The acquisition strategy builds on existing capabilities using evolutionary acquisition to standardize, modernize and sustain the AOC. The AOC Modernization Contract was competitively awarded on 25 October 2011, but due to contract protests and associated delays, the actual start date was 20 December 2011. The Modernization contractor is using a system of systems perspective, and is following systems engineering rigor, to evolve AOC to a Net-Centric environment, compliant with DoD Services Oriented Architecture (SOA) standards.											
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.											

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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 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0604458F: Air & Space Ops Center				PROJECT 644945: AOC Inc 10.2					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
AOC 10.2 Modernization	C/Various	Northrop Grumman:Herndon, VA	-	0.000		0.000		40.791	Oct 2013	-		40.791	Continuing	Continuing	TBD
Training	C/Various	Various:Various,	-	0.000		0.000		2.160	Nov 2013	-		2.160	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		42.951		0.000		42.951			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
Test	Various	Various:Various,	-	0.000		0.000		1.710	Oct 2013	-		1.710	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		1.710		0.000		1.710			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
Systems Engineering	SS/ Various	MITRE:Bedford, MA	-	0.000		0.000		6.570	Oct 2013	-		6.570	Continuing	Continuing	TBD
Program Management Administration	Various	Various:Hanscom AFB, MA	-	0.000		0.000		7.630	Oct 2013	-		7.630	Continuing	Continuing	TBD
Subtotal			0.000	0.000		0.000		14.200		0.000		14.200			

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	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		0.000		58.861		0.000		58.861				

Remarks

In FY 2014, Project Number 644945, AOC Increment 10.2, efforts were transferred from PE 0207410F, AOC WS, Project Number 675117 in order to improve transparency for this major program.

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PE 0604458F: *Air & Space Ops Center*
Air Force

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APPROPRIATION/BUDGET ACTIVITY

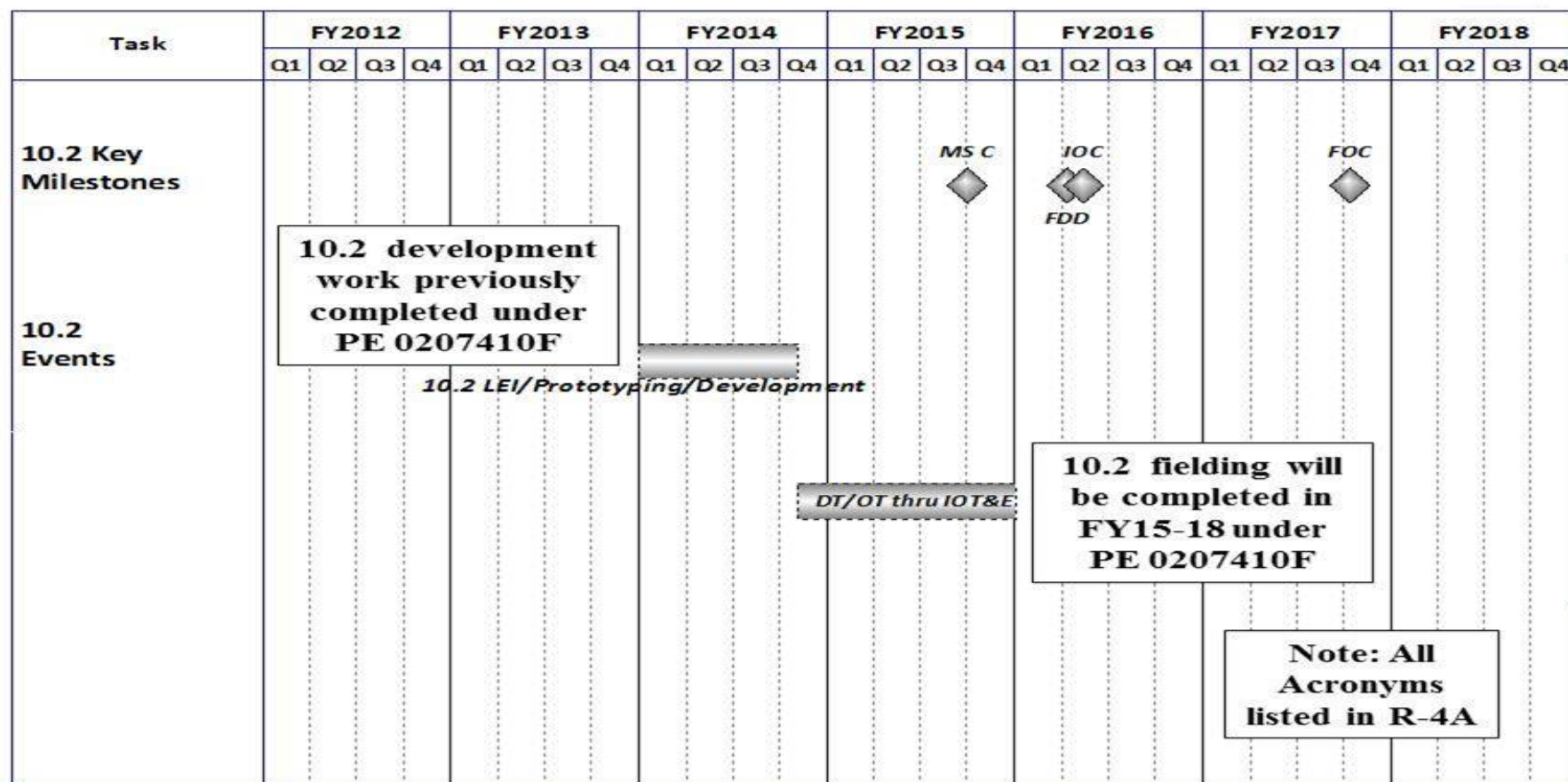
3600: Research, Development, Test & Evaluation, Air Force
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0604458F: Air & Space Ops Center

	PROJECT
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644945: AOC Inc 10.2



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

Events	Start		End	
	Quarter	Year	Quarter	Year
AOC 10.2 Limited Early Install (LEI)/Prototyping/Development	1	2014	4	2014
Developmental Test (DT)/Operational Testing (OT) thru Independent Operational Test and Evaluation (IOT&E)	4	2014	4	2015
AOC 10.2 Milestone C (MS C)	4	2015	4	2015
AOC 10.2 Initial Operational Capability (IOC)	2	2016	2	2016
AOC 10.2 Full Deployment Decision (FDD)	2	2016	2	2016
AOC 10.2 Full Operational Capability (FOC)	4	2017	4	2017